

Karwowski M., *The effects of the evolution of the business model in a period of economic crisis — a study of annual reports of selected airlines*, „Ekonomia i Prawo. Economics and Law”, Polzakiewicz B., Boehlke J. (ed.), Vol. 14, No. 4/2015, pp. 479–490. DOI: <http://dx.doi.org/10.12775/EiP.2015.031>.

MARIUSZ KARWOWSKI*

THE EFFECTS OF THE EVOLUTION OF THE BUSINESS MODEL IN A PERIOD OF ECONOMIC CRISIS — A STUDY OF ANNUAL REPORTS OF SELECTED AIRLINES

SUMMARY

The business model has become the new challenge in external reporting. It is increasingly used in International Financial Reporting Standards and non-financial reporting. In an era of global crisis, enterprises are changing their business models. This article presents the consequences of the evolution of business models within the airline sector in a period of economic crisis and the reflection of changed business models in annual reports. The conclusions summarize information about the business models disclosed in annual reports of selected airlines.

Keywords: business model; annual reports; accounting

JEL Classification: M41; G01

INTRODUCTION

The business model is increasingly popular in management. Casadesus-Masanell and Ricart summarize this concept as the logic of a company, the way it operates, and how it creates value for its stakeholders. In this con-

* Mariusz Karwowski, Warsaw School of Economics, Collegium of Business Administration, Department of Management Accounting, al. Niepodległości 162, 02-554 Warsaw, Poland, phone: +48 22 564 92 40, e-mail: mkarwo@sgh.waw.pl.

text, it is worth noting that the business model is neither a strategy, which refers to the choice of a business model through which the firm competes in the marketplace, nor tactics, which refer to the residual choices made based on the business model¹.

DaSilva and Trkman describe the business model as the way businesses conduct their operations through depictions of activities, allowing the systematic structuring of the company's activities².

Chesbrough argues that a business model enables a company to:

- articulate its value proposition
- identify its market segment
- specify a mechanism for generating revenue
- define the structure of the value chain
- estimate its cost structure and profit potential
- describe the position of the firm within the value network, identifying potential competitors
- set the competitive strategy whereby the company will gain and maintain advantage over competitors³.

An interesting issue are the effects of the evolution of the business model within full-service air carriers during a period of economic crisis. The aim of this article is to present findings reflecting these changes in the annual reports of selected airlines. The article poses the thesis that external reporting of airlines after the economic crisis does not reflect business models adequately. In order to verify this thesis, annual reports of selected full-service airline companies using different business models were studied, the results of which are presented in the third chapter. In the first two chapters the critical review of literature method was used.

1. THE CONCEPT OF THE BUSINESS MODEL IN THE AIRLINE INDUSTRY

The value proposition of the airline industry is air transport from point A to point B, interdependent on the decision as to which customer segment

¹ R. Casadesus-Masanell, J.E. Ricart, *From Strategy to Business Models and onto Tactics*, "Long Range Planning", Vol. 43, No. 2–3/2010, p. 196.

² C.M. DaSilva, P. Trkman, *Business Model: What It Is and What It Is Not*, "Long Range Planning", Vol. 47, No. 6/2014, pp. 385–386.

³ H. Chesbrough, *Business Model Innovation: Opportunities and Barriers*, "Long Range Planning", Vol. 43, No. 2–3/2010, p. 355.

to serve⁴. The most important factors which influence customers' decisions are schedule and price⁵. The main business models adopted by airlines are based on full-service or low-cost strategies⁶.

Models based on the full-service strategy are characterized by offering most services such as flights to major airports, business class service, and frequent-flyer programs⁷. Tickets are sold with higher added value to customers with greater purchasing power. Airlines which have adopted this model include Singapore Airlines, Lufthansa, Malaysia Airlines, and British Airways⁸.

The greatest returns are realized on long-distance routes utilising multi-configuration aircraft. The longer the journey, the greater the tendency of high-yield passengers to pay more. In addition, traditional airlines use the hub & spoke system (based on central hubs)⁹.

