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UNIVERSITY COLLEGE CORK  
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**THE NORTH AMERICAN COACH TOURIST  
TO IRELAND:  
A FACTOR ANALYSIS APPROACH**

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# THE NORTH AMERICAN COACH TOURIST TO IRELAND: A FACTOR ANALYSIS APPROACH\*

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## **Abstract**

The objective of this paper is to identify the most significant travel behaviours and characteristics of North American coach tourists visiting Ireland. The data, identifying travel behaviours and characteristics, such as travel constraints, motivation, activities, accommodation attributes, life focus and personality traits was elucidated from questionnaires (n = 741) distributed to North American coach tourists that visited Ireland between June 2007 and March 2008. Factor analysis, which is a statistical technique that uses correlations between variables to determine the underlying dimensions represented by the variables, is used to identify the most significant factors that have common characteristics amongst the tourists. Results show, over 59% of the coach tourists surveyed are under 65 years. Coach tourists are largely active individuals with a strong propensity for cycling. They tend to be culturally aware and are drawn to historical destinations. They have a desire to learn new things. Fear of terrorism is their main travel constraint. They focus on sharing their beliefs with others. Finally, those surveyed tend to be independent and family orientated. These findings suggest tourism policies can now be directed more succinctly to cater for a specific type of coach tourist visiting Ireland rather than supplying a generic tourist product. **The findings also help target future niche markets of coach tourism by suggesting eight coach tour niches worthy of further research. The active coach tourist: the spa retreat tours: the spiritual tourist: the historical coach tours: the health conscious coach tourist: the adult-only coach tourist: the family orientated coach tourist and the luxurious coach tourist.**

*Keywords:* coach tourists, factor analysis

## **1. 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 8.0 million in 2007, before falling back to 7.8 million in 2008 (CSO,2009). Following a lengthy period of unrelenting 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 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 the phenomenon of tourism grows and become more competitive, destinations interests have similarly grown in attracting their share of visitors (Sheehan, Ritchie, & Hudson, 2007). The North American tourist provides an interesting opportunity for the Irish tourism industry.

Irish tourism policymakers know little regarding the type of North American tourist who visits here<sup>1</sup>. Ward noted there is a need for empirical work in this area as it “would be particularly insightful for the Irish tourism industry” (2006:434), especially since destination choices available to consumers today have proliferated (Pike, 2005). Given this, this paper reports factor analysis<sup>2</sup> results based on the North American coach tourist. It identifies the most important travel behaviours and character type variables epitomizing these tourists. The paper 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 findings will help Irish tourism to provide an appropriate product into the future.

The paper is organised as follows: Section 2, examines the North American tourist in Ireland. Section 3 and 3.1 describes the methodology. Section 4 (4.1.1 to 4.1.7); provides the findings of the research. Section 4.2 highlights the limitations of factor analysis and finally, the paper concludes with a summary, policy implications and future research.

## ***2. North American Tourist in Ireland***

North American tourists are important contributors to the Irish tourism industry for two reasons, their market size and their market potential. Over the years 2000 and 2006, the number of North Americans travelling overseas<sup>3</sup> increased by 10% (Survey of United States International Airline Travellers, 2006) and given a potential of 64 million North American tourists travelling internationally, the island of Ireland attracted over one million (965,000 US and 100,000 Canadian visitors) (Tourism Ireland 2007). North American visitors stay longer, averaging 9.3 nights in 2008 (CSO, 2008). They are significant contributors to the Irish tourism industry because they 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. 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 also vital in terms of their market potential. Given the current economic climate the North American market provides a steady income stream (Failte Ireland, 2007). Statistics indicate North Americans are the second highest spenders on travel abroad spending on average 60% more than other tourists in Ireland (Tourism Ireland, 2006). Their average spend per visitor to Ireland increased 8% in the last four years (Tourism Ireland, 2006). They constitute 20% of overall tourism receipts to the island of Ireland (CSO, 2008). Consequently, they signal a great opportunity to help Ireland remain competitive in such testing times.

Irish research detailing this market has been sparse however. Work carried out by Tourism Ireland in 2006 profiled Ireland’s best prospects by categorising the North American tourists into two<sup>4</sup> groups. Firstly, the sightseers and culture seeker boomers

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<sup>1</sup> The researcher acknowledges the work of Tourism Ireland, discussed in Section 2

<sup>2</sup> Factor analysis is explained in Section 3.1.

