



Agentisation of airports and the pursuit of regional development in Poland

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Abstract

The paper adopts the economic-geographical ideas of strategic coupling, path-dependence and path-creation to analyse the role of local/regional institutions in shaping the impacts of airports on regional development. By means of focusing on the airport industry (i.e. an integral component of the wider air transport system), the paper aims to help bridge the gap between economic geography, where air transport has received little attention, and transport geography, which so far has made little use of the theoretical advancements made in economic geography. The paper discusses the example of Poland where, further to the fall of communism, regional development became a key ambition for local and regional governments and where the importance of passenger aviation is rapidly increasing. Drawing from 16 interviews with airlines, Polish airports and Polish local authorities, and from documentary analysis, the paper explores the ways in which local/regional governments charge their airports with the path-shaping tasks of fostering strategic couplings with airlines and catalysing new forms of growth. This includes financial and political support, joint marketing and imposing challenging targets. The paper also shows that the transformation of Polish airports from passive assets into active agents of regional development (a process that is referred to as the ‘agentisation of airports’) is inherently path-dependent. The peculiar structure of ownership in the Polish airport industry (a partial legacy of the previous system) and the tensions between various actors that it spawns entangle Polish airports in the multi-scalar patterns of politics, which determine the effectiveness of their path-shaping roles.

Keywords

Airports, air transport, path-dependence/path-creation, Poland, regional development, strategic coupling

Introduction

The key objective of this paper is to look at airports as enablers of growth and explore how their role as a catalyst for regional development is moulded by the multi-scalar institutional contexts in which they are embedded. Although the geographical literature on air transport is increasing in profile (see Shaw and Sidaway, 2010), some important aspects of the air transport industry that should be of interest to

geographers remain under-researched. While it is recognised that air transport plays a central role in mediating the effects of globalisation on host territories (Bowen, 2010; Cidell, 2006; Keeling,

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2007), very little is known about the interrelations between air transport and the sub-national contexts that it interconnects and the varied ways in which local factors shape the impacts of air transport on regional development (Niewiadomski, 2017). In contrast to freight air transport (see, e.g. Bowen, 2012; Bowen and Leinbach, 2006; Hesse and Rodrigue, 2004), all these gaps are particularly evident in research on passenger aviation. Although there is a lot of work on the liberalisation and deregulation of passenger air transport (including the closely interrelated work on commercialisation of airports, e.g. Bowen, 2010; Gillen, 2011; Graham, 2011; Graham and Ison, 2014), the developmental dimensions of these processes are still unexplored. By means of focusing on the passenger side of the airport industry, this paper aims to contribute to this agenda.

The paper focuses on Poland where many airports are (co-)owned by local/regional authorities and where regional development has been a priority for local/regional governments since the fall of communism. Given that the marketisation of the Polish economy after 1989 coincided in time with the deregulation of European aviation and the commercialisation of airports across Europe, Poland serves as an interesting case through which some of the under-researched aspects of aviation can be addressed. More specifically, the paper adopts the economic-geographical notions of strategic coupling (Coe et al., 2004; Coe and Hess, 2011; Yeung, 2009, 2016), path-dependence and path-creation (Boschma and Martin, 2007, 2010) to explore the transformation of Polish airports from passive assets into proactive agents of regional growth – a process that is referred to in this paper as the ‘agentisation of airports’. The way in which these ideas are combined draws from MacKinnon (2012), who argues that strategic couplings are always inherently path-dependent and that they also serve as mechanisms of path-creation. In this respect, the paper aims to help bridge the gap between economic geography, which has paid little attention to air transport to date, and transport geography, which so far has made negligible use of the theoretical advancements made in economic geography (Goetz, 2006; Goetz et al., 2009; Hall, 2010; Hall et al., 2006; Keeling, 2007).

The paper is based on 16 semi-structured interviews conducted in 2015. Five of them targeted senior executives from major international airlines flying to Poland, whereas the remaining 11 took place in Poland and targeted representatives of various airports (six interviews with five airports, that is, 33% of all passenger airports in Poland) and senior officials from local administrations in various Polish cities with international airports (five interviews in three locations). To secure a representative variety of respondents that would allow generalisations about the whole country, both leisure and business destinations and both small and larger airports were included. Most importantly, the sample covered all three categories of airports in terms of ownership: (1) those where the state has a majority stake; (2) those where it has a minority stake; and (3) those where it has no shares at all (see the third section and Table 1 for more details on the structure of ownership in the Polish airport sector and the significance of the ownership criterion).

The analysis of the interviews revolved around three pre-defined themes: (1) the perceived importance of airports for regional development; (2) the interrelations between airports and the respective local and regional governments; and (3) the interactions between airports and their owners on the one hand and the central administration on the other. In order to structure and select relevant data, each piece of data was assigned to one of the three themes. Patterns and regularities in the data were then traced out. The findings generated by the interviews were subsequently compared to those obtained through documentary analysis, which comprised strategies of regional development and various press articles that were found to be related to any of the three themes. The analysis of such documents followed the same pattern as the analysis of the interviews. In this respect, the data obtained through documentary analysis also enabled triangulation of the interview findings, that is, the interview data could be verified and the credibility, reliability and validity of the findings could be thus ensured. The findings are related further in this paper theme by theme.