Models based on low-cost strategies are characterized by creating value by focusing on cost and customers with less purchasing power¹⁰. Low-cost carriers focus on a point-to-point model within one continent¹¹. Adoption of these actions is part of the cost leadership strategy highlighted by Porter¹². Companies which have adopted this model include JetBlue Airways, Ryanair, Southwest Airlines, Virgin Blue, Air Asia, and EasyJet¹³.

But business models based on the strategies of low-cost or full-service are insufficient in the current market reality because low-cost companies do not suit the demand for full-services and vice versa¹⁴. The solution to this paradigm is a hybrid business model. Franke indicates that a company offering

⁴ B. Nowak, *Wielość modeli biznesu czy model hybrydowy — strategiczne wyzwania na rynku przewoźów lotniczych*, [in:] M. Poniatowska-Jaksch (red.), *Nowe myślenie w zarządzaniu strategicznym przedsiębiorstwem*, Oficyna Wydawnicza SGH, Warszawa 2015, p. 248.

⁵ M. Liehr, A. Größler, M. Klein, *Understanding Business Cycles in the Airline Market*, "Systems Dynamics Review", Vol. 17, No. 4/2001, p. 3.

⁶ B.A. Pereira, M. Caetano, *A conceptual business model framework applied to air transport*, "Journal of Air Transport Management", Vol. 44–45/2015, p. 71.

⁷ J.F. O'Connell, G. Williams, *Passengers' perceptions of low cost airlines and full service carriers: A case study involving Ryanair, Aer Lingus, Air Asia and Malaysia Airlines*, "Journal of Air Transport Management", Vol. 11, No. 4/2005, p. 269.

⁸ M. Franke, *Innovation: The winning formula to regain profitability in aviation?*, "Journal of Air Transport Management", Vol. 13, No. 1/2007, p. 24.

⁹ B. Nowak, *op. cit.*, pp. 248–249.

¹⁰ B.A. Pereira, M. Caetano, *op. cit.*, p. 71.

¹¹ B. Nowak, *op. cit.*, pp. 250–251.

¹² M. Porter, *Strategie konkurencji*, PWE, Warszawa 1992, p. 54.

¹³ M. Franke, *op. cit.*, p. 24.

¹⁴ B.A. Pereira, M. Caetano, *op. cit.*, p. 71.

more specialized services with reduced prices stimulates additional demand when the upgraded service is not a common feature in this sector¹⁵.

2. ECONOMIC CRISES IN THE AIRLINE INDUSTRY

There are two important features of the airline industry. First, airlines have no real inventory. If flights are cancelled, airlines cannot stockpile or easily recover lost traffic in the immediate future¹⁶. From this point of view, the air transport market suffers from the typical service industry problem which is the lack of ability to produce stock. In addition, the air transport product is an indifferent product, meaning that the levels of service of different air transport companies are more or less the same¹⁷.

Second, demand for air transport is pro-cyclical. Air traffic generally expands (diminishes) with increased (reduced) economic growth, but at a much faster rate. Business class travel is particularly sensitive to economic fluctuations, which has a disproportionate impact on airlines' revenue and profitability¹⁸. So there is a positive correlation between the air transport sector and economic activity: economic growth generates a greater need for transport¹⁹. A strong economic cycle is unambiguously good for airline profitability. Even when fuel prices are high (as in 2010), a strong economy will allow airlines to generate high profits and returns on capital²⁰. A decrease in economic activity leads to a declining demand for transport. It was noted that, during crises, the decreased demand generates a revenue crisis which is usually followed by a cost and profit crisis, fuelled by massive overcapacity²¹.

The evolution of the airline market is characterized by business cycles. Since 1970 the airline market has seen several complete cycles, which included crises affecting nearly all carriers in the early 80s, in the early 90s, and

¹⁵ M. Franke, *op. cit.*, p. 29.