<sup>3</sup> Overseas implies outside the USA, Canada and Mexico

<sup>4</sup> Section 3 details why the coach tourist is analysed.

who have already been to Europe 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 paper; 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 (2006:8). Consequently, this paper examines the group tourist niche market in detail.

### **3. Methodology**

In order to examine the group tourist, coach tourists were assessed. Group tourists increased in market size by 56% between the years 2002 and 2006 (ITIC, 2008). Over the same period, tour programmes, with North America as its largest individual source increased 160%, the fastest rate of any country (Failte Ireland, 2007). Given this, a survey was conducted. The survey was a self administered questionnaire<sup>5</sup> distributed to North American coach tourists at the beginning of their coach tour<sup>6</sup>. It was carried 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% was achieved. The questionnaires were distributed to all tourists irrespective of age in order to get a representative sample. Results found 6.2% were <35years, 6% were aged 35-44years, 18.9% were 45-54years, 26.5% were 55-64years, 31.7% were 65-74years and 9.6% were 75years and over and 1% were non response. The aim of the questionnaire was to establish the motivations to travel (push and pull traits), activities sought while on holiday, favoured hotel attributes, constraints that may prohibit travel, life focus over the next five to ten years and level of agreement on various character traits. An explanation of factor analysis is detailed in the next section.

#### **3.1 Factor Analysis**

Factor analysis is a statistical technique that uses correlations between variables to determine the underlying dimensions represented by the variables. It simplifies complex datasets by finding natural groupings in the data. It does not test the differences between individuals or groups, nor is it a single statistical method (Pett *et al*, 2003) rather it describes a set of related variables, as a smaller number of dimensions (Scott, 1966). It 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. Its use is important when there is a need to reduce large amounts of data (Croux *et al*, 2004; Hair *et al.*, 1992). 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. Factor analysis is employed here in order to condense the lengthy lists of variables that exist within the questionnaire<sup>7</sup> and enable the researcher to identify the most important variables in each question. It identifies the most significant factors that have common characteristics amongst the tourists. The factors

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<sup>5</sup> Refer to Appendix A for a copy of the questions that were factor analysed.

<sup>6</sup> The researcher was permitted by tour operators to distribute the survey on the bus. Tours travelled various routes throughout the island of Ireland and tourists stayed in 15 different hotels.

<sup>7</sup> Refer to Appendix B for the list of detailed questions that were factor analysed.

that result from re-grouping the variables are relabelled and represent a new underlying dimension.

The first step when conducting a factor analysis is to look at the inter-correlation between variables. A correlation is a numerical measure of the degree of agreement between two variables. The degree of correlation can range from -1.00, indicating a negative relationship or complete disagreement to +1.00, indicating a positive relationship or complete agreement and a value of 0 highlights no relationship (Bradley, 2007; Tacq, 1997). The assumption is that if questions measure the same underlying dimension(s) then we would expect them to correlate with each other (+1), as they are measuring the same otherwise unknown factor. To obtain a correlation between variables, the variance, standard deviation and covariance need to be obtained (Pett et al, 2003; Kline, 1994) and by doing so, factor analysis reduces the number of original variables by identifying and condensing a smaller number of underlying common factors or dimensions.

This process is carried out using principal component factor analysis<sup>8</sup>. This analysis 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). According to Guidici (2007) principal component factor analysis is the easiest way to carry out data reduction as it is based on linear transformations i.e the principal components that are extracted from the set of variables are linear combinations of the original variables (Goddard et al, 1976; Guidici, 2007). Pett et al, (2003) indicated it was a straightforward, easy to understand technique in factor analysis and the variables included in the analysis can be calculated perfectly by the components which have been extracted.<sup>9</sup>

Estimating how many factors to be extracted is based on two criteria; firstly, whether the eigenvalue measure exceeds one and secondly the percentage level of variance explained by the extracted factors. *Eigenvalues* represent the amount of variance accounted for by each factor (Pett *et al*, 2003; Verbeek, 2008) and they assess the importance of each component in selecting the number of factors. The larger the eigenvalue reported for a factor, the more variance that is explained by that factor (Kline, 1994). The latent root criterion is used here denoting factors with *eigenvalues* greater than 1 are significant (Kaiser, 1961).<sup>10</sup>

The second condition used in deciding how many factors to extract was the percentage of variance explained. This involves cumulating the percentage of variance extracted by a number of successive factors. The extraction process would be complete when a certain amount of variance percentage has been reached, that is to say between 75% and 80% in the natural sciences and a lower level of 50% to 60% within the social science arena (Pett *et al*, 2003)<sup>11</sup>. The factors are extracted in order of their importance i.e the factor explaining the most variance between the variables is

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<sup>8</sup> The standard procedure in SPSS packages.

