Towards Tourism Business Change

Eyal ECKHAUS[1]

Abstract

The tourism industry is a critical component in the global economy being the world's largest generator of wealth and employment. The widespread use of the internet has had a tremendous impact on the industry which was one of the first to take advantage of the capabilities and developments. Despite these advances, the tourism industry still hasn't realized the full potential of the digital realm and much need to be done to attain a higher level of user experience. A major recent technological advance has been the integration of a three-dimensional virtual world into a virtual reality. This new environment is rapidly growing in popularity among users and businesses as powerful promotional tool. Despite the potential of this new type of environment, a question-mark still hangs over its implementation and assimilation. This paper discusses the implications of this novel development in relation to the tourism industry, and highlights the approaching trend.

Keywords: *tourism, entrepreneurship, virtual reality, technology, business.*

JEL classification: M10, M30.

1. Introduction

Tourism is one of the fastest growing industries globally (Ma, Hong & Zhang, 2015). Having managed to remain resilient in spite of uncertain global economic outlook in the recent years (Blanke & Chiesa, 2013), the traveling sector is on the increase as new possibilities arise from the process of globalization, the advance of technology, and more readily available means of travel (Iyer, Dey & Chakraborty, 2015). These developments are extremely vital to the tourism industry which constitutes a critical component in the global economy and is the world's largest generator of wealth and employment (Blanke & Chiesa, 2013). Over the past few years we have seen the widespread use of the internet among the public at large. Various tools were introduced, including ones that comply with the development in recent years of the Web 2.0 technological infrastructure (Popescu & Popescu, 2016). New communication approaches were created to improve interaction and communication (Martínez-Torres, Toral, Barrero & Cortés, 2010), having a powerful effect on the tourism industry and the travel sector. Site are being promoted using various online applications such as social networking sites, tourism blogs, smartphone applications, and virtual worlds (Munar & Jacobsen, 2014). However, studies show that the digital integration isn't fully exploited and

---
[1] **Eyal Eckhaus**, Ariel University, Department of Economics and Business Administration

much more must be done to improve the online expertise (*cf.* Nusair, Hua & Li, 2010).

With the development of these technological advances and more sophisticated applications, the internet has gradually become a target and not only the way to achieve the strategy, often having a priority for sales and marketing over offline and traditional resources (Chaffey, Ellis-Chadwick, Mayer & Johnston, 2009). With this shift, a new trend has arisen, one that provides a higher quality of user online experience by integrating reality with fantasy to create a virtual world. This generation of virtual worlds (VR) has become extremely popular (Okutsu, DeLaurentis, Brophy & Lambert, 2013), with a clear business potential and millions of registered users (Zhang *et al.*, 2014). However, the high expectations associated with these developments remain unfulfilled showing that the parameters of success from this medium are not yet fully understood (Boa-Ventura & Zagalo, 2010).

The tourism industry was one of the first to use the online environment for promotion purposes (Stankov, Lazic & Dragicevic, 2010) and there are many benefits the industry may gain by understanding how best to assimilate the VR into the industry's offerings. While focusing on the tourism industry and the travel sector, this paper highlights a trend of virtual environment's assimilation in our daily lives, which has only begun and proposes that entrepreneurs should seek to identify the combination of the right time with the readily available technology in order to promote richer and better business models that utilize this trend.

2. Traveling and the tourism industry

The decisions that tourists make are often explained by the expectancy value theory (Cohen, Fishbein & Ahtola, 1972), in which expectations define the probability that a certain attitude will lead to positive or negative benefits. A choice is made by combining expectations and values (Correia, Valle & Moço, 2007). Most tourism literature explains the motivation behind a decision as arising from cognitive or emotional factors (Trumbach, Williams & Mujtaba, 2009), which may be the result of internal factors that arise from personal needs, or external reasons which result from publicity and promotion (Correia *et al.*, 2007). St. Augustine once wrote, "The world is a book, and those who do not travel read only one page" (Callihan, 2009). As travel becomes more readily available the need to travel consequently increases (Simpson, 2002).