The remainder of this paper consists of three sections and conclusions. The following section reviews the literature to which this paper contributes and

Table 1. The structure of ownership in the Polish airport industry in 2016 (%).

| CITY/AIRPORT | IATA CODE | PPL (the state) | REGIONAL AUTHORITIES (regions) | LOCAL AUTHORITIES (municipalities) | OTHER (inc. private shareholders) |
|---------------|-----------|--------------------|--------------------------------------|------------------------------------------|-----------------------------------------|
| Warsaw-Chopin | WAW | 100.00 | 0.00 | 0.00 | 0.00 |
| Warsaw-Modlin | WMI | 30.39 | 30.37 | 4.81 | 34.43 |
| Krakow | KRK | 76.19 | 22.73 | 1.08 | 0.00 |
| Wroclaw | WRO | 19.74 | 31.11 | 49.15 | 0.00 |
| Poznan | POZ | 39.00 | 24.00 | 37.00 | 0.00 |
| Gdansk | GDN | 31.44 | 31.62 | 36.94 | 0.00 |
| Katowice | KTW | 17.30 | 34.88 | 5.22 | 42.60 |
| Bydgoszcz | BZG | 5.91 | 70.49 | 22.67 | 0.93 |
| Lodz | LCJ | 0.00 | 5.70 | 94.29 | 0.01 |
| Szczecin | SZZ | 48.94 | 51.06 altogether | | |
| Lublin | LUZ | 0.00 | 30.10 | 64.50 | 5.40 |
| Radom | RDO | 0.00 | 100.00 altogether | | |
| Rzeszow | RZE | 45.65 | 54.35 | 0.00 | 0.00 |
| Olsztyn | SZY | 12.67 | 40.00 | 0.00 | 47.33 |
| Zielona Gora | IEG | 0.00 | 100.00 | 0.00 | 0.00 |

Source: Own elaboration on the basis of the airports' official websites (accessed between March and April 2016).

IATA: International Air Transport Association; PPL: Polskie Porty Lotnicze.

discusses the key concepts that framed the research. To set the scene, the third section offers background information on Polish air transport and its post-communist development. The penultimate section presents empirical findings, while the concluding section summarises the theoretical implications of the paper.

The airport industry and economic development

Since the late 1970s, in line with the wider neo-liberal tendencies, air transport has been subject to liberalisation and deregulation (Debbage, 1994). Apart from giving airlines unprecedented flexibility, intensifying airline competition and encouraging the rise of new carriers (Bowen, 2010; Debbage, 1994), deregulation of air transport has also markedly reshaped the airport industry. Not only has it induced intensive airport development, but it has also stimulated the commercialisation of airports. As a result, airports are undergoing a shift from the public service paradigm, wherein they were passive utilities, to the commercial paradigm, in which they are equipped with social agency and act as competitive

businesses (Bowen, 2010; Gillen, 2011; Graham, 2011, 2013, Graham and Ison, 2014).

Importantly, all these processes have facilitated the recognition of airports as key actors in the global air transport system, thus shifting the focus from airports as passive nodes in networks of connections onto airports as active two-sided platforms that offer services to both airlines and passengers and that compete for air traffic and passengers to achieve financial sustainability (Bowen, 2010; Gillen, 2011; Graham, 2013; Graham and Ison, 2014; Morrell, 2010). Unsurprisingly, most attention is being paid to the effects of commercialisation on airports' performance, new modes of airport governance and the changing relations between airports and airlines (Gillen, 2011; Graham, 2011, 2013). By contrast, little consideration is given to how the ways in which airports are governed and in which they compete for traffic depend on the political and institutional features of the places that they represent. Apart from work on airport planning (e.g. Addie, 2014; Bowen and Cidell, 2011; Cidell, 2013; Stratford and Wells, 2009), the involvement of local/regional institutions in shaping aviation 'from below' has been explored

very negligibly. Such research is either rare (e.g. Lohmann et al., 2009) or limited to national regulatory frameworks and state initiatives (e.g. Bowen, 2000). Meanwhile, it must be recognised that the homogenisation of the airline sector, which open-skies policies are fostering, is not fully reflected 'on the ground' at the sub-national level where local/regional governments often opt to retain control over regional airports (Bowen, 2010; Graham and Ison, 2014) to harness their developmental potential. As Graham (1998: 88) contended, 'no transport network can be understood or interpreted apart from the historical processes, socio-economic forces and political decisions which created them'.

Another pertinent strand in research on airports focuses on the ability of airports to open their regions to increased investment and business/leisure visitation. Airports are thus seen as a necessary (although not sufficient) condition for development to occur (Bowen, 2010; Button et al., 2010; Button and Taylor, 2000; Graham, 1998; Graham and Guyer, 2000). Two specific topics can be distinguished here. Firstly, in line with the former preoccupation of aviation research with networks of air connections, multiple studies focus on the position that airports hold in their networks and how this position determines the inclusion of their regions in the global economy (e.g. Bowen, 2002; Johansson, 2007; Taylor et al., 2007). Secondly, apart from recognising that airports foster regional development directly (e.g. through generating employment), indirectly (e.g. through forging local linkages) and in an induced way (e.g. through enabling the people employed in the airport industry to spend their wages locally), much air transport research focuses on the so-called catalytic impacts of aviation, that is, how accessibility by air translates into regional development on the ground (Baker et al., 2015; Graham and Ison, 2014; Halpern and Brathen, 2011). Although the relations between aviation and regional development are difficult to disentangle and the direction of causality is rarely clear, there is a common agreement that aviation enhances regional competitiveness, functions as an economic multiplier and serves as a critical factor influencing company location decisions (Baker et al., 2015; Bowen, 2010; Button et al., 2010; Debbage and Delk, 2001; Graham and Guyer, 2000;

Hakfoort et al., 2001; Halpern and Brathen, 2011; Mikkala and Tervo, 2013; Redondi et al., 2013).