<sup>9</sup> If no relationship exists between the variables, each variable would make its own unique or random factor.

<sup>10</sup> Details of the extraction process is given in the next section.

<sup>11</sup> Tables 1,3,5,7,9,11 and 13 in Section 4.1.1 detail the variance explained.

extracted first and all other factors extracted thereafter explain the remaining smaller variance after each extraction (Pett *et al*, 2003). The interpretability of these factors is improved through rotation. Rotation improves the solution in terms of interpretation and utility as each variable is associated with one factor only (Tabachnick *et al*, 2001; Everitt *et al*, 2001). According to Hair *et al* (1995), factor rotation involves turning the reference axes in order to achieve a more meaningful factor solution. Rotation processes aid interpretation and give a clearer separation of factors due to their simplistic nature.

Varimax rotation is the most widely used rotation method. It maximises the factor loading of each variable on one of the extracted factors whilst minimizing the loading on all other factors (Tabachnick *et al*, 2001). Factor loadings are the correlations between a variable and the factor that has been extracted. According to Hair *et al* (1992) “factor loadings greater than +0.30 are considered significant, loadings greater than +0.40 are more important while loadings more than +0.50 are very significant”. A minimum level of acceptance of +0.40 is used here, following the tourism methodologies applied in Pennington-Gray & Lane (2001) and Shoemaker (1989, 2000)

When the heavily weighted factor variables (>0.40) are extracted they are retained and re-labelled under a new factor heading. Interpreting the pattern of factor loadings for each of the variables, influences the name attributed to each factor. The names chosen are subjective and are open to criticism so reference was made to published research within the area. Hair (1992) found if names are logical and reflect the fundamental features of the factors then this procedure is justifiable. The findings of the factor analysis are detailed in the following section.

#### **4. Factor Analysis Findings**

Factor analysis is applied to seven questions in the questionnaire<sup>12</sup>. They deal with pull motivations, push motivations, activities sought while on holiday, constraints that prevent holidaying, important hotel attributes, life focus over the next five to ten years and level of agreement on detailed character types. One hundred and one variables under-pin these seven questions and factor analysis is used to reduce the variables into more defined dimensions. The factor analysis results of each question are given in the following sections.

##### **4.1.1 Holiday Activities**

Holiday activities<sup>13</sup> were the first set of variables subjected to factor analysis. Eighteen common holiday activities were listed and respondents rated each activity on a scale of one to five in terms of their importance while on holiday. Table 1 below displays the extracted activity variables from carrying out the principal component factor analysis. Applying the latent root criterion (*eigenvalues* greater than 1) meant four factors were extracted and these four factors adhered to Pett *et al* (2003) findings as they explain a large proportion, 64.7 per cent, of the overall variance,

Factor 1, with an eigenvalue of 7.39 is the most important as it explains 28% of the variance. Establishing what constitutes Factor 1, 2, 3 and 4, is explained by the rotated

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<sup>12</sup> See Appendix A.

<sup>13</sup> Refer to Appendix A for the specific holiday activity question.

component matrix (or a rotated factor matrix). This is displayed in Table 2. This table displays the maximum factor loadings for each variable onto each of the extracted factor whilst minimising the loading on all the other factors. Factor loadings less than 0.4 have not been displayed as these loadings were suppressed<sup>14</sup> and all remaining loadings are deemed very significant as they are greater than +0.50 (Hair, 1992).

**Table 1 Activity variables extracted using principal component factor analysis**

<b>Component</b>	<b>Extraction Sums of Squared Loadings</b>			<b>Rotation Sums of Squared Loadings</b>		
	<b>Total</b>	<b>% of Variance</b>	<b>Cumulative %</b>	<b>Total</b>	<b>% of Variance</b>	<b>Cumulative %</b>
<b>Factor 1</b>	7.393	41.074	41.074	4.985	27.695	27.695
<b>Factor 2</b>	1.637	9.095	50.169	2.541	14.114	41.809
<b>Factor 3</b>	1.531	8.505	58.674	2.392	13.287	55.096
<b>Factor 4</b>	1.097	6.093	64.766	1.741	9.670	64.766

Source: Primary Research

The highest loading factor scores displayed in Table 2 influence the labelling of each of the four factors and by assessing the relative weights of the factor loadings (all very significant as they exceed +0.50), the following labels are applied:

Factor 1 – Physical activities

Factor 2 – Indulging and entertainment activities

Factor 3 – Cultural activities.

