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THE QUALITY OF ATTRACTIONS AND THE SATISFACTION, BENEFITS AND BEHAVIOURAL INTENTIONS OF VISITORS: VERIFICATION OF A MODEL

Abstract: The study is an attempt to verify a model of the relations between motivation, quality of attraction, benefits, satisfaction and the behavioural intentions of visitors to tourism attractions. The data for the analysis was collected from 582 visitors during the 10th Archaeological Festival at Biskupin. It was noted that the effect of the quality of the attraction on behavioural intentions leads to the benefits gained by the visitors. Benefits have a stronger total effect on behavioural intentions than visitor satisfaction.

Key words: tourism attractions, quality, satisfaction, benefits, behavioural intentions, structural equation modelling.

It is generally believed that a deciding factor for the success of tourism attractions[1] is the satisfaction of visitors (PRENTICE, 1993; SWARBROOKE, 1995; MIDDLETON, 1996). However, empirical studies do not support this thesis explicitly and one of the first theories explaining the processes taking place during leisure activities was BROWN's *Recreation Opportunity Spectrum*[2] (1984). For the first time attention was paid to processes of mutually determined events taking place during a leisure activity. Brown said that an activity undertaken in specific conditions produces experiences as a result of which specific benefits are achieved. On the basis of Brown's model and a *SWOT* analysis, PRENTICE (1995) & NOWACKI (2000b) carried out studies of visitors to tourism attractions. On the other hand, MOSCARDO (1996, 1999) has noted that the key factor for visitor satisfaction is the attentiveness of visitors and what is learned during the visit. This is caused by two groups of factors: exhibition factors (variety of exhibition, media, novelty, questions, multimedia, labelling), and visitor factors (interest and fatigue). Both have a direct impact on the attentiveness of visitors, but exhibition factors also have an effect on visitor factors, i.e. interest and fatigue. Another factor which affects satisfaction is quality. However, as demonstrated by JENSEN (2004) when verifying Herzberg's theory (1996) on the conditions applying to tourism attractions, quality does not affect satisfaction directly but indirectly through perception of gained benefits.

For managers of tourism attractions, visitors' future intentions[3] towards the attraction, in particular the willingness to visit again, are more important than visitor satisfaction. BAKER & CROMPTON (2000) studying the relations between quality, satisfaction and behavioural intentions found that although quality affects satisfaction and satisfaction affects intentions, however perception of quality (as they defined it – the efforts of the service provider) has a much stronger total effect on behavioural intentions than satisfaction. Moreover, the authors assumed a unidirectional effect of quality on satisfaction, although others, for example GOTLEIB, GREWAL & BROWN (1994), suggested that this relation is two-way: a positive mood of satisfaction results in a good assessment of the quality of infrastructure.

TOMAS, SCOTT & CROMPTON (2002) proposed a model integrating the above variables: quality, satisfaction, benefits and behavioural intentions. The quality of product was made up of educational factors, exhibitions of animals, general information, staff, comfort, detailed information, and quality of infrastructure. Benefits included such factors as introspection, knowledge, spending time with family, escape, watching animals, and spending time with friends. The researchers demonstrated the relation between the quality of product, and behavioural intentions, benefits and satisfaction. The latter relation, according to the authors, was of a recurring nature, as well as the relation of benefits and behavioural intentions, and the effects of satisfaction on behavioural intentions. However, the multiple regression analysis applied did not allow the authors to verify the direction of effect of the studied variables.

Satisfaction and the behavioural intentions of visitors are also affected by motives. In the study of YOON & UYSAL (2003) it was found that both the 'push' motivation factor with motives of excitement, education, relaxation, achievement, spending time with family, escape, safety and curiosity, as well as the motivation-attracting factor made up of motives of atmosphere, activity, weather, landscape, culture, cleanliness, shopping, night life and water activity have a direct impact on tourism satisfaction. Moreover, it was found that the 'push' motivation factor has a direct positive effect on behavioural intentions.