¹⁶ G. Harvey, P. Turnbull, *The impact of the financial crisis on labour in the civil aviation industry*, International Labour Office, Geneva 2009, p. 4.

¹⁷ M. Liehr, A. Größler, M. Klein, *op. cit.*, pp. 2–3.

¹⁸ G. Harvey, P. Turnbull, *op. cit.*, p. 4.

¹⁹ L. Diaconu, *The impact of the economic crises from the XXIst century on the European low-cost airlines' market*, "The USV Annals of Economics and Public Administration", Vol 12, No 1(15)/2012, p. 91.

²⁰ B. Pearce, *Economic Performance of the Airline Industry*, <http://www.iata.org/whatwedo/Documents/economics/Economic-Performance-of-the-Airline-Industry-mid-year-2015-forecast-slides.pdf> (10.08.2015), p. 9.

²¹ L. Diaconu, *op. cit.*, p. 91.

in the early years of this century. Figure 1 shows the change of revenue passenger kilometres according to IATA and the change of GDP²².

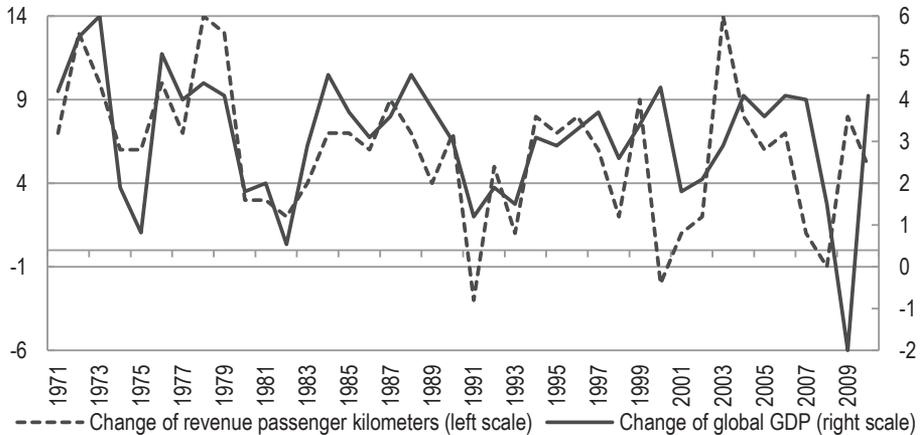


Figure 1. Pro-cyclical demand and economic crises in the civil aviation industry according to IATA

Source: Own preparation based on: G. Harvey, P. Turnbull, *The impact of the financial crisis on labour in the civil aviation industry*, International Labour Office, Geneva 2009, p. 5.

The last economic recession first impacted the corporate travel segment where profit started to decrease in the last quarter of 2007, with travel agencies reporting a sudden drop of 20% in bookings. While the price of oil declined during 2008, reducing the cost of air services and resulting in lower prices, this occurred against a significant decline in demand for premium tickets²³.

The global economic-financial crisis from 2007 had significant impact on the evolution of both low-cost and traditional carriers. But, the negative influence was less on low-cost airlines; the largest ones even increased their market shares, revenues, and profits²⁴. During this period of global economic crisis and general recession, some passengers of full-service airlines began to choose the low-cost alternatives²⁵ in order to secure savings. At the same time, the majority of premium full-service carriers invested significantly in develop-

²² M. Liehr, A. Größler, M. Klein, *op. cit.*, p. 1.

²³ M.G. Oprea, *The effects of global economic crisis on the air transport of passengers in Europe and in Romania*, "GeoJournal of Tourism and Geosites", Vol. 5. No. 1/2010, pp. 53–54.