Factor 4 – Family orientated activities.

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<sup>14</sup> See Section 3.1 for the reason why 0.40 was used.



Table 2

Rotated Component Matrix<sup>a</sup>

	Component			
	1	2	3	4
Cycling	.854			
Water-sports	.826			
Equestrian	.817			
Golf	.731			
Walking/Hill walking/Hiking	.708			
Spa treatments / massage	.633			
Spiritual activities	.583			
Artistic and literary activities	.563			
Nature activities	.545		.517	
Fine dining		.822		
Music/Food		.752		
Shopping		.708		
Theatre act/stage show	.414	.561		
Historical activities			.794	
Museum/art gallery activities			.739	
Guided tours/excursions			.529	
Visiting relatives and friends				.790
Tracing roots/Genealogy			.443	.589

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

a. Rotation converged in 6 iterations.

Factor one is re-labelled, **Physical Activity**, as its most heavily weighted variables include active, sporty activities such as: cycling (.854), water-sports (.826), equestrian (.817) and golf (.731). Factor two is categorised as **Indulging/Entertainment Activities** (accounting for 14 per cent of the variance). Only the high factor loadings are retained incorporating activities such as fine dining, music/food and shopping. The third factor, **Cultural Activities** includes historical activities, museum and art gallery activities, nature activities and guided tours and excursions. The final factor, **Family Orientated Activities** contains two variables: visiting relatives and friends and tracing roots and genealogy.

Factor analysis displays a more concise spectrum of activities. North American coach tourists are now categorised into four core activity labels. One can now imply that the coach tourists are active individuals (given the largest loading of significant variables are placed under this factor), they like to indulge, are culturally aware and are family orientated.

#### 4.1.2 Push motivations<sup>15</sup>

The same procedure is adopted for the push motivation variables. The question asks what motivates North American tourists to go on holiday. Factor extraction reduced nine variables to two, each displaying *eigenvalues* greater than one. Table 3 presents the findings of the extraction process.

<sup>15</sup> Refer to appendix A for the push motivation question.

**Table 3 Push motivations extracted using principal component factor analysis**

Component	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
<b>Factor 1</b>	3.251	36.118	36.118	2.481	27.565	27.565
<b>Factor 2</b>	1.558	17.307	53.425	2.327	25.861	53.425

Source: Primary Research

The two factors explained approximately the same variance. Labelling cannot occur however until the overall theme of the variables in each factor can be examined. As with the activity question, the rotated component matrix, illustrated in Table 4 simplified the process by identifying the relevant factor weights. Renaming of the factors meant the two factors are now:

Factor 1 – Educational

Factor 2 – Rest/Relaxation

**Table 4**

**Rotated Component Matrix<sup>a</sup>**

	Component	
	1	2
To learn new things	.788	
Experience new culture	.782	
For personal growth	.774	
For adventure	.634	
For rest and relaxation		.714
Opportunity for romance		.667
For nostalgia purposes		.647
To escape		.633
Quality time with family/Spouse		.597

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

a. Rotation converged in 3 iterations.

Column one above represents the **Educational** factor, the most heavily weighted factor with an *eigenvalue* of 3.2. This factor accounts for 27.5 per cent of the variance. It is relabelled, educational as, learning new things (.788), experiencing a new culture (.782) and personal growth (.774) characterize it. Factor two is labelled **Rest/Relaxation**. The variables constituting this include rest and relaxation, opportunity for romance and nostalgia. All factor loadings are very significant as they exceed +0.50. The motivations for North American coach tourists to go on holiday can be categorised into two: educational and rest and relaxation.

#### **4.1.3 Pull motivations <sup>16</sup>**

Pull motivations asks what elements attract an individual to a destination. What specifically attracts North Americans to visit a destination? Factor analysis reduced the number of variables from eight to two. Table 5 below presents the eigenvalue scores of the two factors as well as the variance explained.

<sup>16</sup> Refer to Appendix A for the specific pull motivation question.

**Table 5 Push motivations extracted using principal component factor analysis**

Component	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
<b>Factor 1</b>	2.993	37.413	37.413	2.362	29.523	29.523
<b>Factor 2</b>	1.304	16.297	53.710	1.935	24.188	53.710

Source: Primary Research

The rotated component matrix (Table 6) as before, labels the factors in accordance with the heaviest weighted variables. Two push factors are re-labelled as:

Factor 1 – Location Attributes

Factor 2 – Physical Attributes

**Table 6****Rotated Component Matrix<sup>a</sup>**

	Component	
	1	2
Nice weather	.758	
Good value for money	.728	
Ease of getting there	.635	
A safe and secure location	.634	
Availability of high quality accommodation	.606	.434
Interesting history		.845
Quality of scenery		.685
Recommendation from friends		.643

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

a. Rotation converged in 3 iterations.