Tourism is a global growth industry (Mao, 2015), involving 200 million employees worldwide (Muga, 2009). This industry is important to countries' economy (Hilmarsson, 2016). It accounts for 5 per cent of the world's economy (Miles, 2008) and is the world's largest generator of wealth and employment, contributing 11 per cent to the global GDP (Rita, 2000). According to the UN World Tourism Organization (UNWTO), international tourist arrivals, a measure of actual bodies on the move, jumped 30 per cent since 2003 to nearly 900m in 2007 (FT.com, 2008), to 1087 million in 2013 (Mehmood, Ahmad & Khan, 2016),

reaching a total of 1.184 million in 2015 (Czaika & Neumayer, 2017), and anticipating further growth (Mackay & Spencer, 2017).

With the increasingly growing need to travel, technology advances, and for the last one and a half decades we have been witnessing the rise of a new dawn of possibilities, one that affects every aspect of our lives, including traveling, tourism and hospitality; the age of the internet.

3. Traveling and the tourism industry

Internet tools and applications have increasingly affected the tourism industry (Elliot, Li & Choi, 2013). Different forms of e-business have emerged characterized by increased interactivity and communication possibilities between customers and businesses (Helgueros, 2012). The widespread diffusion of these information and communication technologies (ICTs) in recent decades (Westjohn, Arnold, Magnusson, Zdravkovic & Zhou, 2009) has driven a business revolution.

The diffusion of the internet to the public occurred in the mid-1990s (Clark, 2000), bringing a wide range of new possibilities and opportunities in all areas of our lives. It has facilitated communication across international borders (Bishop, Reinke & Adams, 2009) providing a reduction in transaction costs and spurring the growth in the number of suppliers in electronic markets (Standing, Stockdale & Love, 2010), while expanding the marketplace and promoting interactivity for both businesses and consumers (Turban & King, 2003). Because the Internet lies behind a communication revolution, enabling every individual or organization to contact other individuals or entities around the globe (Tabor & Maniam, 2010), it has become an essential part of the communication strategies of organizations (Riley & Lacroix, 2003). New communication approaches have been created to improve both the interaction and communication between businesses and their customers and between individuals. These approaches may include audio and video tools as well as social networking (Kaplan & Haenlein, 2010), including live chats, emails, blogs or discussion groups, and file sharing (Carter, Foulger & Ewbank, 2008). Some of the new means of communication are based on Web 2.0 techniques, which provide a richer user experience and include blogs, communities, mashups, RSS feeds, pod-casts, tagging, social networks, video streams, virtual worlds, widgets, and Wiki's (Chaffey *et al.*, 2009, p. 14). Communication plays a part in formulating perceptions about norms since behavior depicted in the media conditions perceptions of acceptable behavior (Maria Knight & Rimal, 2005). Indeed, the internet has fundamentally transformed communication behaviors (Pan & Fu, 2013). Hundreds if not thousands of Web 2.0 tools have been created in recent years (Oliver, 2010) with a profound effect on communication and interaction among individuals and businesses and fostering a business revolution.

4. Digital integration of the tourism industry

Businesses have recognized the need to integrate the online arena (Coupey, 2016) and the tourism industry is no exception. Information and Communication Technologies (ICTs) have revolutionized the travel industry, contributing to all processes in the tourism value chain (Buhalis & Deimezi, 2004). The ICTs have played a critical role in this industry's growth, impacting various aspects such as cost, competition, marketing, e-business, and more (Zelenka, 2009).

The increase and spread of technological developments have affected significantly the tourism industry (Khare & Khare, 2010). The internet distribution of tourism information and products became a major consumer source for selecting a destination (Marine-Roig & Anton Clavé, 2015), and one of the main marketing channels for tourism and hospitality. The modern traveler is looking for appropriate information to assist in his decision-making (Khare & Khare, 2010).

Another aspect which has become more significant as the global financial situation worsens (Ghiurco, 2014), and travel budgets are drastically cut (Papagiannakis, Baraklianos & Spyridonidou, 2017) is the virtual environment that eliminates the need to travel. The electronic communication networks, for example, replace the need to actually travel to meetings (Salafsky, 2010). Web-based conferencing tools can be used to conduct live meetings, training sessions or presentations (Li, 2014), offering an effective solution to the radical reductions of travel budget (ibid). The tourism industry is well suited to the online business community model, which allows businesses to communicate with their customers and for participants to exchange ideas (Stockdale, 2007).