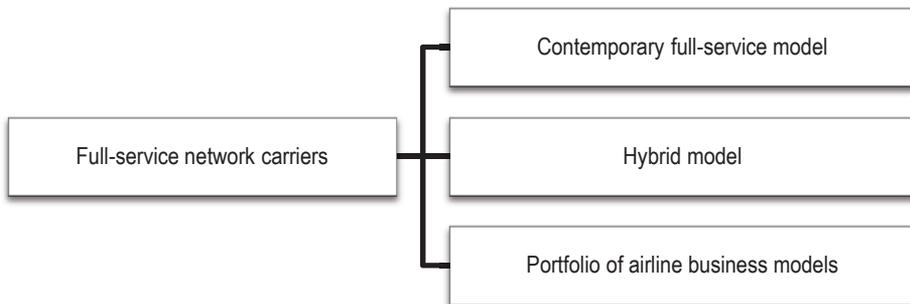
²⁴ L. Diaconu, *op. cit.*, p. 97.

²⁵ B. Nowak, *op. cit.*, p. 252.

ing their business class products, with a focus on such elements as seat pitch and width, inflight connectivity and WiFi²⁶.

The full-service business model based on air transport of passengers with low price sensitivity had to be changed. As a result, after the last economic crisis full-service airlines have evolved into three new business models²⁷:

- the contemporary full-service model,
- the hybrid model,
- the portfolio of airline business models.



Graph 1. Three new business models of full-service airlines after the last economic crisis

Source: Own preparation based on: B. Nowak, *Wielość modeli biznesu czy model hybrydowy — strategiczne wyzwania na rynku przewozów lotniczych*, [in:] M. Poniatowska-Jaksch (red.), *Nowe myślenie w zarządzaniu strategicznym przedsiębiorstwem*, Oficyna Wydawnicza SGH, Warszawa 2015, pp. 252–253.

3. THE STUDY OF SELECTED ANNUAL REPORTS

Financial results have become crucial for air transport companies, since the international air traffic markets were deregulated and liberalized. Additionally, most of the formerly state-owned companies are now traded on public stock markets. Once listed on international stock markets, airlines have to focus more on shareholder return²⁸.

In this chapter three business models of traditional airlines formed after the last recession are described, based on the annual reports of Turkish Airlines, SAS, and the Lufthansa Group. The financial reports for most re-

²⁶ CAPA Centre for Aviation, *Airline profitability prospects improve but profit margins remain anaemic*, <http://centreforaviation.com/analysis/airline-profitability-prospects-improve-but-profit-margins-remain-anaemic-85722> (26.07.2015), p. 14.

²⁷ B. Nowak, *op. cit.*, p. 252.

²⁸ M. Liehr, A. Größler, M. Klein, *op. cit.*, p. 3.

cent years were studied. The reports characterize a high comparability among accounting periods.

3.1. THE CONTEMPORARY FULL-SERVICE MODEL

After the last economic crisis Turkish Airlines still focuses on superior passenger comfort and maintains a high ratio of long-distance routes to regional ones²⁹, which is confirmed in note 33 of its financial statements, as shown in table 1.

Table 1. Geographical details of revenue from scheduled flights of Turkish Airlines

DESTINATION	REVENUE OF 2014 (IN TRY)	REVENUE OF 2013 (IN TRY)	DIFFERENCE (IN %)	STRUCTURE (IN %)
Europe	7 739 944 667	6 101 037 615	26.86	32.75
Far East	5 510 324 778	4 228 517 327	30.31	23.32
Middle East	2 746 196 700	2 057 326 448	33.48	11.62
America	2 665 261 133	1 981 878 529	34.48	11.28
Africa	1 950 319 415	1 535 619 716	27.01	8.25
Domestic flights	3 020 711 625	2 484 103 978	21.60	12.78

Source: Turkish Airlines, *Annual Report 2014*, Istanbul 2015, p. 144.

According to this note, domestic flights comprise only 12.78% of total revenues, while farther destinations (Far East, America, Africa) account for 42.85%. Turkish Airlines flies to 264 destinations: 45 domestic and 219 international³⁰.