The first factor labelled **Location Attributes** explains 30 per cent of the variance. It features factor loadings such as, nice weather (.758), good value for money (.728), ease of getting there (.635) and a safe and secure location (.634). The second factor, **Physical Attributes** displays interesting history, quality of scenery and recommendations from friends as its greatest significance. Each factor loading is, yet again very significant (exceeding +0.50). Location and physical features are therefore the two main factors that pull North American coach tourists to a destination.

#### **4.1.4 Travel constraints<sup>17</sup>**

Travel constraint factors are also subjected to factor analysis. Individuals were asked whether or not each travel constraint listed curtailed their tourism behaviour. Two constraint factors are identified from the list of nine. They account for 50 per cent of the variance with *eigenvalues* spanning 3.4 to 1.0. Just as before each constraint variable with a factor loading greater than +0.40 is included in the analysis. Table 7 presents the findings of the principal component analysis and Table 8, presents the results from the factor matrix respectively.

<sup>17</sup> Please see Appendix A for the travel constraint question.

**Table 7 Travel constraints extracted using principal component factor analysis**

Component	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
<b>Factor 1</b>	3.461	38.453	38.453	2.736	30.400	30.400
<b>Factor 2</b>	1.072	11.909	50.362	1.797	19.962	50.362

Source: Primary Research

Using the higher loading variables as a guide, two constraint factors were re-labelled:

Factor 1 – Fear Constraints

Factor 2 – Time Constraints

**Table 8**

**Rotated Component Matrix<sup>a</sup>**

	Component	
	1	2
Holiday constraint - Fear of terrorism	.719	
Holiday constraint - Health problems	.686	
Holiday constraint - Lack of interest	.682	
Holiday constraint- Pets to look after	.651	
Holiday constraint - Lack of travel companion	.592	
Holiday constraint - Family commitments	.509	
Holiday constraint - Lack of money	.446	.415
Holiday constraint - Commitments to work		.841
Holiday constraint - Lack of time		.835

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

a. Rotation converged in 3 iterations.

Factor one, **Fear Constraints**, is linked with anxieties an individual might experience. The variables explain 30 per cent of the variance and include very significant factors (+0.50) such as, fear of terrorism (.719), health problems (.686) and lack of interest (.682). Factor two **Time Constraints**, incorporate constraint variables that restrict people from going on holiday in the first place. This factor loads significantly on commitments to work and lack of money. Factor analysis in this instance reduced nine constraint variables to two important dimensions.

#### **4.1.5 Hotel facilities<sup>18</sup>**

The hotel facilities question asked respondents to rank particular hotel attributes on a scale of importance from 1 to 5. Applying factor analytic techniques, six discrete factors were extracted from the original thirty-four. These factors accounted for 63 per cent of the variance explained. *Eigenvalues* range from 13 to 1.07. Table 9 below displays these principal component results.

<sup>18</sup> Refer to Appendix A for the hotel attribute question.

**Table 9 Hotel facilities extracted using principal component factor analysis**

Component	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
<b>Factor 1</b>	12.920	38.000	38.000	7.658	22.524	22.524
<b>Factor 2</b>	2.798	8.228	46.228	4.534	13.336	35.860
<b>Factor 3</b>	2.108	6.201	52.429	3.424	10.070	45.930
<b>Factor 4</b>	1.310	3.852	56.281	2.295	6.750	52.681
<b>Factor 5</b>	1.083	3.186	59.466	2.018	5.936	58.617
<b>Factor 6</b>	1.074	3.159	62.625	1.363	4.009	62.625

Source: Primary Research

Similar to the questions, each factor was labelled in accordance with its dominant theme. Examining Table 10, factor names were decided based on the most highly weighted variable loadings. The names deciphered are:

Factor 1 – Hotel Facilities

Factor 2 – Bedroom facilities

Factor 3 – Safety Facilities

Factor 4 – Health conscious facilities

Factor 5 – Hotel Type

Factor 6 – Hotel location

Factor one, **Hotel facilities** accounts for the most variance (22.5 per cent). The largest number of variables are weighted on this factor. Examples include: bike-use service (.820), availability of bunk beds in rooms for friends and/or children (.788) and availability to participate in organised hotel entertainment (.762). Factor two, **Bedroom Facilities**, relates to flat screen with TV and cable, internet access, thick curtains to protect against sunshine and complimentary toiletries/tea/coffee. The third factor, **Safety Facilities** accounts for 10% of the variance. This factor incorporates the variables: well-lit bedrooms, non-skid material on bathroom floor and safe and secure location. The fourth factor **Health Conscious facilities** incorporates availability of 24 hour medical services, modern feel and design and special dietary menus. The fifth factor, **Hotel Type** includes variables such as: a room with a view, an adult-only hotel and an historical property. The final hotel variable **Central Location** incorporates two variables; location in heart of sight-seeing attractions and location in heart of shopping district.