However, the literature on the relations between air transport and regional development suffers from similar underdevelopments as the work on airport commercialisation. Namely, it pays little attention to how the impacts of aviation on regional development are shaped by the institutional and political features of the region, how air transport fits the region's path of development, what potential to alter this trajectory air transport has, why some regions fit the strategic needs of airlines whilst others are bypassed by their networks, what regional assets air transport relies on and why building an airport is seldom enough to improve the region's economic stature. More work is thus needed on how, in the context of ongoing neo-liberalisation and inter-regional competition, the potential of aviation to foster regional growth is realised in various contexts at the sub-national level.

The notions of strategic coupling, path-dependence and path-creation can prove helpful in addressing these gaps. Associated with the wider global production networks (GPNs) perspective (Henderson et al., 2002, see also Coe et al., 2004; Hess and Yeung, 2006), whose key concern is 'to reveal the dynamic developmental impacts that result both from the firms and the territories that they interconnect' (Coe and Hess, 2011: 130), the idea of strategic coupling captures the place-dependent relations between the GPNs of firms and the assets of the territories into which these firms expand (Coe et al., 2004; Coe and Hess, 2011; Yeung, 2009, 2016). Regional development is defined here as a dynamic and contingent outcome of the complementarities between regional assets (i.e. institutional, human and technological resources that are a precondition for development to occur) and the strategic needs of trans-local actors (Coe, 2009). Importantly, the concept of strategic coupling also stresses that the extent to which such complementarities can bring desired developmental effects always depends on the ability of the existing institutions to promote regional assets and tie down the capital of trans-local actors (Coe, 2009; Coe et al., 2004; Coe and Hess, 2011; Yeung, 2009). Thus, strategic couplings are created by the conscious and intentional actions of institutions and

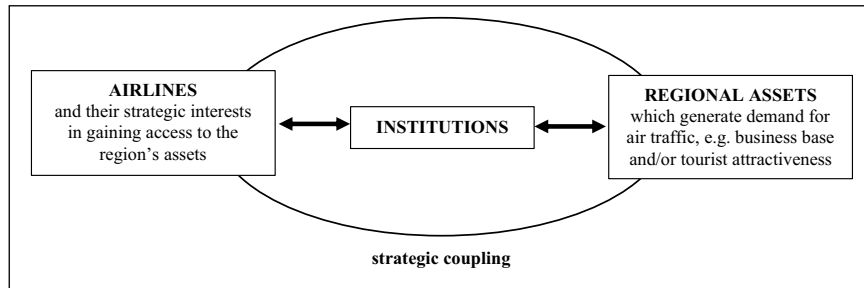


Figure 1. Basic strategic couplings in the passenger air transport industry.

Source: Own elaboration inspired by Coe et al. (2004: 470, Figure 1).

firms who opt to set up time- and space-contingent coalitions (MacKinnon, 2012).

Although this shows that the concept of strategic coupling is based on a rationalist and deliberative sense of social agency (MacKinnon, 2012), it should be also recognised that power relations between actors within strategic couplings are not always symmetrical (Dawley, 2011; see also Coe and Hess, 2011). For instance, firms can play off host regions against each other to secure the best possible deal for themselves in terms of financial and political support – something that the neo-liberal processes of deregulation and liberalisation largely facilitate (MacKinnon, 2012). Much therefore depends on the bargaining power of (local) institutions and their ability to create a stimulating environment for firms (van Grunsven and Hutchinson, 2016).

So far, however, most research on strategic coupling has focused on the complementarities between regions and firms and the subsequent processes of decoupling and recoupling (Dawley, 2011; Horner, 2014; Yang, 2009; Yang et al., 2009; Yeung, 2009), thus leaving the different context-specific ways in which institutions foster strategic couplings (i.e. the ‘pre-coupling stage’) largely unexplored (Horner, 2014; MacKinnon, 2012; Yang, 2017). This mainly applies to state authorities at various levels and how they use their agency to foster relations between regions and firms (van Grunsven and Hutchinson, 2016; Yang, 2017). It is thus necessary to pay more attention to ‘the state as constituted at different geographical scales and as an institutional and relational actor in the governance of global production arrangements’ (Smith, 2015: 311).

In this respect, the idea of strategic coupling can shed light on how, in a competitive, liberalised and deregulated environment where airlines tend to play off airports against each other (Graham, 2013), local/regional institutions utilise their airports as a catalyst for development to pursue the value that air transport has the potential to generate. In return, the airport industry is a good case through which the role of institutions in bringing strategic couplings into existence can be better explored. Figure 1 shows a simplified version of the idea of strategic coupling tailored to air transport.