1. OBJECTIVES

The aim of the study was to verify the model of relations between the quality of attractions and the motives, benefits, satisfaction and behavioural intentions of visitors. The output variable of the model is behavioural intentions which are a good indicator of future behaviour (AJZEN & FISHBEJN, 1980). Behavioural intentions are affected by satisfaction as well as motivation and the attraction product quality. Benefits are affected by satisfaction, attraction product quality and motivation. And finally, perception of the attraction product quality is affected by visitor motivation (Fig. 1).
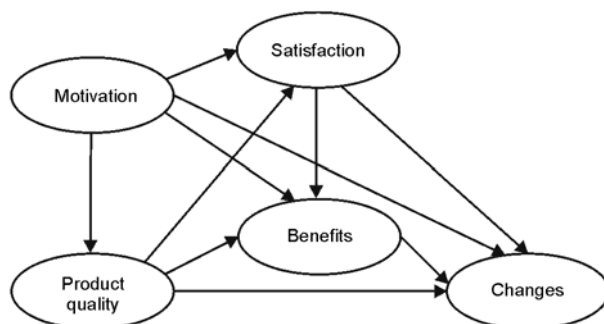

Fig. 1. Hypothetical model of relations between variables
(s o u r c e: author)

2. METHOD

A questionnaire containing scales for the measurement of motivation, quality, benefits, satisfaction, behavioural intentions was used in the study. The questionnaire also included questions on frequency of visiting, composition of the group of visitors, interest in the theme of the attraction, and a socio-demographic profile which are not the subject of this paper.

The motivation scale consists of seven items corresponding to the levels of need in PEARCE's (1988) model of tourist travel careers (Table 1). The scale of benefits was also made up of seven items which corresponded to individual elements of the motivation scale (e.g. the item *I wanted to get away from everyday stress* on the motivation scale corresponded to *I managed to rest and relax* on the benefits scale). The measurement scale of an attraction product quality consisted of three factors: elements of exhibition (ten items characteristic for each attraction), sources of information (six items) and quality of services (six items). The satisfaction scale consists of three bipolar items: *boring – interesting, tiring – relaxing* and *irritating – pleasant* assessed using a five point scale: *very – a little – neutral – a little – very*. The scale was developed on the basis of the work of VITTERSO *et al.* (2000). Behavioural intentions were assessed using statements: *Would you recommend visiting … to your friends?,* and *Would you like to visit … again?* And a further question about the price the visitors would be willing to pay for the admission ticket to the facilities was used.

The study was carried out during the 10th Archaeological Festival at Biskupin[4] (18–26th Sept 2004) and visitors over 15 years of age were questioned as they were leaving the attraction. The pattern of selection of the sample can be described as 'first free', which means that after questioning one person, the pollster asked the next free person to fill out the questionnaire. The study finally included 582 people of whom 65% were women and 35% men. 44% were 15–18 years old, 21% were 19–25, 15% were 26–35 and only 20% were over 35. Only 18% of visitors were tourists (with a trip lasting longer than one day) and as many as 73% were repeat visitors – 46% arrived from homes more than 100 km from Biskupin.

3. RESULTS

In the factor model there were five latent variables: *motivation, attraction product quality, satisfaction, benefits* and *behavioural intentions*. In order to identify the factor structure of the variables measurement scales, exploratory factor analyses of individual scales were carried out. The method of principal components with varimax rotation and the criterion of minimum eigenvalue equal to 1.0 were used. The minimum acceptable value of factor loading was 4.0 (HAIR *et al.* 2007; ZAKRZEWSKA, 1994). The factor analysis of a seven-element scale for the measurement of motivation revealed two factors: *cognitive* and *recreational and social* (Table 1). Both factors accounted for over 50% of variance of the motivation variable and were characterised by a high reliability equal to Cronbach's $\alpha = 0.66$.

T a b l e 1. Results of exploratory factor analysis of motivation scale

Items of motivation scale	Factors	
	cognitive	socio-recreational
I wanted to learn something new	0.727	
I wanted to show my children/ family/friends something new	0.530	
Because such places should be visited	0.679	
I wanted to see a new interesting place	0.795	
I wanted to relax in good surroundings		0.785
I wanted to get away from everyday stress		0.787
I wanted to spend time well with my children/family/friends		0.683
Eigenvalue	1.960	1.845
% of explained variance	28.00	26.37
Cronbach's α	0.66	0.66

S o u r c e: Author based on inventory.

T a b l e 2. The results of exploratory factor analysis of attraction product quality

Items on the attraction product quality scale	Factors		
	exhibition	sources of information	quality of services
Museum exhibition	0.431		
Displays of historical fights	0.449		
Zagroda Wisza (Wisz's homestead)	0.445		
Live animal enclosures	0.422		
Cake baking	0.630		
Shows on the restoration of historical artefacts	0.447		
Handicraft shows	0.477		
Beer brewing	0.613		
Dances, songs and instrument playing	0.519		
Archery, crossbow shooting	0.525		
Information boards		0.646	
Talking to the staff		0.463	
'*Gazeta Biskupińska*' (a local newspaper)		0.634	
Guide/brochure		0.564	
Direction signs		0.650	
Plans, maps		0.682	
Car park			0.472
Staff			0.576
Souvenirs			0.616
Adapting the exhibition for children			0.416
Catering			0.680
Toilets			0.584
Eigenvalue	3.016	2.085	2.431
% of explained variance	13.114	9.064	10.569
Cronbach's α	0.69	0.71	0.62

S o u r c e: Author based on inventory.