Factor analysis reduced thirty-four hotel attributes to six. According to the North American coach tourist, the most important hotel attributes include the family orientated facilities in the hotel, bedroom facilities, safety facilities, health conscious facilities, hotel type and where the hotel is located.

Rotated Component Matrix<sup>a</sup>

		Component					
		1	2	3	4	5	6
Location in heart of sight seeing attractions							.816
Location in heart of shopping district							
Room with a view							
Historical property						.663	
Adult-only hotel (no children allowed)						.614	
Safe and secure location				.576			
Modern feel and design						.688	
Availability of 24 hour medical services						.796	
Public area away from bar		.695					
Knowledgeable staff				.648			
Variety of menu choice				.584			
Special dietary menus		.443					
Early dining hours		.692					
Large print menus, signs and information		.821					
Custom concierge service		.697					
Bike-use service		.820					
Availability/participate in organised entertainment in hotel		.762					
Well-lit bedrooms and bathrooms				.628			
Master electrical switch at bedside to control all room lights		.551	.409				
Non-skid material on bathroom floor		.465		.593			
Good lighting over mirrors			.420	.571			
Night lights in bedrooms		.446		.483			
Sound-proof bedrooms				.577	.432		
Internet access in bedrooms		.424		.648			
Thick curtains/ draperies to protect against morning sunrise			.616				
Flat screen TV with cable + DVD in room			.720				
Bedroom with chalkboard walls		.711					
Choice of using a bath tub in room		.499					
Grab handle bars on shower/baths		.488		.423			
Premium complimentary toiletries / tea and coffee				.588			
Eco-friendly bedding and furnishings		.442		.536			
Laptop size safes		.557		.552			
Reasonable phone charges		.481		.455			
Availability of bunk beds in rooms for friends and/or children		.788					

Extraction Method: Principal Component Analysis.  
Rotation Method: Varimax with Kaiser Normalization.  
a. Rotation converged in 11 iterations.

#### 4.1.7 Five to Ten Year Focus<sup>19</sup>

The next question subjected to factor analysis dealt with respondents' focus in life over the next five to ten years. The principal component analysis (Table 11) highlights from the eleven original variables three explain 59% of the overall variance with 30% of this variance explained by Factor 1.

**Table 11 Future Focus extracted using principal component factor analysis**

Component	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
<b>Factor 1</b>	3.635	33.043	33.043	3.266	29.695	29.695
<b>Factor 2</b>	1.601	14.556	47.599	1.648	14.979	44.674
<b>Factor 3</b>	1.233	11.206	58.805	1.554	14.131	58.805

Source: Primary Research

The factor loadings displayed in the factor matrix (Table 12), facilitated the labelling of the three factors:

Factor 1 – Educating Spiritualist

Factor 2 – Family Focused

Factor 3 – Luxurious Wanderer

**Table 12**

**Rotated Component Matrix<sup>a</sup>**

	Component		
	1	2	3
Sharing my beliefs with others	.835		
Working in my dream occupation	.728		
Strengthening my faith (spiritual)	.723		
Developing new skills	.716		
Technology/Gadgets/Internet	.703		
Caring for the environment	.598		
Family		.791	
Importance over next 5-10 years - Grandchildren		.762	
Looking after my health		.560	.493
Travelling more			.784
Enjoying more of life's luxuries			.597

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Factor one **Educating Spiritualist** includes variables such as sharing my beliefs (.835), working in my dream occupation (.728) and strengthening my spiritual faith (.723). The second factor, **Family Focused**, incorporates two variables, family and grandchildren. Factor 3 the **Luxurious Wanderer** incorporates travelling more and enjoying more of life's luxuries. North American coach tourists are now categorised into three life-focus factors: educating, spiritual individuals, while others are family focused or travel lovers.

<sup>19</sup> Refer to Appendix A for the life focus question.