The high proportion of long-distance routes compared to regional connections is associated with the necessity of maintaining long-distance aircraft³¹. Turkish Airlines' fleet, which is one of Europe's youngest, consisted of 252 aircraft at the end of 2014: 197 narrow-body (78%), and 55 wide-body aircraft (22%)³². The airline continues to work on its goal of acquiring the youngest and most modern fleet in Europe. Wide-body aircraft are expected to increase to 24% by 2032³³. In comparison, the SAS aircraft fleet to-

²⁹ B. Nowak, *op. cit.*, p. 257.

³⁰ Turkish Airlines, *Annual Report 2014*, Istanbul 2015, p. 1.

³¹ B. Nowak, *op. cit.*, p. 256.

³² Turkish Airlines, *op. cit.*, p. 10; 31.

³³ *Ibidem*, p. 7.

talled 151 aircraft at the end of the 2013–2014 fiscal year — only 12 wide-body (8%), 7 of which were leased³⁴.

According to the chairman's message, which is a part of the annual report, Turkish Airlines continued to create value for their customers in 2014. The aim of the company is to become the leading five-star airline by raising its quality of service³⁵. Adoption of these actions is a part of the differentiation strategy highlighted by Porter³⁶.

3.2. THE HYBRID MODEL

The hybrid model seeks to deepen price differentiation among passengers. For this reason, the Scandinavian airline SAS after the last economic crisis withdrew from proposing business class on its European routes, offering instead SAS Plus and SAS Go. The first corresponds to a product offered by other traditional airlines in Europe, while the latter is designed to attract passengers of the low-cost airlines. This means that SAS actually offered the product of low-cost airlines³⁷.

According to note 41 of its financial statements concerning segment reporting, there was a relatively low ratio of long-distance routes in contrast to Turkish Airlines, as shown in table 2.

Table 2. Geographical breakdown of passenger revenue of SAS

DESTINATION	REVENUE OF NOV 2013–OCT 2014 (IN BLN SEK)	REVENUE OF NOV 2012–OCT 2013 (IN BLN SEK)	DIFFERENCE (IN %)	STRUCTURE OF NOV 2013–OCT 2014 (IN %)
Domestic	8 592	10 864	-20.91	29.93
Intra-Scandinavian	3 102	3 384	-8.33	10.80
Europe	11 018	11 449	-3.76	38.38
Intercontinental	5 998	6 042	-0.73	20.89

Source: SAS, *Annual Report with Sustainability Review, November 2013–October 2014*, <http://www.sasgroup.net/en/wp-content/uploads/sites/2/2015/01/SAS-Sustainability-Report-2014.pdf> (29.06.2015), p. 61.

³⁴ SAS, *Annual Report with Sustainability Review, November 2013–October 2014*, <http://www.sasgroup.net/en/wp-content/uploads/sites/2/2015/01/SAS-Sustainability-Report-2014.pdf> (29.06.2015), p. 12.

³⁵ Turkish Airlines, *op. cit.*, p. 12.

³⁶ M. Porter, *op. cit.*, s. 54.

³⁷ B. Nowak, *op. cit.*, p. 257; 259.

According to table 2, domestic and intra-Scandinavian flights comprise 40.73% of total revenues, while farther destinations (intercontinental) account for only 20.89%.

The necessary condition for the success of the hybrid model is that the cost of the product should be at a competitively low level. For this purpose, the carrier was forced to restructure and cut costs significantly, after the last economic crisis³⁸. To meet market challenges and strengthen competitiveness, SAS initiated discussions with its trade unions to achieve increased flexibility and reduced complexity³⁹. During the period 2013–2014, SAS completed implementation of the restructuring program started in November 2012. SAS also launched a SEK 2.1 bln program of further cost measures, with full effect in 2017, and completed a SEK 5.1 bln recapitalization during the fiscal year⁴⁰.

3.3. THE PORTFOLIO OF AIRLINE BUSINESS MODELS

A portfolio of airline business models assumes the operation of two carriers: the first competes directly with low-cost carriers through economies of scale and scope, and the second is a full-service airline, positioned higher, and operating via hubs. Lufthansa, together with Germanwings, is an example of a carrier which elected to follow such a solution, after the last economic crisis⁴¹.