The factor analysis of the measurement scales for attraction product quality revealed three factors: *exhibition, sources of information* and *quality of services* (Table 2). The three factors extracted 32.75 % of total variance of the variable *attraction product quality*. The factors were characterised by a relatively high reliability: the highest was achieved by the *sources of information* scale (α$_c$ = 0.71), slightly lower, but also significant values of indicators were achieved by the scales of *exhibition* (α$_c$ = 0.69) and *quality of services* (α$_c$ = 0.62).

Another analysis was carried out for the measurement scale of the benefits variable. As a result three factors were obtained: *recreational, educational* and *social* (Table 3). The first one, including elements of relaxation, entertainment and escape was the most reliable: Cronbach's α = 0.68. The reliability of the second factor, made up of perceptions of authenticity, atmosphere and own learning was Cronbach's α = 0.64. The third factor made up of indicators of care for other people and spending time with them was called a social factor, had the lowest reliability (Cronbach's α = 0.53), but was acceptable (HAIR *et al.*, 2007).

T a b l e 3. The results of an exploratory factor analysis (EFA) of the benefits scale

Items on the benefits scale	Factors		
	recreational	educational	social
I managed to rest and relax	0.801		
I managed to forget about everyday duties	0.845		
I felt the authentic character of life in past epochs		0.811	
I learned something new		0.596	
I felt the real atmosphere of this place		0.653	
I showed something new to my children/family/friends			0.883
I spent a good time with my children/family/friends			0.592
Eigenvalue	1.853	1.536	1.484
% of explained variance	26.466	21.946	21.194
Cronbach's α	0.70	0.61	0.53

S o u r c e: Author based on inventory.

The satisfaction variable was made up of three indicators: *boring – interesting, tiring – relaxing* and *irritating – pleasant.* The scale achieved a very high level of reliability: Cronbach's α = 0.82. The last of the studied variables – *behavioural intentions* – made up of three indicators: *loyalty, recommendation* and *willingness to pay* achieved a reliability of Cronbach's α = 0.59.

Another step was an assessment of how the model matched the data, carried out using a confirmatory

T a b l e 4. Results of confirmatory factor analysis

Variables	Assessment of parameter [a]	Standard error	t statistics	p	Reliability	Variance extracted and variance error
Quality					0.637[b]	0.331[d]
Exhibition	0.545	0.049	11.194	0.000	0.297[c]	0.469
Sources of information	0.730	0.060	12.089	0.000	0.532	0.615
Services	0.405	0.040	9.829	0.000	0.164	0.323
Satisfaction					0.888	0.720[4]
Interesting	0.869	0.047	18.458	0.000	0.756	0.387
Relaxing	0.814	0.049	16.773	0.000	0.663	0.486
Pleasant	0.862	0.046	18.536	0.000	0.743	0.386
Benefits					0.431	0.210[4]
Recreational benefits	0.360	0.042	8.483	0.000	0.130	0.477
Educational benefits	0.480	0.036	13.313	0.000	0.230	0.218
Social benefits	0.487	0.049	9.909	0.000	0.237	0.614
Behavioural intentions					0.469	0.236[4]
Loyalty	0.507	0.041	12.325	0.000	0.257	0.399
Willingness to pay	2.546	0.416	6.121	0.000	0.169	0.736
Recommendation	0.501	0.035	14.403	0.000	0.251	0.230

Note: χ^2 = 98.71 (48); p < 0.001; *GFI* = 0.981; *AGFI* = 0.969; *RMSEA* = 0.049; *MDI* = 0.943; *AIC*[9] = 0.360.

[a] The model is built on the basis of covariance matrix, hence factor loading reflects regression coefficients between observable variables and factors (coefficients can be greater than zero) (SAGAN, 2003).
[b] Construct reliability coefficient = $[\text{SUM}(P_i^2/(1-P_i^2))]/[1+\text{SUM}(P_i^2/(1-P_i^2))]$, where P_i – i-th parameter (GAGNE & HANCOCK, 2006).
[c] Reliability coefficient of the indicator is the square of its parameter.
[d] Explained variance = $[\text{SUM}(P_i^2)]/[\text{SUM}(P_i^2) + \text{SUM}(e_i)]$, where P_i – i-th parameter, e_i – corresponding error equal to 1, minus the reliability coefficient of the indicator (*see above*).