Simultaneously, the paper adopts the concepts of path-dependence and path-creation, both of which are closely associated with evolutionary economic geography (EEG) – a theoretical paradigm that focuses on how the economic landscape evolves over time, what historical factors shape its evolution and how external forces counterbalance this influence (Boschma and Martin, 2007, 2010; Martin and Sunley, 2006). While the concept of path-dependence implies that the state of the economy at a given moment is always determined by the path that the economy has followed to date, the notion of path-creation assumes that new trajectories of growth are always possible and that economic actors can always transform and deviate from existing structures, practices and forms of growth (Boschma and Martin, 2007, 2010; Martin and Sunley, 2006). In other words, the idea of path-dependence addresses how the weight of inherited skills, investments and practices inhibits the capacity of regions to adapt to wider processes of change, while the concept of path-creation looks at how path-dependence can be overcome.

by initiating new endogenous paths of development, upgrading (or diversifying) the existing industries or exposing the region to external networks and the expertise and investment that they could give access to (MacKinnon, 2012; Martin and Sunley, 2006).

However, although EEG has spawned rich empirical analysis, it tends to be criticised for its relative isolation from institutional and relational approaches in economic geography (Yang, 2012). Firstly, by contrast to the GPN perspective, which addresses the relations between global processes and regional change, EEG underplays exogenous linkages and focuses instead on endogenous factors (Yang, 2012, 2014). Secondly, despite the recognition that a region's institutional past exerts a major influence on its future development (Martin and Sunley, 2006), EEG pays little attention to the role of institutions in mediating new paths of growth (Dawley et al., 2015; Yang, 2012, 2014). Connected to this (by contrast to the idea of strategic coupling), EEG defines social agency rather narrowly, that is, in terms of routine practice and habit (MacKinnon, 2012). Thus, it is often argued that the general understanding of path-dependence and path-creation could largely benefit from a more pluralist conception of institutions and agency. More attention should be therefore paid to how new paths of development are shaped by state agencies and how their social agency generates contingency and particularity in economic space (Dawley, 2014; MacKinnon et al., 2009; Martin and Sunley, 2015; Pike et al., 2009).

In this respect, the ideas of path-dependence and path-creation can help explore how local conditions (including different legacies of preceding economic and political systems) mould the role of airports in fostering regional development (path-dependence) and how effective this role can be in catalysing new forms of growth (path-creation). In return, air transport can serve as a useful lens through which the role of institutions and social agency in catalysing new trajectories of development can be better understood. Importantly, the applicability of these two ideas to the post-communist context in Central and Eastern Europe (CEE) has already been verified multiple times (see, e.g. Pickles and Smith, 1998). Both ideas have also proved useful in explaining the post-communist restructuring of various service sectors in CEE. Tourism (Williams and

Balaž, 2002) and hotels (Niewiadomski, 2016) can serve here as good examples.

This paper is based on a conviction that, despite the differences between the two literatures, there is much to be gained from bringing GPNs and EEG together. Given that the GPN framework is not well suited for addressing the historical evolution of production networks, regional assets and institutions that constitute strategic couplings (MacKinnon, 2012), an evolutionary perspective on how strategic couplings emerge could markedly improve the general understanding of regional transformations in contemporary economic globalisation (Yang, 2012). In this respect, this paper draws from MacKinnon (2012), who observed that local/regional institutions' capacities to bargain with external actors always reflect the legacies of previous forms of development and, therefore, strategic couplings are always path-dependent in nature. Simultaneously, 'new forms of strategic coupling based on the meshing of regional assets and local firms in GPNs can be seen as a key mechanism of path creation' (MacKinnon, 2012: 234).

The notions of strategic coupling, path-dependence and path-creation are adopted here to explore the relations between air transport and regional development in Poland. The paper focuses on the role of local/regional institutions in fostering strategic couplings between airlines and regions and illustrates how Polish local/regional authorities charge their airports with developmental responsibilities, thus transforming them into active agents of regional development. To set the scene, the following section provides background information on Polish passenger aviation and its post-communist development.

Post-communist transformations and the Polish passenger air transport industry

Further to the collapse of communism in 1989, Poland embarked on the ambitious path of transition to capitalism. The main objective was to dismantle central planning, replace the socialist institutions with market-orientated structures and implement pro-market reforms (Bradshaw and Stenning, 2004; Smith, 1997; Sokol, 2001). Great hopes were also

pinned on the expected influx of Western firms and their help in commercialising state-owned enterprises (Pavlinek, 2004). Naturally, the post-communist restructuring also embraced air transport.