The tourism industry is using the Internet in many way such as to promote specific regions (Tung & Wu, 2016). Social networking sites are offering tourism promotion opportunities (Stankov et al., 2010) while tourism blogs are used as a word-of-mouth mechanism (Yilmaz & Ozdogan, 2010). Travelers to record and share experiences through online travel journals (Cai, 2016). And there are even virtual worlds, which include virtual tours and embassies that offer tourist information and links to official government offices (Wyld, 2010).

Despite all these possibilities, some argue that the internet in the tourism industry isn't being used optimally and fails in a number of ways, such as in providing the highest Web quality to enhance customer satisfaction, or in building long term relationship with customers (Nusair et al., 2010). Many organizations don't take advantage of Facebook as the most popular social medium, or don't even have a Facebook presence (Stankov et al., 2010). Thus, although tourism organizations were among the first to utilize the internet (ibid), and the integration of the internet in this industry is rising, there is still much to be done, particularly in the area of VRs, a rising medium that has surfaced with a growing popularity in the last few years, elevating the integration of traditional and digital media to a higher level.

The uses and gratifications theory (Katz, Blumler & Gurevitch, 1973) claims that individual expectations influence choice of media for need fulfillment, which leads to gratification. Katz, Gurevitch, & Haas (1973) explain that the

contribution of the mass media to each need is relative to the gratifications obtained from other non-media sources (i.e., friends, holidays, and lectures). The emergence of the internet has extended this approach by discovering new gratifications (LaRose & Eastin, 2004) and numerous studies have applied this theory to the internet (Sweetser, Porter, Chung & Kim, 2008). The rise of VRs elevates a new media channel for gratification.

5. Virtualization in the business arena

At the start of the digital economy, better communication and interaction were at the core of the business model of new companies (Martínez-Torres *et al.*, 2010). In many new companies that are arising today, new technologies and Web techniques that try to stimulate our senses in a two-way communication between the content provider and the user are major factors (Ho, 2010). Not only are these companies seeking to supply better ways of communication or interaction, they are also offering increased levels of experience itself, by providing ease of access, simplicity, and a journey to a new realm. Virtual worlds (VRs) are a successful application of this idea. VR sites that provide a virtual environment, such as Second Life, offer groups and individuals the opportunity to interact by means of user-created objects and personas. Second Life and other sites like it are attracting millions of members (Sourin, 2017) by imitating reality and providing online alternatives and experiences for individuals.

The assimilation of the virtual environment applies not only to individuals, but also to businesses and efforts to improve business processes. The emergence of new simulation and virtualization tools can simplify business processes, provide more accurate forecasts, and better train employees (Dopico *et al.*, 2016). Virtual product development, including the designing, prototyping, and development of the product and manufacturing processes in a digital environment is becoming a reality. The use of easy-to-use visualization, simulation and 3-D collaboration tools is expanding (*cf*. Redmond & Alshawi, 2017).

Virtual worlds offer a number of attractive benefits. For example, virtual worlds enable businesses to reduce production cycle times and increase user input in the development process (Noor, 2009). And as they become more sophisticated, their potential as a platform for various collaborative activities in business (Shen & Eder, 2009) is increasing. Although some companies have used VRs as means of conducting online sales and support meetings, its advantages compared to traditional online Web shops hasn't been proved yet (Pinkwart & Olivier, 2009). Although there has been an increase in the number of internet businesses and e-commerce transactions the past few years (Kim, Dekker & Heij, 2017), 3D virtual worlds lack critical components for successful e-commerce (Manzoor, 2017). They are still an unexplored land of opportunities for the business arena, with some big corporations, such as IBM and Sun Microsystems, pioneering the examination of this territory. These companies are convincing others to follow but with caution resulting from the fall of some VR projects (Boa-Ventura & Zagalo, 2010) and value of brand presence is yet to be investigated (Ramanathan & Purani, 2014).

Although studies that try to point out parameters for success in virtual social words exist (Kaplan & Haenlein, 2009), further research is necessary. If the business use of virtual communities is to expand various factors are necessary, such as a dedication of resources, building a critical mass, and matching community and business needs, (Spaulding, 2010).