Customers are at the centre of the airline group's market strategy, which is based on high quality, safety, punctuality, reliability, and professional service. By developing its product portfolio further and continuously harmonising its process, the group offers its customers a global route network of 271 destinations in 107 countries. Hubs in Frankfurt, Munich, Zurich and Vienna form the basis for its multi-hub strategy⁴².

Direct flights apart from those at the hubs in Frankfurt and Munich were successfully transferred to Germanwings by January 2015. From late 2015, the airlines in the Lufthansa Group will offer high-quality, low-cost, point-to-point connections on short- and long-haul routes within and from Europe under the Eurowings brand⁴³, via a stand-alone business model from that

³⁸ *Ibidem*, p. 254; 260.

³⁹ SAS, *op. cit.*, p. 19.

⁴⁰ *Ibidem*, p. 1.

⁴¹ B. Nowak, *op. cit.*, p. 260.

⁴² Lufthansa Group, *Annual Report 2014*, Troisdorf 2015, p. 61.

⁴³ *Ibidem*, p. 62.

of the airline group. Eurowings' existing regional fleet will increasingly be replaced by more efficient aircraft of the A320 family (narrow-body aircraft)⁴⁴.

These developments were underscored in an interview with the CEO, according to whom worldwide point-to-point traffic is growing, while the business models of the Lufthansa Group's airlines have been focused primarily on hubs. Growing business in direct traffic besides that at the hubs of the Lufthansa Group will play a central and essential role in its future development. Traffic volumes in direct traffic within Europe are already several times greater than travel via hubs⁴⁵.

In 2014 there was a decline in traffic revenue, primarily due to pricing and exchange rates. But at the same time, passengers increased by 1.3%, and available seat-kilometres by 2.1%⁴⁶. Note 17 of the financial statements presents traffic revenue by regions of the Lufthansa Group, as shown in table 3.

Table 3. Traffic revenue by regions of the Lufthansa Group

DESTINATION	REVENUE OF 2014 (IN MLN EUR)	REVENUE OF 2013 (IN MLN EUR)	DIFFERENCE (IN %)	STRUCTURE OF 2014 (IN %)
Europe	5 654	5 706	-0.91	38.8
North America	3 629	3 607	0.61	24.9
Asia/Pacific	2 828	2 949	-4.10	19.4
South America	1 274	1 283	-0.70	8.7
Africa	583	632	-7.75	4.0
Middle East	601	641	-6.24	4.1

Source: Lufthansa Group, *Financial Statements 2014*, Troisdorf 2015, p. 17.

Unfortunately, the group did not provide information about assets, revenues, etc. divided between the full-service and low-cost business models.

CONCLUSIONS

The study of the literature concerning the airline industry highlights the following important issues:

- configuration of assets in the case of all business models,
- restructuring, especially in the case of the hybrid model,

⁴⁴ *Ibidem*, p. 123.

⁴⁵ *Ibidem*, p. 10.

⁴⁶ *Ibidem*, p. 46.

– segments, especially in the case of the portfolio of airline business models.

Configuration of assets is one of the key characteristics of the business model of airlines⁴⁷. An airline can organise its flight routes using certain hub airports or point-to-point connections, which impacts the structure of its fleet of aircraft. A high proportion of wide-body aircraft was noted in the contemporary full-service model, due to a high percentage of long-distance routes.

Restructuring is another important characteristic of a business model due to its impact on the cost structure of the business. The annual report of the company using the hybrid model provides information about its restructuring program, its reasoning and the possible effects.

In the case of all companies, but especially those with a portfolio of airline business model, information about segments is crucial for stakeholders. Routes based on hubs and point-to-point service require different strategies, which impacts the cost structure and margins. Unfortunately, segmented information for the company using the portfolio of airline business models does not provide information about the two different kinds of business model.