In 1989 the Polish transport system faced a variety of problems inherited from the preceding period (Hall, 1993; Shibata, 1994; Taylor, 1998). The initial lack of a clear strategy hampered the restructuring of Polish transport even more (Taylor, 1998). The condition of the Polish airline industry in the 1990s epitomises this situation perfectly. The poor condition of the fleet, the lack of capital to restore it and the low quality of services were the key problems that the national carrier LOT Polish Airlines had to address (Hall, 1993; Shibata, 1994; Taylor, 1998). The conflicting intentions of the central government towards air transport made the situation even more complex. While on the one hand the objective was to commercialise aviation, the decision to retain a majority stake in LOT and stick to the protectionist policies made it difficult to attract foreign partners, thus leaving Poland far behind the rest of Europe, where deregulation and liberalisation of air transport had already started (Shibata, 1994; Taylor, 1998). Although in 1992 LOT was transformed into a public limited company with the state keeping 51% of shares, the intended selling of the remaining 49% to private investors never materialised (Shibata, 1994; Taylor, 1998). In 1999 LOT was re-nationalised (Akbar et al., 2014; Shibata, 1994; Taylor, 1998) and it has remained in the hands of the state ever since.

The situation in the Polish airport industry was not much different. Until 1993 all passenger airports were owned and managed by the state enterprise Polskie Porty Lotnicze (PPL). Although in 1993 all airports were commercialised and converted into joint stock companies (a proportion of their shares were transferred to the respective local/regional authorities), PPL strategically kept a stake in all the airports that it had previously controlled. Warsaw-Chopin (WAW) – Poland's central airport and LOT's hub – remained in the hands of PPL entirely. Since that time, the structure of ownership in the Polish airport industry has seen very few changes, with the replacement of the old two-level system of administration (regions and municipalities) with a new three-level system (regions, counties and municipalities) in

1999 being the main exception. Table 1 presents the current ownership structure. The only airports that are not co-owned by PPL are those developed after 1993 and those that had not had the status of passenger airports before 1993: Lodz (LCJ), Radom (RDO), Zielona Gora (IEG) and Lublin (LUZ). Warsaw-Modlin (WMI), which opened as a passenger airport in 2012 and which is co-owned by PPL, is an exception here. Figure 2 shows the location of all Polish operational airports.

The policy framework in which the newly commercialised Polish airports had to operate in the 1990s was also far from favourable. While local/regional administrations would have preferred the central government to pursue open-skies policies and thus give regional airports the power to attract air traffic independently, the government was committed to protecting the interests of LOT and WAW. Local and regional authorities' ability to utilise their airports as a catalyst for development was thus limited (Taylor, 1998). The situation changed in 2004 when Poland joined the European Union (EU). The adoption of open-skies policies and the entry of low-cost carriers (LCCs), both of which generated a sudden increase in air traffic (see Table 2), not only reduced the dependence of regional airports on the central government (Augustyniak et al., 2015), but also encouraged the further development of regional airports and fostered the transformation of Polish airports from passive utilities into active businesses. The infrastructural improvements related to air transport were further facilitated by the EU, which in 2009 invested nearly 400 million Euro in the renovation and development of selected Polish airports (Pancer-Cybulska and Olipra, 2016).

As a result, to capture the value that airports could now generate, local/regional authorities started capitalising on all these changes and, apart from investing in the existing infrastructure or developing new facilities where possible, they began charging their airports with developmental tasks. However, even though the central government promised to decentralise air transport (Ministerstwo Transportu, 2007), the peculiar structure of ownership (a partial legacy of the communist system) has kept Polish regional airports entwined in the multi-scalar patterns of politics, which now often hamper their ability to fulfil

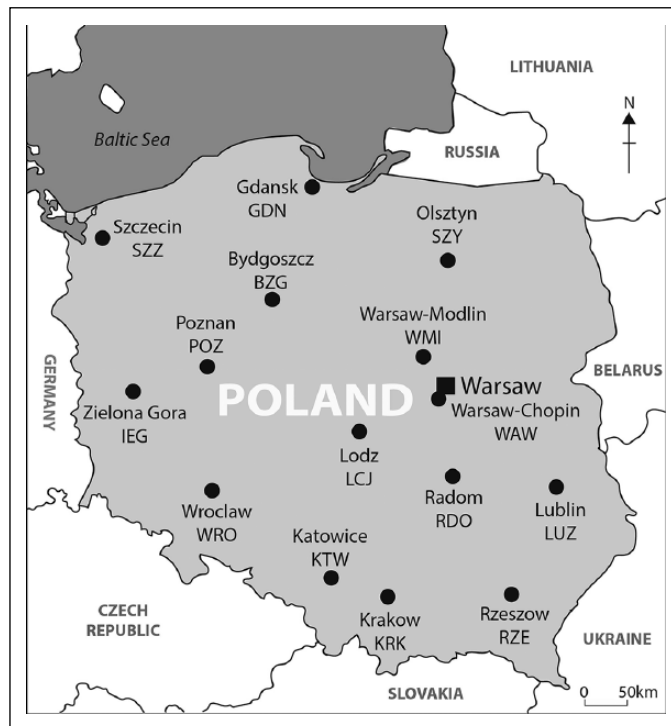


Figure 2. Polish passenger airports in 2015.

Source: Own elaboration.

their path-shaping roles. The interdependencies between these two sets of processes lie at the heart of the following section, which discusses the perceived importance of airports as a catalyst for regional development, the relations between airports and their local/regional administrations and the tensions between airports and their local/regional owners, on the one hand, and the central authorities on the other.