VRs are being used in a wide variety of recreational, social, gaming and educational sites (Pinkwart & Olivier, 2009). The World of Warcraft, one of the most dominant in the virtual gaming industry, has boasted over eight million paying users (Jordan, 2014), after being released only in 2004 (Poels, Ijsselsteijn & de Kort, 2015). Second Life, with more than 13 million in 2009 (Parmentier & Rolland, 2009) which grew to over 36 million registered users and still growing with popularity (Chen, 2016), after only released in 2003 (Case, King & DeSimone, 2010). These two sites demonstrate the popularity of this medium, that offers a simulated world where the individual experiments with his identity and forms of creation and consumption (Parmentier & Rolland, 2009). However, research is still lagging behind, and only few studies applied formal theory to understand the significance of virtual worlds to the tourism industry (Huang, Backman, Backman & Moore, 2013).

Huang et al. (2013) provide evidence that individuals are ready to accept VR platform technology and it will in fact increase the motivation to travel to simulated locations. The key is to understand that while providing an experience and stimulation, VRs don't replace reality and aren't being used to merely escape from it (Atkinson, 2008). Rather they are an alternative that can be integrated into our lives. The exception may be the virtual gaming industry, which may have an addictive effect on individuals wanting to escape from reality (Sattar & Ramaswamy, 2004).

The assimilation of the VR in the individual's life is manifested clearly in the use of this environment as a primary source of livelihood and commerce (Steinicke, 2016). Users pay real money for virtual advantages (Hamari & Keronen, 2016), including products, services, or even virtual lands that are available for sale in virtual environments, such as Facebook's FarmVille that offers the opportunity to harvest virtual crops and to raise virtual livestock (Griffiths, 2010). These possibilities are sold to the highest bidder, while Second Life permits its subscribers to buy and sell virtual lands as well virtual currency inside and outside the virtual Second Life world (Jones, 2010). In other virtual worlds, such as Entropia Universe, users can sell virtual goods and properties (Steinicke, 2016). The absorption of virtual objects and figures in the daily routine and conduct is therefore increasing. The blurring of the border between the real and the virtual has wide-ranging implications.

The benefits of the VR's assimilation have been recently identified by technological giants, showing a genuine interest to integrate it in the company's strategy. Examples include Facebook recent acquisition of Oculus VR - leader in immersive virtual reality technology, for $2 billion (Facebook, 2014), Google's development of Google Glass – a wearable, immersive technology which aims to

combine virtual with reality (Grabowski, 2015), Microsoft HoloLens wearable hologram (Blake, 2015), and Samsung's virtual-reality headset (Tsukayama, 2016). Specifically for traveling or destination exploration, in line with this vision, Google recently started updating its 3D models of buildings in Google Earth and Maps to enable virtual exploration, with Hong Kong being the first city to be modeled (Schroeder, 2014).

6. Implications of the move to VR

In spite of the fact that global travel has been affected by economic problems in Western Europe and the US, international travel is increasing (Marinov & Kazandzhieva, 2010). At the same time, the technology to channel traveling needs to the online arena is advancing at a rapid pace. Virtual environments are arising and offering various opportunities to replace actual travel with virtual representations of the journey such as virtual sights, sounds, and experiences (Knabe, 2010). Replacing the real with the virtual becomes possible and as technology progresses the blurring of the borders between the real and the virtual becomes more prominent (Williamson, Yip, Sharoni & Spaulding, 2009). In terms of tourism, the value and expectations that form the VRs increasingly affect the tourism industry (Huang, Backman, Backman & Chang, 2016), and result in a possible shift of significance where the virtual environment becomes the goal of the traveler and not only an impression that affects the choice.

As virtual experience becomes more sensory, offering easier and cheaper "travel" opportunities, the virtual environment will be developed as a primary target that may, to a certain extent, replace the need itself to physically travel. This undoubtedly will impact on the tourism, hospitality, and airline industries (Marinov & Kazandzhieva, 2010).

7. Conclusions

Over the past 15 years or so, we have been witnessing a huge leap in technology. The increased pace of ICT development offers many advantages for businesses and individuals, providing cheaper, more efficient and cost-effective tools that have affected every field of our life, particularly the tourism industry and travel.

The tourism industry, being one of the most significant sectors impacting the economy, was one of the first to understand the importance of Web presence and the possibility of providing information to support the individual's choice of a travel and touring destination. However, studies show that this medium isn't being sufficiently and efficiently exploited. Much more research must be conducted in order to support the growing needs of this industry. While this industry seeks ways to improve its digital presence, a new phenomenon has surfaced the last few years, offering a richer user experience with sensory capabilities, elevating the 2D digital environment to a three-dimensional virtual reality. The popularity of VRs is

growing. However, as the hype in business expectations settles, there is the realization that this is an uncharted territory that need much more research.