Based on the above observations, it can be seen that the studied annual reports of selected airlines do not adequately reflect the airlines' business models formed after the economic crisis.

BIBLIOGRAPHY

- CAPA Centre for Aviation, *Airline profitability prospects improve but profit margins remain anaemic*, <http://centreforaviation.com/analysis/airline-profitability-prospects-improve-but-profit-margins-remain-anaemic-85722> (26.07.2015).
- Casadesus-Masanell R., Ricart J.E., *From Strategy to Business Models and onto Tactics*, "Long Range Planning", Vol. 43, No. 2–3/2010, <http://dx.doi.org/10.1016/j.lrp.2010.01.004>.
- Chesbrough H., *Business Model Innovation: Opportunities and Barriers*, "Long Range Planning", Vol. 43, No. 2–3/2010, <http://dx.doi.org/10.1016/j.lrp.2009.07.010>.
- DaSilva C.M., Trkman P., *Business Model: What It Is and What It Is Not*, "Long Range Planning", Vol. 47, No. 6/2014, <http://dx.doi.org/10.1016/j.lrp.2013.08.004>.
- Diaconu L., *The impact of the economic crises from the XXIst century on the European low-cost airlines' market*, "The USV Annals of Economics and Public Administration", Vol 12, No 1(15)/2012.
- EFRAG, *The role of the business model in financial statements*, Research Paper, Vol. 2013.

⁴⁷ EFRAG, *The role of the business model in financial statements*, Research Paper, Vol. 2013, p. 46.

- Franke M., *Innovation: The winning formula to regain profitability in aviation?*, "Journal of Air Transport Management", Vol. 13, No. 1/2007, <http://dx.doi.org/10.1016/j.jairtraman.2006.11.003>.
- Harvey G., Turnbull P., *The impact of the financial crisis on labour in the civil aviation industry*, International Labour Office, Geneva 2009.
- Liehr M., Größler A., Klein M., *Understanding Business Cycles in the Airline Market*, "Systems Dynamics Review", Vol. 17, No. 4/2001.
- Lufthansa Group, *Annual Report 2014*, Troisdorf 2015.
- Lufthansa Group, *Financial Statements 2014*, Troisdorf 2015.
- Nowak B., *Wielość modeli biznesu czy model hybrydowy — strategiczne wyzwania na rynku przewoźców lotniczych*, [in:] M. Poniatowska-Jaksch (red.), *Nowe myślenie w zarządzaniu strategicznym przedsiębiorstwem*, Oficyna Wydawnicza SGH, Warszawa 2015.
- O'Connell J.F., Williams G., *Passengers' perceptions of low cost airlines and full service carriers: A case study involving Ryanair, Aer Lingus, Air Asia and Malaysia Airlines*, "Journal of Air Transport Management", Vol. 11, No. 4/2005, <http://dx.doi.org/10.1016/j.jairtraman.2005.01.007>.
- Oprea M.G., *The effects of global economic crisis on the air transport of passengers in Europe and in Romania*, "GeoJournal of Tourism and Geosites", Vol. 5. No. 1/2010.
- Pearce B., *Economic Performance of the Airline Industry*, <http://www.iata.org/whatwedo/Documents/economics/Economic-Performance-of-the-Airline-Industry-mid-year-2015-forecast-slides.pdf> (10.08.2015).
- Pereira B.A., Caetano M., *A conceptual business model framework applied to air transport*, "Journal of Air Transport Management", Vol. 44–45/2015, <http://dx.doi.org/10.1016/j.jairtraman.2015.02.006>.
- Porter M., *Strategie konkurencji*, PWE, Warszawa 1992.
- SAS, *Annual Report with Sustainability Review, November 2013–October 2014*, <http://www.sasgroup.net/en/wp-content/uploads/sites/2/2015/01/SAS-Sustainability-Report-2014.pdf> (29.06.2015).
- Turkish Airlines, *Annual Report 2014*, Istanbul 2015.