Polish airports as agents of regional development

The commercialisation of airports and the partial transfer of ownership to local/regional authorities in 1993, the reform of the system of administration and the devolution of developmental functions to regions and municipalities in 1999, as well as the accession of Poland to the EU and the adoption of ‘open-skies’ policies in 2004, significantly re-shaped the Polish airport industry. As a result, Polish airports are now

subject to various unprecedented, often contradictory, pressures. On the one hand, due to the fact that the adoption of capitalist norms after 1989 gave rise to inter-regional competition, airports are expected by their owners to deploy their newly acquired social agency to compete for air traffic in order to stimulate strategic couplings with airlines and catalyse new paths of development, while aiming for financial sustainability. On the other, their operations continue to be shaped by the legacies of the previous system, with the tensions between regional airports and PPL/LOT/WAW being a good example. These path-dependent and path-shaping pressures are not easy to reconcile.

Polish local/regional administrations, who in 1999 faced the responsibility of managing their regional development almost by themselves, quickly spotted the path-shaping potential of airports and began exploiting their airports (or even developing new facilities where possible) to enhance the economic visibility of their regions. The conviction that

Table 2. Passenger air traffic in Poland in 1993–2015 by airports.

| AIRPORT | IATA CODE | 1993 | | 2003 | | 2005 | | 2015 | |
|------------------|--------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | | Passengers | % of total | Passengers | % of total | Passengers | % of total | Passengers | % of total |
| Bydgoszcz | BZG | 0 | 0.00 | 20,065 | 0.28 | 38,682 | 0.34 | 318,817 | 1.05 |
| Gdansk | GDN | 129,945 | 5.17 | 365,036 | 5.13 | 677,946 | 5.89 | 3,676,771 | 12.10 |
| Katowice | KTW | 17 278 | 0.69 | 257,991 | 3.63 | 1,083,517 | 9.42 | 3,044,017 | 10.02 |
| Krakow | KRK | 87,654 | 3.49 | 593,214 | 8.34 | 1,564,338 | 13.6 | 4,208,661 | 13.85 |
| Lodz | LCJ | 0 | 0.00 | 7320 | 0.10 | 18,063 | 0.16 | 287,620 | 0.95 |
| Lublin | LUZ | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 264,070 | 0.87 |
| Olsztyn | SZY | 0 | 0.00 | 489 | 0.01 | 332 | 0.01 | 0 | 0.00 |
| Poznan | POZ | 27,415 | 1.09 | 263,551 | 3.71 | 399,255 | 3.47 | 1,477,318 | 4.86 |
| Radom | RDO | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 670 | 0.00 |
| Rzeszow | RZE | 7449 | 0.30 | 67,165 | 0.94 | 91,499 | 0.80 | 641,146 | 2.11 |
| Szczecin | SZZ | 16,540 | 0.66 | 87,433 | 1.23 | 101,801 | 0.89 | 412,162 | 1.36 |
| Warsaw Chopin | WAW | 2,149,768 | 85.47 | 5,166,991 | 72.67 | 7,071,667 | 61.47 | 11,186,688 | 36.79 |
| Warsaw Modlin | WMI | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 2,589,286 | 8.52 |
| Wroclaw | WRO | 78,684 | 3.13 | 273,712 | 3.85 | 454,047 | 3.95 | 2,269,216 | 7.47 |
| Zielona Gora | IEG | 0 | 0.00 | 7813 | 0.11 | 427 | 0.00 | 15,550 | 0.05 |
| POLAND TOTAL: | | 2,514,733 | 100.00 | 7,110,780 | 100.00 | 11,501,574 | 100.00 | 30,391,992 | 100.00 |

Source: Own elaboration on the basis of the data retrieved from the official website of the Polish Civil Aviation Authority (Urząd Lotnictwa Cywilnego), www.ulc.gov.pl, in October 2016.

IATA: International Air Transport Association.

airports are ‘gateways’, that is, that they provide access to networks of air connections that, in turn, attract investors and tourists, has since largely permeated their developmental strategies. A senior official from the government of a Polish city observed:

The airport is for us like a window on the world. Without an airport that offers an efficient network of connections it would be difficult for us to keep developing as a modern metropolis. We recognised this particularly strongly in the last decade. (...) [This city] is a popular location for service firms for whom a possibility to travel quickly to major cities in Western Europe is key. (...) Without appropriate air connections (...) many of those firms would not have picked [this city].

(May 2015)

Indeed, all 16 Polish regions make a reference to air transport in their strategies of development as an important factor conditioning regional economic attractiveness (Pancer-Cybulska and Olipra, 2016).

The strategic importance of airports was also highlighted in all 16 regional operational programmes (ROPs) negotiated by Polish regions with the EU for the years 2007–2013. In the case of regions with no airports or where airports have not been funded by the EU, the same can be seen in the 2014–2020 round of ROPs (although in some cases plans to build new airports were questioned by the European Commission) (Pancer-Cybulska and Olipra, 2016).

Since the economic interests of airports are convergent with the economic interests of their respective regions and the political and reputational interests of their administrations, local authorities and their airports embark on various forms of cooperation. In order to attract enough traffic, airports capitalise on regional assets and the various forms of support that their local/regional governments provide. In return, to ensure that airports generate enough revenue, promote their regions to tourists and play an active role in fostering strategic couplings with airlines, local/regional authorities tend to

pressurise their airports in various ways – something that would not be possible if regional airports were fully privatised, or if they remained state-owned or, importantly, if they had not been commercialised and equipped with social agency. In this respect, they extend the role of their airports from that of passive assets to that of pro-active agents of regional development. Although similar tendencies occur in other deregulated environments, the peculiar structure of ownership in the Polish airport industry renders Poland a specific case (see also Forsyth, 2003, for the case of Australia).