S o u r c e: Author based on inventory.

factor analysis. Latent variables were defined in such a way that each of them has at least three factors. Motives were the only exception due to the two-factor structure of the motivation scale. Each indicator had only one variable (HAIR *et al.*, 2007). The matching of the model to the data analysed using absolute indicators: χ^2 test, *GFI*, *AGFI* and *RMSEA* turned out to be insufficient (SAGAN, 2003). The value of χ^2 test was 203.43 (*df* = 67) and was statistically significant at the level of *p* < 0.001. This means that standardised residuals of theoretical and empirical matrixes differ significantly which suggests the need to reject the model. The values of other indicators were *GFI*[5] = 0.940, *AGFI*[6] = 0.906, *MDI*[7] = 0.799 and *RMSEA*[8] = 0.060 which also leads us to reject the tested model.

Due to this, and due to the weakest correlation of motivation factors with other variables, this variable was removed from the model. The modified model matched the data much better. Although the value of the χ^2 test = 98.71; with *p* < 0.001 may suggest that the new model still does not match the analysed data, the value of the χ^2 test is significantly lower than in the original model. Moreover, many scholars claim that with large samples even a well matched model may be rejected by a χ^2 test as it is very sensitive to the size of the sample (JORESKOG & SORBOM, 1996; HAIR *et al.*, 2007). In this case other tests are recommended. The tests which were carried out disclosed a good match with the model: *GFI* = 0.981 – significantly above the recommended value of 0.95, *AGFI* = 0.969 – above the recommended value of 0.95, *RMSEA* = 0.049 – below the recommended 0.05, *MDI* = 0.943 – very close to the recommended 0.095. All factor loadings of the model had values above the recommended value of 0.3, and high values of the *t* statistic (with *p* < 0.001) indicate that the obtained loadings are statistically significant (table 4).

In order to verify the hypothetical relations between the variables in the model a procedure of modelling structural equations was carried out[10]. All hypothetical relations between the variables of the second model turned out to be statistically significant at the level of *p* < 0.05 or lower (table 5). Benefits gained from visiting are the strongest factor affecting behavioural intentions (β = 0.567; *p* = 0.008). The next factor affecting visitor intentions is the attraction product quality (β = 0.171;

T a b l e 5. Detailed results of structural equation modelling

Variables	Parameter β	Standard error	*t* statistics	*p*
Quality – Exhibition	0.545	0.049	11.193	0.000
Quality – Sources of information	0.729	0.060	12.089	0.000
Quality – Services	0.405	0.040	9.832	0.000
Quality → Satisfaction	0.338	0.058	5.803	0.000
Quality → Intentions				
Direct effect	0.171	0.061	2.806	0.005
Indirect effect	0.192	–	–	–
Total effect	0.363	–	–	–
Quality → Benefits				
Direct effect	0.201	0.035	5.831	0.000
Indirect effect	0.053	–	–	–
Total effect	0.254	–	–	–
Satisfaction → Intentions				
Direct effect	0.140	0.048	2.934	0.003
Indirect effect	0.089	–	–	–
Total effect	0.229	–	–	–
Satisfaction → Benefits	0.157	0.033	4.702	0.000
Satisfaction → Interesting	1.000	–	–	–
Satisfaction → Relaxing	0.936	0.063	14.767	0.000
Satisfaction → Pleasant	0.991	0.062	16.075	0.000
Benefits → Intentions	0.567	0.215	2.637	0.008
Benefits → Educational benefits	1.000	–	–	–
Benefits → Recreational benefits	0.932	0.178	7.486	0.000
Benefits → Social benefits	0.951	0.190	7.100	0.000
Behavioural intentions → Loyalty	1.000	–	–	–
Behavioural intentions → Willingness to pay	0.812	0.117	6.912	0.000
Behavioural intentions → Recommendation	0.988	0.095	10.433	0.000

