

INFORMATION TECHNOLOGIES IN THE ACTIVITIES OF DESTINATION MANAGEMENT ORGANIZATIONS

Review

Jacek Borzyszkowski

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Abstract

The purpose – The purpose of the article was an attempt to assess the significance of two spheres connected with the functioning of DMOs, i.e. internet marketing and the development of modern technologies and information systems.

Design – The study covers theoretical issues connected with the essence of destination management organizations as the basic organizational structures in the tourism sector, and with the significance of the Internet and modern information technologies in the activities of these organizations. The second part of the study covers the empirical issues of the problem analyzed.

Approach and methodology – Apart from theoretical deliberations, it provides the review of previous research. Moreover, the results of the author's research were used with the aid of the diagnostic survey technique. The results from 53 DMOs that represent 19 European states were obtained.

Findings – The quantity of expenditures on information technologies was defined in the structure of the total expenditures on the part of DMOs. The average value for all the organizations under analysis was 10.9%. Owing to the application of the point grading method (Likert scale), it was demonstrated that internet marketing and the development of modern technologies and information systems are becoming increasingly more important areas of the activities.

Originality of the research – The originality is evident in the insights it provides about use of modern information technologies and the Internet in the activities of DMO. The empirical deliberations presented in this article should become an important point of reference for many DMOs and should emphasize the growing significance of information technologies.

Keywords information technology, Internet, Destination Management Organizations

INTRODUCTION

The development of the present-day modern destinations is the result of many elements: a comprehensive impact on the individual elements of the tourist supply and demand. It is important that the offer of destination be properly adapted to the changing conditions on the tourist market and in particular to the requirements of the present-day tourist. More and more frequently, it appears that tourists, when choosing their destination (as well as when staying there), make use of the information technologies' modern solutions. Hence, there is the growing role of the adequate entities in the scope of an adaptation to the tourist's requirements. It is accepted that the so-called destination management organizations (sometimes also referred to as destination marketing organizations) are the most important entities in this area. It is these very organizations that are (or should be) the most important "players" in a given destination. It is them that should be the leaders in the area of the tourist function

development. They are also responsible for the proper preparation of a comprehensive offer for tourists and thereby an adaptation to the tourist's requirements. A competent use of modern information technologies will play a significant role in this area.

1. IDEA OF DESTINATION MANAGEMENT ORGANIZATIONS

In literature, more and more attention is paid to the issues connected with the functioning of DMOs. Scientists also undertake attempts to define these organizations. At this point, it should be mentioned that various authors do not only define in different manners the organization itself, but they also hold diverse views concerning the name itself: some make references to destination marketing organizations, whereas others speak about destination management organizations (Borzyszkowski 2011, 238). Destination Management Organizations are defined by the World Tourism Organization (UN-WTO) as "(...) those organizations which are responsible for management and/or marketing of individual tourist destinations" (World Tourism Organization 2004, 3). Collins and Buhalis define Destination Management Organizations as the providers of products and information technology services to customers, agents and suppliers in the sector of tourism (Mendling, Rausch, Sommer 2005, 2). Padurean (2010, 10) speaks about an organization which is responsible for the management and coordination of all the activities in a destination including planning and promotion. According to Gretzel, Fesenmaier, Formica and O'Leary (2006, 116), Destination Management Organizations are non-profit entities which aim at the generation of the tourists' visits in a given area.

Destination Management Organizations may occur in one of the following forms: national tourism authorities (NTAs) or organizations (NTOs) (responsible for management and marketing of tourism at a national level); regional, provincial or state DMOs (RTOs) (responsible for the management and/or marketing of tourism in a geographic region defined for that purpose, sometimes but not always an administrative or local government region such as a county, state or province) and local DMOs, (responsible for the management and/or marketing of tourism based on a smaller geographic area or city/town) (World Tourism Organization 2004, 3).

2. INFORMATION TECHNOLOGIES AS THE SPHERE OF DMOs' ACTIVITIES

The present-day society is an information society. This concerns practically all the aspects of the social and economic life. No wonder that more and more attention is paid to the proper use of modern information technologies in practically each branch of the national economy. This also concerns the tourism sector.