#### 4.1.8 Character Type<sup>20</sup>

The final question subjected to factor analysis measures respondents' level of agreement regarding character type. Of the twelve variables, three factors were extracted. They explain 49% of the variance and eigenvalues measure from 3.4 to 1.

**Table 13 Character Type extracted using principal component factor analysis**

Component	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
<b>Factor 1</b>	3.422	28.516	28.516	2.331	19.426	19.426
<b>Factor 2</b>	1.502	12.520	41.036	1.866	15.553	34.979
<b>Factor 3</b>	1.006	8.380	49.416	1.732	14.437	49.416

Source: Primary Research

Examining the loadings of the factor matrix in Table 14 meant the three factors are labelled as:

Factor 1 – Trendy Liberalist

Factor 2 – Independent Youth

Factor 3 – Traditionalist

**Table 14**

**Rotated Component Matrix<sup>a</sup>**

	Component		
	1	2	3
I am a risk taker.	.677		
I always keep up with new trends.	.671		
I consider myself liberal.	.646		
Modern technology challenges me.	.580		
Financial enrichment is important to me.	.525		.469
I enjoy being on my own.		.778	
I choose to associate with younger people.		.563	
Cultural enrichment is very important to me.		.500	
I live a physically active life.	.465	.484	
Traditional values are very important to me.			.742
I look forward to retiring			.557
Routine suits me.			.548

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

Factor 1, **Trendy Liberalist**, incorporates individuals who see themselves as risk takers (.677), wanting to keep up with new trends (.671) and consider themselves liberal (.646). Factor 2, **Independent Youths**, enjoy being on their own while also being associated with younger people. The final factor, the **Traditionalist**, as the label portrays, find traditional values very important. They look forward to retiring while routine also suits them. Factor analysis reduced twelve variables to three. We can thus deduce that North Americans are liberal, independent or traditionalist.

Assessing the above sub-sections, factor analysis successfully and very significantly (all factor loadings were +0.50) reduced one hundred and one variables to twenty-two.

<sup>20</sup> Refer to Appendix A for the character type question.



A summary list can be seen in Appendix B. Although factor analysis gainfully reduced the variables, it is not without its limitations, as outlined in the next section.

#### ***4.2. Limitations to Factor Analysis***

Like other statistical procedures factor analysis has a number of limitations. Firstly, numerous methods exist for performing factor analysis and controversy prevails over which technique is most appropriate. Secondly, aspects of factor analysis are subjective, for example, deciding how many factors to extract or which technique should be used to rotate the factor axes or which factor loadings are significant. Factor analysis is therefore open to criticism and like all statistical procedures, reliability is also an issue.

Despite these, factor analysis can be used to identify hidden dimensions or constructs which may or may not be apparent from direct analysis. Naming and using dimensions is flexible. However as factor analysis has been used in previous tourism studies and in collaboration with other statistical procedures such as cluster analysis. It is proven to be very effective in identifying niche markets.

#### ***5. Summary, Policy implications and Future Research***

This paper uncovers the most important travel constraints, motivation, activities, accommodation attributes, life focus and personality traits epitomizing the North American coach tourists. The extracted activity factors inform tourism providers that coach tourists are very active. Product innovations such as bike hire or advertising cycling tours is subsequently a niche worth examining for 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 spa retreat tours or a spiritual tours are niche coach tours worth researching further.

Pull motivations are found to be either location or physical. Coach tourists seek either attractive location attributes such as weather and value for money or are drawn by physical features such as historical relics. The latter may be further utilised if marketers continue to develop and advertise Ireland as a historically drenched destination. Fear and time are noted as the two travel constraints North American coach tourists' face. Implications from a policy perspective are deep rooted in ensuring Ireland is marketed as a safe, unified peaceful destination. Although not a new phenomenon, promoting a peaceful island of Ireland is still a forefront issue with coach tourists.

Assessing the important hotel attributes in this paper are significant to the sectors future, as the severity of the recent downturn and reduced yields achieved by the industry has put severe pressure on cash flows. Important hotel attributes highlighted here, target the physically active coach tourist. Providing facilities such as bike hire is thought to be worthy facility. The health conscious coach tourist is also a niche worth capitalising on with special dietary menus provided as norm in hotels. The choice of staying in an adult-only hotel is a niche worth examining further in order to increase future revenues. Insights on the life-focus of coach tourists over the next five to ten years, indicates a future coach tour niche dedicated to family tours. Findings highlight the importance of family and the promotion of not only child/parent holiday facilities

but also child/grandparent tours. The high-end market selling Ireland as a pampering plush haven to coach tourists is also a niche worth researching further.