The main form of help that local/regional owners offer is financial support. Given that until recently state aid for airlines and airports was illegal in the EU (Bowen, 2010; Morrell, 2010), financial support for Polish airports rarely went beyond funding essential infrastructural improvements or covering the airport's losses (as opposed to, e.g. subsidising air connections that did not fall into the public service obligation category). It has been only recently that some forms of direct financial support for smaller airports have been allowed (Toplensky, 2017). Given that the volume of traffic at eight Polish airports does not exceed 1 million passengers per year (Table 2) and that it is difficult for airports serving less than 1 million passengers per year to be profitable (Baker et al., 2015; Redondi et al., 2013), most Polish airports generate losses. For instance, in 2012 only five Polish airports were profitable (WAW, KRK, KTW, GDN, POZ), thus setting this threshold at 1.6 million passengers (Sipiński, 2013). The majority of local/regional governments that (co-)own their regional airports accept the necessity to cover such losses, hoping that direct financial losses can be compensated in the longer term by indirect economic gains catalysed by strategic couplings with airlines and the strategic couplings with other firms, which the availability of connections will foster. An executive from a regional airport in Poland confirmed:

Economically, some airports in Poland can be justified and some cannot. (...) There is a considerable number of airports which (...) at least for many years to come will not be profitable because they are unlikely to attract a sufficient volume of air traffic to balance out their actual costs. But there are other reasons why they should exist (...). They improve the accessibility of

their regions and give them a chance to develop. Lublin Airport is a good example. The region needs it, so its existence is justified even though it is not profitable now and it surely won't be in a foreseeable future.

(June 2015)

The same can be said about other Polish airports, for example, Rzeszow (RZE) (JS, 2016). However, this long-term thinking is not shared by everyone. An executive from a Polish regional airport commented:

Some time ago, when I went to a meeting called by the Polish President (...) and attended by all regional political leaders, I heard one of the attendees (...) complaining: 'Whose idea was it that airports are windows on the world? I keep subsidising my airport all the time and it already drives me insane! I really have enough of this, whose idea was it?'

(May 2015)

Given that the development of new airports is often driven by the political ambitions of local leaders who finance over-designed airports without much consideration as to whether the region has any economic potential to attract carriers and, ultimately, other investors (Pancer-Cybulska and Olipra, 2016), some Polish airports are difficult to justify even if long-term thinking is invoked. Radom (RDO), which in 2015 served only 670 passengers, and Olsztyn (SZY), which currently does not offer any scheduled services (Table 2), are the most frequently mentioned examples (various interviews with executives from Polish airports, May–June 2015). Although such 'white elephants' can also be identified in other liberalised environments (Bowen, 2010; Button et al., 2010; Graham and Ison, 2014), in the Polish case their existence is usually attributed to the path-dependent nature of the post-communist restructuring and various legacies of the communist system – the relative immaturity of capitalist thinking and the dominance of political ambitions over economic rationality. Indeed, as emphasised by the EU in the latest round of ROPs, there is now no need to build new airport facilities in Poland (Walków, 2017).

Local/regional authorities in Poland also engage their airports in fostering new paths of development

through joint marketing. Such initiatives are very frequent, often very advanced and usually based on a recognition that the airport is an important component of the city or region and that the two parties are inseparable (interview with a senior official from the government of a large Polish city, May 2015). Importantly, such cooperation often exceeds 'dry' advertising. Consulting each other's development plans and exchanging strategic information are critical examples here. The role that joint marketing and information exchange play has been captured very well by a senior official from the government of a major Polish city:

There is an intense exchange of information between us and the airport. First, we need information about the airport and its network of connections to faithfully promote it in our marketing initiatives as one of the most important assets we have. (...) Second, (...) we assist the airport with collecting information on what demand for air services the firms in the city are expecting to generate. We also (...) advise the airport on what connections potential investors would like the airport to offer.

(May 2015)

However, such forms of cooperation are still not ever-present. Instead, the intensity of cooperation is frequently a function of the proportion of shares that a given level of administration holds. Thus, regardless of the aforementioned mutuality of interests, cities/regions that are marginal shareholders are sometimes less inclined to fund joint marketing, whilst airports are less prompted to market their cities/regions if they cannot rely on their support. As this situation is a direct reflection of the structure of ownership in the Polish airport industry, it reiterates that the ways in which air transport is used to foster regional development are inherently path-dependent.