S o u r c e: Author based on inventory.
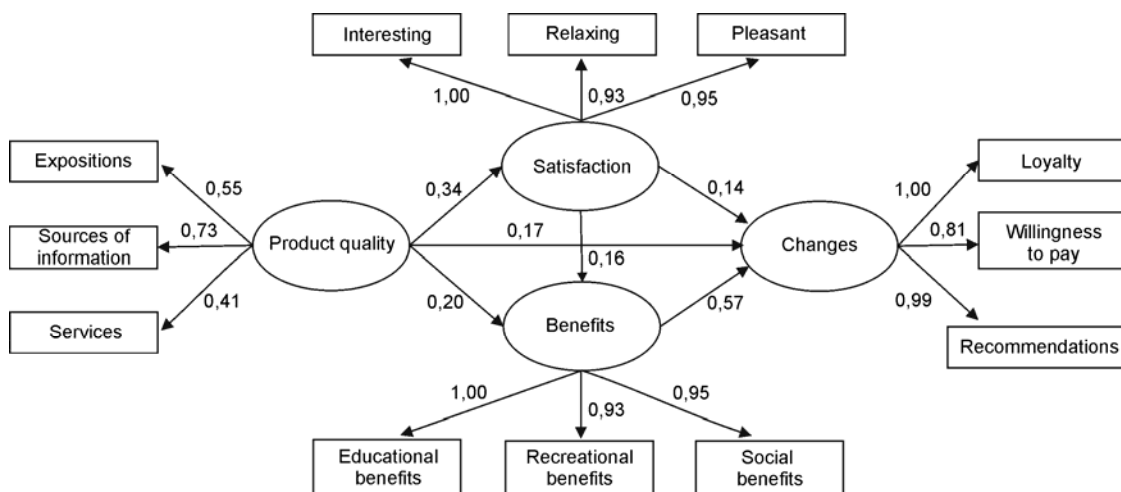

Fig. 2. Model of relations between quality, satisfaction, benefits and behavioural intentions
(s o u r c e: author)

p = 0.005) and satisfaction (β = 0,140; p = 0,003). The results make it possible to adopt other hypotheses: the attraction product quality has a positive effect on satisfaction (β = 0.338; p < 0.001) and on benefits gained from visiting (β = 0.157; p < 0.001). Satisfaction has a positive effect on the perception of benefits from visiting (β = 0.157; p < 0.001). The effect of benefits on behavioural intentions (β = 0.567) turned out to be stronger than the effect on attraction product quality (β = 0.171) and satisfaction (β = 0.140). The above relations are illustrated by the model in Fig. 2.

4. DISCUSSION AND CONCLUSIONS

The author's intention was to verify empirically relations between factors affecting satisfaction and behavioural intentions, and to create a model explaining the process of tourists visiting attractions. There was a clear majority of young people in the surveyed group: as many as 65% were 25 and younger, and only 20% were 35 and older. This certainly had an influence on the results. Dependences among variables could have had a different intensity in another older group. However the surveyed group is representative of those visiting the festival as young people dominate, illustrated by the constructed model. In the case of other attractions, with different product features and a different socio-demographic of visitors, these dependences could have different relations. That is why further verification of the proposed model is required for other tourism attractions.

It was found that the 'perception of quality' and 'satisfaction of visitors' are correlated in a significant way. This means that the high value given by the visitors to the efforts of the service provider has a positive relation with their satisfaction in visiting. The study also delivered proof on the effect of satisfaction and benefits gained from visiting on intentions relating to further visits, recommending the attraction to friends and paying for admission. These data confirm partly the results obtained by TOMAS, SCOTT & CROMPTON (2002) as well as BAKER & CROMPTON (2000). The intermediate factor between 'quality of the attraction' and 'intentions of the visitors' is benefits. This is the main route of influence of the quality of the attraction on behavioural intentions, and in addition this effect takes place partially through satisfaction of visitors. The factors which most strongly 'load' the variable of quality are 'sources of information' and 'exhibitions'. Among sources of information those assessed highest by the visitors are information boards and panels and direction signs, while among exhibitions – live exhibitions, and those prepared in an interesting way allowing for inter-action with visitors. These elements of attractions provide most satisfaction, benefits to the visitors and as a consequence make them want to visit again.

The obtained results prove that benefits and quality of the attraction have a greater total effect on behavioural intentions than satisfaction of visitors. People visiting tourism attractions to a greater extent base their decision to revisit, or recommend, on the assessment of their benefits and the quality of attraction than on their own satisfaction. In other words, elements of long-term benefits and memories of visiting the attraction affect decisions to revisit, not momentary satisfaction which is considered to be a psychological state affecting a change of attitudes rather than a factor affecting intentions (OLIVIER. 1980; YI, 1991). What is more, the variables which play the strongest part in the assessment of efforts of the service provider are sources of knowledge and exhibitions. Similar relations were obtained by Baker & Crompton (2000), however for them quality of service and the exhibition of the attraction had the greatest effect on perception of the quality of the attraction.