In summary, factor analysis condensed one hundred and one original variables to twenty-two dimensions. Rather than analysing a complete list of single entity variables in the questionnaire, factor analysis enabled correlated variables to be grouped into fewer common categories, known as dimensions. The paper contributes to 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. The findings help target future niche markets of coach tourism by suggesting eight coach tour niches worthy of further research. The active coach tourist: the spa retreat tours: the spiritual tourist: the historical coach tours: the health conscious coach tourist: the adult-only coach tourist: the family orientated coach tourist and the luxurious coach tourist.

The paper facilitates the Irish coach tourism industry to compete effectively for the market share of the North American market once the global economy improves. Given tourism businesses with strong track records and viable futures are to be protected (Tourism Renewal Group report, 2009), the scope for further research can help tourism policymakers aptly provide appropriate products targeting the coach tourist of the future.

## Appendix A

**Which of the following influence your CHOICE of destination? Please (√) where 1 is LEAST important, 5 is MOST important.**

	1	2	3	4	5
A safe and secure location					
Ease of getting there					
Interesting history					
Quality of scenery					
Recommendation from friends					
Availability of high quality accommodation					
Good value for money					
Nice weather					

**How important are the following for YOU to go on a LEISURE vacation? (√)EACH, where 1 is LEAST and 5 is MOST important.**

	1	2	3	4	5
To escape					
Experience new culture					
For personal growth					
For adventure					
To learn new things					
Opportunity for romance					
Quality time with family/Spouse					
For rest and relaxation					
For nostalgia purposes					

**How important are the following ACTIVITIES to YOU while on any vacation? Please (✓) 1 is LEAST important, 5 is MOST important.**

	1	2	3	4	5
Visiting relatives and friends					
Tracing roots/Genealogy					
Historical activities					
Museum/art gallery activities					
Nature activities					
Guided tours/excursions					
Spiritual activities					
Artistic and literary activities					
Water-sports					
Equestrian					
Golf					
Cycling					
Walking/Hill walking/Hiking					
Theatre act/stage show					
Fine dining					
Music/Food					
Shopping					
Spa treatments / massage					

**Which of the following have STOPPED you from going on vacation? (Please (✓))**

Fear of terrorism	
Lack of money	
Lack of travel companion	
Family commitments	
Lack of time	
Commitments to work	
Health problems	
Lack of interest	

**How IMPORTANT will the following be in your life, over the next 5 to 10 years? Please (✓) where 1 is LEAST important and 5 is MOST important.**

	1	2	3	4	5
Grandchildren					
Family					
Travelling more					
Looking after my health					
Strengthening my faith (spiritual)					
Developing new skills					
Caring for the environment					
Enjoying more of life's luxuries					
Technology/Gadgets/Internet					
Sharing my beliefs with others					
Working in my dream occupation					

**For the following, please tick (✓) YOUR level of agreement. 1 is LEAST agree and 5 is MOST agree.**

	1	2	3	4	5
I choose to associate with younger people.					
Traditional values are very important to me.					
I enjoy being on my own.					
Cultural enrichment is very important to me.					
I look forward to retiring.					
Financial enrichment is important to me.					
I always keep up with new trends.					
Routine suits me.					
Modern technology challenges me.					
I live a physically active life.					
I consider myself liberal.					
I am a risk taker.					

## Appendix B

<b>Variable</b>	<b>Factors Extracted</b>
<b><i>Activities</i></b>	Factor 1 – Physical Activities Factor 2 – Indulging and Entertainment activities Factor 3 – Cultural Activities. Factor 4 – Family Orientated Activities.
<b><i>Push Motivations</i></b>	Factor 1 – Educational Factor 2 – Rest/Relaxation
<b><i>Pull Motivations</i></b>	Factor 1 – Location Attributes Factor 2 – Physical Attributes
<b><i>Travel Constraints</i></b>	Factor 1 – Fear Constraints Factor 2 – Time Constraints
<b><i>Hotels</i></b>	Factor 1 – Hotel Facilities Factor 2 – Bedroom Facilities Factor 3 – Safety Facilities Factor 4 – Health conscious Facilities Factor 5 – Hotel Type Factor 6 – Hotel Location
<b><i>Focus Over next 5-10 years</i></b>	Factor 1 – Educating Spiritualist Factor 2 – Family Focused Factor 3 – Luxurious Wanderer
<b><i>Character Type</i></b>	Factor 1 – Trendy Liberalist Factor 2 – Independent Youth Factor 3 – Traditionalist

Source: Primary Research

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