In literature, there are a number of studies concerning both information technologies and their application in tourism. For example, according to Pawlicz (2012, 16), information technologies (IT or ICT) can be defined as the total of digital information processing technologies that support the management processes of the resources of an organization and communication with its external partners. ICTs are defined as the total

of electronic tools which enable a strategic and operational management of organizations through enabling them both management of information, functions and processes and an interactive communication with partners to achieve the goals assumed. The notion of e-tourism is close to this. As Buhalis (2003, 50) puts it, e-tourism is "(...) the reflection of the digitization of all the processes in the sector of tourism". This can be also treated just as the application of ICT (IT) in tourism (Buhalis and Law 2008, 615). The World Tourism Organization treats e-tourism as e-business in tourism (World Tourism Organization 2002, 33).

The ability to use the possibilities offered by the Internet is one of the more important aspects of the application of modern information technologies. The justified relations between tourism and the Internet were emphasized by the World Tourism Organization. According to it, both elements "(...) are an ideal combination" (Bendito, and Ramírez 2011, 8). This can be practically referred to all the entities that operate in our times on the tourist market including DMOs. This is confirmed with opinions by many scientists. For example, Gretzel, Fesenmaier, Formica and O'Leary (2006, 117) observe that among the most important challenges of DMOs include an adaptation to technological changes. The authors emphasize that in many cases, internet websites do not satisfy tourists' needs, and the Internet is not able to replace old marketing techniques. Regardless of the threats occurring, it is worth once more to emphasize the potential possibilities which the Internet (or a more broad perspective: modern information technologies) offers to individual organizations. Some are of the opinion that the greatest changes in the use of the so-called e-tourism are visible at the level of the destination (being the area of the activities of DMOs). Destination Management Organizations by using the Internet, Intranet and Extranet, successfully combine these functions with the promotion of the destination and aid to tourist companies in the support of their products (Ma, Buhalis, Song 2003, 452).

National tourism organizations (NTOs) can be indicated as an appropriate example. The current activities of many NTOs, which focus on traditional media and advertising tools are replaced with modern technologies that are used in many aspects of the social and economic life. The Internet is becoming a more and more universal communication channel to transmit information to potential recipients. The websites of individual NTOs are extended so that "(...) a visit to them becomes an unforgettable experience" (Beerli and Martín 2002, 17; Standing 2000, 47).

The Internet offers a number of various possibilities in communication and promotion. The so-called e-brochures are the tool which in the recent years seems to be growing in its significance in the use of modern information technologies by DMOs. These are electronic equivalents of traditional advertising publications. Though they should theoretically coincide with traditional carriers (a good quality, exhaustive information), they possess such features which are distinctive to them, i.e. they are not sold, information can be quickly updated, they are definitely cheaper, there is a clear possibility to control the number of downloads from a website (Bennett, and Jones 2004, 40). An increasing "saturation with information" is the problem which is becoming more and more evident in the use of the Internet by NTOs. This often leads to the user being confused. In this case, this is the fault of NTOs which frequently forget about their requirements (Bowen 2002, 6). This problem is viewed from a slightly

different perspective by Han and Mills (2006, 420). According to them, the majority of the NTO websites can be treated as “visual mega-places” with an adequate selection of colors and photos. The information available is quite poor. The authors call for NTOs to consider a change of their current activities in the Internet by adding on-line reservation. However, it turns out that in many cases e-brochures either are not to a sufficient degree used in promotion, or they contain selective information only. Research carried out on a group of several national tourism organizations demonstrated that in Greece only 18% of information included in typical printed brochures is presented in an on-line form (Bendito, Ramírez, Noubar 2010, 5).