This paper highlights a trend which will continue to grow, offering highly valuable opportunities to those who correctly identify the right moment for action, especially in the tourism industry and the traveling sector, both of which will be significantly affected by this evolving trend. Future research on the strategy needed for assimilating VR into the business may provide valuable insight, while businesses should carefully consider their strategic and marketing plans, and implement the appropriate infrastructure to meet with the new global trend, providing a new experience for their customers, in the age of digital economy.

References

1. Atkinson, T. 2008. *Myths and Realities*, TechTrends 52(5), pp 26-29.
2. Bishop, T., Reinke, J. & Adams, T. 2009. *Globalization trends and prespectives*, Allied Academies International Conference. Academy for Studies in International Business. Proceedings 9(2), pp 2-5.
3. Blake, V. 2015. *Microsoft announces project x-ray, wearable holograms for hololens. 6 OCT 2015. Retrieved from* http://www.ign.com/articles/ 2015/10/06/microsoft-announces-project-x-ray-wearable-holograms-for-hololens (accessed 06.07.2017).
4. Blanke, J. & Chiesa, T. (2013). *The travel & tourism competitiveness report 2013.* Paper presented at the The World Economic Forum.
5. Boa-Ventura, A. & Zagalo, N. 2010. *Ecommerce in virtual worlds - a 'just do it' approach?*, Journal of Theoretical and Applied Electronic Commerce Research 5(1), pp I,II,III.
6. Buhalis, D. & Deimezi, O. 2004. *E-tourism developments in Greece: Information communication technologies adoption for the strategic management of the Greek tourism industry*, Tourism and Hospitality Research 5(2), pp 103-130.
7. Cai, W. (2016). *Revisiting the theory and practice of the three-layer system of culture: An exploration of Chinese backpackers' travel experiences in Europe.* University of Surrey (United Kingdom).
8. Callihan, D. 2009. *A Case for Student Travel.*, Delta Kappa Gamma Bulletin 75(3), pp 27-29.
9. Carter, H. L., Foulger, T. S. & Ewbank, A. D. 2008. *You Googled Your Teacher Lately? Teachers' Use of Social Networking Sites*, Phi Delta Kappan 89(9), pp 681-685.
10. Case, C., King, D. & DeSimone, K. 2010. *Virtual worlds: An exploratory study of undergraduate behavior*, Research in Higher Education Journal 8, pp 1-9.
11. Chaffey, D., Ellis-Chadwick, F., Mayer, R. & Johnston, K. 2009. *Internet Marketing: Strategy, Implementation and Practice* (4 ed.): Financial Times/ Prentice Hall.

12. Chen, J. C. 2016. *EFL learners' strategy use during task-based interaction in Second Life*, Australasian Journal of Educational Technology 32(3), pp 1-17.

13. Clark, C. 2000. *The coming revolution in e-commerce*, Futurics 24(1/2), pp 1-3.

14. Cohen, J. B., Fishbein, M. & Ahtola, O. T. 1972. *The nature and uses of expectancy-value models in consumer attitude research*, Journal of Marketing research 9(4), pp 456-460.

15. Correia, n., Valle, P. O. d. & Moço, C. 2007. *Why people travel to exotic places*, International Journal of Culture, Tourism and Hospitality Research 1(1), pp 45-61.

16. Coupey, E. 2016. *Digital business: Concepts and strategies*: Routledge.

17. Czaika, M. & Neumayer, E. 2017. *Visa restrictions and economic globalisation*, Applied Geography 84, pp 75-82.

18. Dopico, M., Gomez, A., De la Fuente, D., García, N., Rosillo, R. & Puche, J. (2016). *A vision of industry 4.0 from an artificial intelligence point of view.* Paper presented at the Proceedings on the International Conference on Artificial Intelligence (ICAI).

19. Elliot, S., Li, G. & Choi, C. 2013. *Understanding service quality in a virtual travel community environment*, Journal of Business Research 66(8), pp 1153-1160.

20. Facebook. 2014. *Facebook to acquire Oculus, March 25, 2014*, Journal (Issue), pp.FT.com. 2008. *Tourist crush*, FT.com 29.2.08, pp 1.