The study proved also that satisfaction is not a strong mediator of behavioural intentions. It can be said then that satisfaction is not an appropriate indicator of the efforts of the service provider as it is affected by a number of factors outside the control of that provider. They include for example the weather, the individual's mood or the mood in a group of visitors.

The results of the above study allow the adoption of the postulated model of relations between quality, satisfaction and behavioural intentions. Changeable motivation was removed from the model due to the impossibility to adjust the model to the data – the main reason, it seems, was the lack of correlation between recreational and social motives with other model variables. Where does this come from? People with such motivation are to a lesser degree interested in sources of information and the exhibition which are the factors that most strongly load the variable efforts of the service provider. So if these two factors determine satisfaction and benefits to the greatest extent, and they in turn determine behavioural intentions, it is obvious that recreational and social motives affect to a small extent the shape of the proposed model, which translates into the absence of the motivation variable in the model. The above results are a stimulus to search for other models which would link motives (in particular recreational and social) with behavioural intentions. The recreational and social activity of visitors may play a significant role as an intermediate variable between motives and intentions. It is also probable that the research into motivation carried out after completion of the visit are loaded with too large an error due to benefits gained

which disrupts the original picture of motivation. If there are both motivation and benefits variables in a model, the latter, as better identified after the completion of the visit, have, as the research showed, a stronger relation with other variables of the model, pushing out somehow motivation from the process of assessing the visit to the attraction. In practice it indicates the need to study the motivation of visitors before they visit the attraction. Secondly, since it is the benefits, not motives that are related most strongly to behavioural intentions, segmentation of the visitor market should be made on the basis of benefits, not the motives of the visitors.

The study also found that sources of information, followed by exhibitions, have the strongest effect on perception of a provider's efforts. Thus, the conclusion for managers of attractions is that there is a need to modernize the content and methods of communicating information, and to ensure high-quality exhibits and heritage interpretations at the attractions.

The studies provided proof that it is the sources of information that determine to the greatest extent the will to revisit and the willingness to accept a higher admission fee. A relatively weak relation between perception of quality of services and the perception of the total efforts of the service provider seems to confirm the findings of HERTZBERG (1966) & JENSEN (2004), concerning factors and motivators. The factor of quality of service belongs to the former. The quality of service and infrastructure is very important to avoid generating dissatisfaction, however, their role in affecting behavioural intentions is small. Therefore, the optimal solution from the point of view of investment effectiveness is ensuring a minimum acceptable level of quality of service (car parks, toilets, catering, souvenirs etc.) and concentrating on perfecting and improving the quality of exhibitions, the interpretation of heritage and the provision of information.

FOOTNOTES

[1] Tourist attractions are a designated permanent resource which is controlled and managed for the enjoyment, amusement, entertainment, and education of the visiting public (MIDDLETON, 1996; NOWACKI, 2000a).

[2] *Recreation Opportunity Spectrum – ROS.*

[3] According to the AJZEN & FISHBEIN's (1980) theory of reasoned action, a person's behavioural intention depends on subjective norms which can be understood as the motivational factor influencing behaviour.

They are determined by three independent factors: behavioural intention, attitude and subjective norm.

[4] The Archaeological Festival at Biskupin is one of the largest in Europe. It takes place annually during the third week of September. During nine days in 2004, there were over 90,000 visitors. Realizing ideas of experimental archaeology organizers incorporate live interpretation techniques as well. A variety of traditional activities from everyday life are presented from ancient times like music, dance, early-mediaeval warriors fights, ceremonies, shooting with long-bows and cross-bows, minting coins and many others.

[5] GFI – Population Gamma Index: the value of this index in case of a good match of equations should be greater than 0.95.

[6] AGFI – Adjusted Population Gamma Index: the value of the index should be greater than 0.95.

[7] MDI – McDonald's Index of Noncentrality: the value of this index should be greater than 0.95.

[8] RMSEA – Steiger-Lind index: the value of this index should be lower than 0.05.

[9] AIC – Akaike Information Criterion: is useful for selecting the best matched model from several– it should be as small as possible.

[10] The method was a development of path analysis (see JORESKOG & SORBOM, 1996; SAGAN, 2003; HAIR, *et al.* 2007).

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