To conclude, the use of modern information technologies by DMOs is already becoming a generally accepted standard. As early as in 1990s, it was emphasized that DMOs cannot limit themselves merely to the provision of information. According to the Business Council of the World Tourism Organization, DMOs must build systems of reservation, to be also used by private sector entities (Çetinkaya 2009, 6). The significance of the Internet in an efficient functioning of DMOs was noted by Buhalis (2000, 101) who, when indicating the most important challenges for these organizations, emphasizes among others the use of new technologies in the coordination of the development of products and services for the purpose of global promotion.

3. AIM, MATERIAL AND METHODOLOGY

In the period from January to March 2013, the author carried out his own research with the use of a questionnaire. The research was conducted via e-mail (by sending questionnaire forms to appropriate organizations). From among the issues within covered by the research carried out, two issues that are essential from the perspective of this study were single out, i.e.:

- share of expenditures on modern information technologies in the structure of the total expenditures of DMOs,
- determination of the significance of modern information technologies in the to-date, present and future activities of DMOs.

In the case of the second objective, the problem analyzed was divided into two issues. In relation to the first one, the significance of Internet marketing was characterized (due to the fact that marketing activities often constitute the basic sphere of the activities of many DMOs including national tourism organizations: NTOs). In the second case, the significance of the joint activities in the sphere of the use of modern information technologies was defined.

The results of the research were obtained from a total of 53 European organizations which represented 19 countries (Croatia, Latvia, Slovakia, Belgium, Finland, Austria, the Czech Republic, Cyprus, Spain, Sweden, France, Wales, England, Switzerland, Poland, Hungary, Montenegro, Estonia, Serbia). From among the results obtained, 4 (i.e. 8%) constituted organizations of a national nature (these were national tourism organizations: NTOs). Regional entities constituted the next group: 22 (41%). Among the organizations examined, local entities were dominant: in total, there were 27 of

them (i.e. 51%). The author wishes to mention that in the case of national Destination Management Organizations, the research results are to be treated with considerable reserve due to the sample being small. In spite of it, a decision was made to take them into consideration in this analysis.

4. EXPENDITURES ON INFORMATION TECHNOLOGIES IN THE STRUCTUE OF THE EXPENSES ON THE PART OF DMOs

The first feature analyzed concerned the selected financial questions connected with the problem raised, that is the quantities of the expenditures on the part of the DMOs examined on widely understood information technologies (among others Internet promotion, e-commerce, m-commerce). The organizations analyzed were asked to provide the percentage share of these expenses in the structure of the whole budget of the organization. 44 DMOs provided answers. The average value was 10.9% of the whole budget. However, significant disproportions were found between the individual organizations. The average as given (10.9%) was achieved by only 13 organizations, and 31 DMOs were below the average. The median for the organizations examined was 6.05%: half of organizations possessed smaller values, and another half higher values. One needs to mention the extreme values that were obtained for the organizations: the smallest was merely 0.01 per cent (2 DMOs), and the highest as much as 50 per cent. It also worth to mention that practically no differences were observed between the regional structures and local structures in the scope of expenditures on IT technology (national structures were omitted due to a small research sample). It appears that the average share of expenditures on information technologies in the structure of the whole budget in regional organizations (N=18) was 11.4% and in local organizations: 11.1%. Thereby, it can be assumed a priori that the level of the occurrence of DMOs has not the influence on the percentage of expenditures on information technologies.

The analysis carried out above of scientific sources and also of the results of the author's own research explicitly demonstrates the growing role of modern information technologies in the activities of DMOs. This is confirmed by the fact of significant expenditures incurred in relation to this sphere by many organizations: in some cases, these quantities reach several dozen percent of the total DMO budget. This information is supported with many other investigations. For example, research carried out among 35 Hungarian DMOs explicitly shows that modern information technologies will be the most quickly developing sphere of the functioning of the organizations. It was predicted (the research was carried out in the year 2008) that within the coming 3 years, this would concern mainly: CRM (an increase by 25%), e-mail marketing (an increase by 33%), the use of IT systems in the area of information (an increase by 17%) and on-line reservations (and an increase by 16%) (Bakucz 2008, 7).