21. Ghiurco, M. S. 2014. *New trends in business management and possible applications in international tourism*, Revista de Management Comparat International 15(2), pp 190-199.

22. Grabowski, M. 2015. *Research on Wearable, Immersive Augmented Reality (WIAR) Adoption in Maritime Navigation*, The Journal of Navigation 68(3), pp 453-464.

23. Griffiths, M. 2010. *Gaming in social networking sites: a growing concern?*, World Online Gambling Law Report 9(5), pp 12-13.

24. Hamari, J. & Keronen, L. (2016). *Why do people buy virtual goods? A literature review.* Paper presented at the 49th Hawaii International Conference on System Sciences (HICSS).

25. Helgueros, Y. 2012. *E-business models as a tool to increase México small and medium size enterprises' sales*, Global Journal of Business Research 6(1), pp 119-126.

26. Hilmarsson, H. Þ. 2016. *Iceland, economic integration and the European Union*, Revista de Management Comparat International 17(4), pp 373-391.

27. Ho, V. 2010. *The Web Evolves :The new Internet isn't a number, it's a journey of purposeful and powerful communication*, Information Management 20(6), pp 5.

28. Huang, Y.-C., Backman, S. J., Backman, K. F. & Moore, D. 2013. *Exploring user acceptance of 3D virtual worlds in travel and tourism marketing*, Tourism Management 36, pp 490-501.

29. Huang, Y. C., Backman, K. F., Backman, S. J. & Chang, L. L. 2016. *Exploring the implications of virtual reality technology in tourism marketing: An integrated research framework*, International Journal of Tourism Research 18(2), pp 116-128.

30. Iyer, V. R., Dey, N. & Chakraborty, S. 2015. *Advent of information technology in the world of tourism*, Emerging Innovative Marketing Strategies in the Tourism Industry, pp 44-53.

31. Jones, C. 2010. *Lying, Cheating, and Virtual Relationships*, Global Virtue Ethics Review 6(1), pp 3-12.

32. Jordan, N. 2014. *World of Warcraft: a family therapist's journey into scapegoated culture*, The Qualitative Report 19(31), pp 1-19.

33. Kaplan, A. M. & Haenlein, M. 2009. *The fairyland of Second Life: Virtual social worlds and how to use them*, Business Horizons 52(6), pp 563-572.

34. Kaplan, A. M. & Haenlein, M. 2010. *Users of the world, unite! The challenges and opportunities of Social Media*, Business Horizons 53(1), pp 59-68.

35. Katz, E., Blumler, J. G. & Gurevitch, M. 1973. *Uses and gratifications research*, The Public Opinion Quarterly 37(4), pp 509-523.

36. Katz, E., Gurevitch, M. & Haas, H. 1973. *On the use of the mass media for important things*, American Sociological Review 38(2), pp 164-181.

37. Khare, A. & Khare., A. 2010. *Travel and tourism industry yet to exploit the Internet fully in India*, Journal of Database Marketing & Customer Strategy Management 17(2), pp 106-119.

38. Kim, T. Y., Dekker, R. & Heij, C. 2017. *Cross-Border Electronic Commerce: Distance Effects and Express Delivery in European Union Markets*, International Journal of Electronic Commerce 21(2), pp 184-218.

39. Knabe, A. P. 2010. *From Disturbing Reality To Virtual Reality*, The Officer 86(4), pp 42-43.

40. LaRose, R. & Eastin, M. S. 2004. *A social cognitive theory of internet uses and gratifications: toward a new model of media attendance*, Journal of Broadcasting & Electronic Media 48(3), pp 358-377.

41. Li, J. 2014. *Greeting you online: selecting web-based conferencing tools for instruction in e-learning mode*, Journal of Library & Information Services in Distance Learning 8(1-2), pp 56-66.

42. Ma, T., Hong, T. & Zhang, H. 2015. *Tourism spatial spillover effects and urban economic growth*, Journal of Business Research 68(1), pp 74-80.

43. Mackay, E. A. & Spencer, A. 2017. *The future of Caribbean tourism: competition and climate change implications*, Worldwide Hospitality and Tourism Themes 9(1), pp 44-59.

44. Manzoor, A. 2017. *Pedagogical potential of virtual worlds*, Handbook of Research on Collaborative Teaching Practice in Virtual Learning Environments, pp 146-161.

45. Mao, N. (2015). *The role of tourism in poverty reduction: a case study of Siem Reap-Angkor region, Cambodia.* Victoria University.

46. Maria Knight, L. & Rimal, R. N. 2005. *An Explication of Social Norms*, Communication Theory 15(2), pp 127-147.
47. Marine-Roig, E. & Anton Clavé, S. 2015. *Tourism analytics with massive user-generated content: A case study of Barcelona*, Journal of Destination Marketing & Management 4(3), pp 162-172.
48. Marinov, S. & Kazandzhieva, V. 2010. *Improving the distribution of Bulgarian seaside holiday hotels*, UTMS Journal of Economics 1(1), pp 29-38.
49. Martínez-Torres, M. R., Toral, S. L., Barrero, F. & Cortés, F. 2010. *The role of Internet in the development of future software projects*, Internet Research 20(1), pp 72-86.
50. Mehmood, S., Ahmad, Z. & Khan, A. A. 2016. *Dynamic relationships between tourist arrivals, immigrants, and crimes in the United States*, Tourism Management 54, pp 383-392.
51. Miles, P. 2008. *Out of this world?*, The Ecologist 38(10), pp 14-21.
52. Muga, W. 2009. *Why Africa needs more tourism*, African Business(349), pp 52-53
53. Munar, A. M. & Jacobsen, J. K. S. 2014. *Motivations for sharing tourism experiences through social media*, Tourism Management 43, pp 46-54.
54. Noor, A. K. 2009. *Disruption from the virtual world*, Mechanical Engineering 131(11), pp 22-28.
55. Nusair, K. K., Hua, N. & Li, X. 2010. *A conceptual framework of relationship commitment: e-travel agencies*, Journal of Hospitality and Tourism Technology 1(2), pp 106-120.
56. Okutsu, M., DeLaurentis, D., Brophy, S. & Lambert, J. 2013. *Teaching an aerospace engineering design course via virtual worlds: A comparative assessment of learning outcomes*, Computers & Education 60(1), pp 288-298.
57. Oliver, K. 2010. *Integrating Web 2.0 Across the Curriculum*, TechTrends 54(2), pp 50-60.
58. Pan, J. & Fu, W. W. 2013. *Love Internet, love online content*, Internet Research 23(4), pp 396-413.
59. Papagiannakis, A., Baraklianos, I. & Spyridonidou, A. 2017. *Urban travel behaviour and household income in times of economic crisis: Challenges and perspectives for sustainable mobility*, Transport Policy.
60. Parmentier, G. & Rolland, S. 2009. *Consumers in virtual worlds: identity building and consuming experience in second life*, Recherche et Applications en Marketing: THE NEW CONSUMER 24(3), pp 43-55.
61. Pinkwart, N. & Olivier, H. 2009. *Cooperative virtual worlds - a viable eCollaboration pathway or merely a gaming trend?*, Electronic Markets 19(4), pp 233-236.
62. Poels, K., Ijsselsteijn, W. A. & de Kort, Y. 2015. *World of Warcraft, the aftermath: How game elements transfer into perceptions, associations and (day) dreams in the everyday life of massively multiplayer online role-playing game players*, New Media & Society 17(7), pp 1137-1153.