Obviously enough, in the individual cases the research results may differ. This is confirmed with the observations that were jointly carried out by the World Tourism Organization and the European Travel Commission in the years of 2008-2009. In the group of 26 National Tourism Organizations (NTOs), the share of expenses on the Internet and e-tourism was on the average 6%, yet in relation to the marketing budget (World Tourism Organization, European Travel Commission 2010, 27, 90). In the case

of the share in the whole budget, this percentage will be even smaller. The differences between the author's research and the UNWTO-ETC data are the result of several factors. Firstly, the author assessed the share of the total information technologies, while in the method used by UNTWO-ETC, this was only the Internet and e-tourism. Secondly, the periods covered by the research are different (the data from the UNWTO-ETC concern the years of 2008-2009) and particularly important: the research samples are different: the UNWTO-ETC include only the National Tourism Organizations and, what is worth to mention, as many as 11 of 26 are non-European. This can be essential as per 23 NTOs, the average expenses of European NTOs on the Internet and e-marketing in the year 2009 were on the average USD 1.95 million, while in the case of non-European NTOs, this was USD 1.03 million (World Tourism Organization, European Travel Commission 2010, 106).

5. EVOLUTION OF CHANGES IN THE APPLICATION OF INFORMATION TECHNOLOGIES BY DMOs

An attempt to assess two quantities, i.e. the significance of Internet marketing and modern technologies and systems (including IT technologies) was another issue covered by the analysis. For this purpose, in the research, the method of point quality classification was used. The entities examined were requested to present the significance of the factor in the scale from 0 to 5, where 0 was an element which does not occur, 1 – an element which is the least important, 5 – the most important element. The method used in this case allowed a determination of the attitudes of individual DMOs towards the issue analyzed. This method is practically in accordance with the Likert scale (in this study, additional "0" option was introduced – the element does not occur). The only drawback of this method is a subjectivity of the answers provided by the employees of DMOs. The organizations examined were asked to indicate the rank of a given factor in three periods, i.e. in the past (5-10 years ago), at present, and its potential significance in the future (during the coming 5-10 years) (Table 1).

It is worth to emphasize that in the individual cases, different research samples were observed, among others due to the fact that some organizations were formed relatively recently (2011-2012), so naturally they were unable to refer to quantities from the past .

Table 1: **Evolution of the activities of DMOs in the area of information technologies and Internet marketing**

No.	Period	Internet marketing		Development of modern technologies and systems	
		N	Value	N	Value
1.	Past (5-10 years ago)	51	1.90	50	2.27
2.	At present	52	3.71	51	3.40
3.	Future (in 5-10 years)	52	4.68	51	4.27

Source: Author's own research.

The values presented in Table 1 clearly depict an increase of the significance of both factors in the activities of the DMOs examined. It can be assumed that the organizations examined emphasize strongly activities both in the sphere of Internet marketing and a comprehensive development of modern technologies and systems. At this point, it also is worthwhile to examine the dynamics of the changes observed. In this case, it can be seen that in the area of Internet marketing, it is significantly larger. For example, the average value from the period of “now” in relation to “the past” increased by 95% (from 1.90 to 3.71), and by 26% in the case of “future” to “now”. In relation to the development of modern technologies and systems, these values were 50% and 26% respectively. Referring to the changes in the extreme cases (i.e. “future” in relation to the “past”) these quantities were: 146% (Internet marketing) and 88% (development of modern technologies and systems). Thereby, it can be clearly found that the organizations examined emphasize (or emphasized) more the development of Internet marketing.

It is interesting to note that in both factors analyzed a greater pace of growth was observed in the recent years than in the nearest future. This does not testify to the marginalization of these activities but more about the fact that at the present stage, the majority of organizations indicated high values (and thereby assessed highly the significance of both factors in the hierarchy of activities); cf. Table 2.

Table 2: **Percentage of DMOs (in %) that indicate the highest values for the factors examined**

No.	Period	Internet marketing		Development of modern technologies and systems	
		“4” and “5”	“5”	“4” and “5”	“5”
1.	Past (5-10 years ago)	16	6	18	6
2.	At present	60	25	47	20
3.	Future (in 5-10 years)	94	79	80	57

Source: Author’s own research.