63. Popescu, A. & Popescu, D. (2016). Hashtag progress: the digital fingerprint of web 2.0 on tourism and hospitality industry management—a case study for Romania *Entrepreneurship, Business and Economics-Vol. 1* (pp. 555-564): Springer.
64. Ramanathan, J. & Purani, K. 2014. *Brand extension evaluation: real world and virtual world*, Journal of Product & Brand Management 23(7), pp 504-515.
65. Redmond, A. & Alshawi, M. 2017. *9 Transforming policy documents into intelligent three-dimensional collaboration tools*, Advances in Construction ICT and e-Business.
66. Riley, F. D. O. & Lacroix, C. 2003. *Luxury branding on the Internet: Lost opportunity or impossibility?*, Marketing Intelligence & Planning 21(2), pp 96-104.
67. Rita, P. 2000. *Tourism in the European Union*, Journal of Contemporary Hospitality Management 12(7), pp 434-436.
68. Salafsky, N. 2010. *Sustainability through computing*, Nature 465(7297), pp 425.
69. Sattar, P. & Ramaswamy, S. 2004. *Internet Gaming Addiction*, Canadian Journal of Psychiatry 49(12), pp 869-870.
70. Schroeder, S. 2014. *New 3D models in Google Maps are incredibly detailed*, Mashable.com. DEC 12, 2014 Retrieved: http://mashable.com/ 2014/12/12/new-google-maps-3d-models/#Z_4JdhHEbiqQ (accessed 06.07.2017).
71. Shen, J. & Eder, L. B. 2009. *Exploring intentions to use virtual worlds for business*, Journal of Electronic Commerce Research 10(2), pp 94-103.
72. Simpson, B. 2002. *Issues in integrating land use and transport policy*, Geography 87(4), pp 355-366.
73. Sourin, A. (2017). Case study: shared virtual and augmented environments for creative applications *Research and development in the academy, creative industries and applications* (pp. 49-64): Springer.
74. Spaulding, T. J. 2010. *How can virtual communities create value for business?*, Electronic Commerce Research and Applications: Special Issue: Social Networks and Web 2.0 9(1), pp 38-49.
75. Standing, C., Stockdale, R. & Love, P. E. D. 2010. *the transition to global electronic markets in the resource engineering sector*, Journal of Enterprise Information Management 23(1), pp 56-80.
76. Stankov, U., Lazic, L. & Dragicevic, V. 2010. *The extent of use of basic Facebook user-generated content by the national tourism organizations in Europe*, European Journal of Tourism Research 3(2), pp 105-113.
77. Steinicke, F. (2016). Toward a virtual revolution *Being Really Virtual* (pp. 33-44): Springer.
78. Stockdale, R. 2007. *Managing customer relationships in the self-service environment of e-tourism*, Journal of Vacation Marketing 13(3), pp 205-219.

79. Sweetser, K. D., Porter, L. V., Chung, D. S. & Kim, E. 2008. *Credibility and the use of blogs among professionals in the communication industry*, Journalism and Mass Communication Quarterly 85(1), pp 169-185.

80. Tabor, L. G. & Maniam, B. 2010. *Globalization - Trends and Perspectives of a New Age*, The Business Review, Cambridge 15(1), pp 39-45.

81. Trumbach, A. E., Williams, A. A. & Mujtaba, B. G. 2009. *Managing tourism and the economy in recessionary times: a conversation with Michael Singh-chief executive officer in the ministry of tourism and civil aviation in Belize*, Journal of Applied Management and Entrepreneurship 14(3), pp 93-99.

82. Tsukayama, H. (2016). A beginner's guide to finally buying a virtual reality headset (March 18, 2016). *Washington Post*. Retrieved from https://www.washingtonpost.com/news/the-switch/wp/2016/03/18/a-beginners-guide-to-finally-buying-a-virtual-reality-headset/?utm_term =.606a837718c3 (accessed 06.07.2017).

83. Tung, F.-W. & Wu, M. (2016). *Rediscover Herbal Lane-Enhancing the Tourist Experience Through Mobile Applications.* Paper presented at the International Conference on Cross-Cultural Design.

84. Turban, E. & King, D. 2003. *Introduction to E-Commerce*: Prentice Hall Publishing.

85. Westjohn, S. A., Arnold, M. J., Magnusson, P., Zdravkovic, S. & Zhou, J. X. 2009. *Technology readiness and usage: a global-identity perspective. Academy of Marketing Science*, Academy of Marketing Science. Journal. 37(3), p 250.

86. Williamson, G., Yip, D., Sharoni, I. & Spaulding, K. 2009. *Identity management: A primer*: MC Press, LLC.

87. Wyld, D. C. 2010. *The virtual tourist: using the virtual world to promote the real one*, Advances in Competitiveness Research 18(1/2), pp 111-120.

88. Yilmaz, B. S. & Ozdogan, O. N. 2010. *Blogs as a means of information sharing among tourism consumers: the case of turkey*, Faculty of Tourism and Hospitality Management in Opatija. Biennial International Congress. Tourism & Hospitality Industry,, pp 1639-1648.

89. Zelenka, J. 2009. *Information and communication technologies in tourism - influence, dynamics, trends*, E+M Ekonomie a Management(1), pp 123-132.

90. Zhang, X., Ordóñez de Pablos, P., Wang, X., Wang, W., Sun, Y. & She, J. 2014. *Understanding the users' continuous adoption of 3D social virtual world in China: A comparative case study*, Computers in Human Behavior 35, pp 578-585.