This phenomenon is clearly evident in the case of two highest marks, i.e. “4” and “5” (presented in an aggregate form). In the case of Internet marketing, above a half (60%) of the organizations indicated such values at the current stage already. In the case of the highest marks (i.e. “5”), the situation is slightly different: here, only 25% of DMOs declare so at present. However, it is important that in the case of the coming future (5-10 years), for as many as for 79% of the entities examined, the Internet marketing will occupy the highest positions in the hierarchy of activities. Similar tendencies are observed in the case of the “development of modern technologies and systems” factor, yet in this situation the pace of changes is clearly smaller. This is confirmed by the highest mark (“5”) declared by the organizations within the coming 5-10 years: this opinion was given by 57% of the respondents.

While preparing a characterization of the activities undertaken by the DMOs examined in the context of the development of information technologies, a statistical analysis was carried out, whose purpose was to depict the correlation between two quantities discussed above, i.e.:

- share of expenditures on modern information technologies in the structure of the total expenditures of DMOs and the present (“now”) perception of the significance of internet marketing in the hierarchy of activities,
- share of expenditures on modern information technologies in the structure of the total expenditures of DMOs and the present (“now”) perception of the significance of the development of modern technologies and systems.

The statistical analysis carried out demonstrated a very weak positive relation both in the first ($R=0.1056$) and in the second case ($R=0.0438$). The results obtained may confirm a clear subjectivity of the answers provided in the case of the determination of the significance of internet marketing and the development of modern technologies and systems. They are not adequate to the amount of expenditures related to information technologies incurred by the DMOs examined. However, these answers should not be considered to be unnecessary. In this case, above all, the depiction is of an essential significance to changes in the perception of both values in specified time intervals (i.e. in the past, at present and in the future).

CONCLUSIONS

The analysis carried out in this article confirms the role of modern information technologies in the activities of DMOs. As demonstrated in the theoretical analysis, these are entities which are responsible for widely understood marketing. On the other hand, there is a visible increase of other activities, mainly in the context of destination management. Information technologies are one of those elements that allow the creation of a modern competitive destination. The research results confirm this assumption. However, significant disproportions are observed between the individual entities in the scope of expenditures allocated to this sphere of activity. This means that there are different attitudes to the problem of the application of information technologies by DMOs. It can be assumed that those entities whose expenditures related to information technologies are higher will achieve a definitely better position on the tourist market.

The fact that in the opinion of the organizations examined the significance of the issue in question has been growing over the past several years is a positive phenomenon. It is predicted that this phenomenon will be observed in the coming future. What is interesting, the dynamics of the increased significance of internet marketing is higher than that of modern technologies and systems. This may mean that tourist marketing will continue to be an essential and even leading sphere of DMOs’ activities. Thereby, assumptions by scientists confirm that the most important challenges of DMOs include an adaptation to technological changes. It can be assessed that this phenomenon in the coming future will be more and more visible among DMOs. Over a half of the organizations examined predict that in the nearest future, internet marketing and

development of modern technologies and systems will occupy the highest positions in the hierarchy of activities.

To conclude, an increase of the significance of information technologies in the activities of DMOs will translate onto a more efficient functioning of many organizations: not only in the sphere of promotion or information but also of a widely understood management of destination. Thereby, these organizations will become more competitive. What is equally important, the effects of a more effective use of information technologies will be observed not only in the activity sphere of organizations. The question of the impact on the potential customer is equally essential (and perhaps even more important). The claim that the future of e-tourism will mainly focus on the customer is correct. The customer is becoming more and more demanding and experienced; hence, it will be more and more difficult to “persuade and win” him/her.

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Jacek Borzyszkowski, PhD
Koszalin University of Technology
Faculty of Economics, Tourism Department
Ul. E. Kwiatkowskiego 6E
75-343 Koszalin, Poland
Telephone number: +48 94 34 39 125
Fax number: +48 94 34 39 113
E-mail: jacbo@wp.pl