On top of destination marketing, local/regional authorities also get involved in helping airlines initiate routes that are considered strategic for the region's growth. Given that the provision of air services is a prerogative of airlines and no airline will initiate a connection if flying to a given airport does not generate sufficient profits (Graham and Guyer,

2000), this form of support most often covers start-up costs (e.g. those associated with market research or route advertising), which normally do not qualify as state aid (although they do remain a controversial issue), but that help airlines make their routes profitable at the initial stage. Such incentives are usually offered to LCCs, which are very attractive partners to secondary airports due to their ability to create new markets and that therefore tend to play off regional airports against each other to couple up with those that offer most support (Graham, 2013). A senior executive from a Polish regional airport explained it perfectly:

Carriers' way of thinking has recently changed. They expect local administrations to be involved in initiating new routes much more than before. In the past they only tried to get lower landing fees and now they ask what else on top of that we can give them. (...) The key thing here (...) is that in the current climate we must beg airlines to fly to our airport. (...) It is now our role to attract their interest, to give them a carrot, to constantly offer new things, to have attractive fees and to be in a position to offer additional incentives and so on... And that's difficult.

(May 2015)

Unsurprisingly, airlines are aware of their bargaining power and try to use it for their own benefit. In contrast to WAW, which serves the country's capital and primary business destination and that is a natural first choice for carriers interested in tackling the Polish market, the bargaining position of many Polish regional airports, which desperately seek air traffic to open their regions to more strategic couplings, is less advantageous. Strategic couplings between airlines and Polish regions are therefore based on largely asymmetrical power relations. A senior executive from a major international airline operating routes to Poland confirmed:

You get into contact with an airport at a very early stage of the planning (...) when usually you have two or three options (...). And then you start negotiating with these airports and if they are not cooperative enough they fall out of the selection process quite quickly.

(April 2015)

For this reason, the successful ‘agentisation’ of airports also requires political support. Some authorities understand this need and try to get involved in negotiations with airlines to lobby them on behalf of their cities/regions and airports (interview with a senior official from a large Polish city, May 2015). However, as the example of Lodz demonstrates, there is still much to be done in this respect. Although Lodz is the third largest city in Poland and it serves a region that is home to 2.5 million people and has the sixth highest gross domestic product (GDP) in the country out of the 16 regions (ec.europa.eu/eurostat, October 2016), the number of routes that the local airport (LCJ) offers (only six in April 2015) and the number of passengers it serves (only 288,000 in 2015 – Table 2) do not correspond with the economic potential of the city, thus placing its airport far behind many of those airports that serve less developed regions. While the geographical proximity of WAW is also a factor here, several interviewees explained this underperformance with a lack of political support from the local administration – the airport’s major shareholder. An executive from a different Polish airport commented:

Here, I would say, we have a mutual understanding between the two parties and both parties know that we have common interests. (...) It’s not like Lodz where the mayor, who owns [94%] of the airport’s shares, says that she prefers to fly from Warsaw (...). We do not have problems like this. In an official interview for *Dziennik Łódzki* [a local daily newspaper in Lodz – see Krystek, 2015] she said that there is nowhere to fly from Lodz and that she prefers to drive to and fly from Warsaw (...).

(June 2015)

Finally, Polish local/regional authorities also try to utilise their airports’ social agency through setting challenging (not always achievable) targets for them. This often leads to tensions. An executive from a Polish regional airport described it:

This is an erroneous way of thinking and it cannot be reversed any more. (...) The owners give us tasks like ‘we expect you will serve this number of passengers by 2018’. How can we do that? We own no aircraft! And if we don’t, they will complain. (...) Meanwhile, we

should be given tasks like ‘we expect that there will be 3 million passengers by 2020 so please ensure that we have sufficient infrastructure to serve them’. And that’s something I can do! I will prepare a plan, tell them how much it will cost and make it happen. But we cannot bring these people because we own no aircraft! (...) We have been manipulated into this philosophy and we have to look for passengers ourselves.

(May 2015)

Importantly, the peculiar structure of ownership in the Polish airport industry also entangles regional airports in the different patterns of extra-local politics, which, in contrast to much of local politics, often restrict airports’ social agency and their path-shaping roles. The central government’s tendency to protect LOT and the role which PPL (the sole operator of WAW – LOT’s hub) plays in managing regional airports are the most frequently invoked sources of tensions between the national authorities and Polish regional airports. For instance, LOT is often accused of having lobbied for the liquidation of EuroLOT – a regional airline developed by the Polish central government in 1996 to take over some of LOT’s regional routes. However, given that over time EuroLOT initiated a number of international connections from a few regional airports under its own brand (www.fly4free.pl, October 2016), it inevitably became LOT’s competitor. LOT’s willingness to take over this traffic and direct it via WAW in order to feed its own services was allegedly the main reason why EuroLOT was liquidated, even though this decision deprived regional airports of useful services (various interviews with representatives of regional airports and local/regional authorities, May–June 2015).

Regional airports also often claim that they are not supported by PPL as much as they should or, even, that PPL intentionally hampers their development to give WAW an advantage (various interviews with representatives of regional airports and senior officials from local/regional authorities in Poland, May–June 2015). One specific example is WMI. According to various interviewees, the development of WMI, which has access to vast areas of land and that therefore has unrestricted possibilities to expand, is deliberately blocked by PPL (one of its key shareholders – Table 1) in order to sustain the dominant status of

WAW (various interviews with representatives of Polish regional airports, May–June 2015). A senior executive from a regional airport summarised it:

The fact that PPL has shares in the majority of airports, which is a historical legacy (...), is not good for regional airports and their business. I believe that if PPL did not interfere with how regional airports are managed it would be the healthiest solution for air transport in Poland. Currently, PPL has shares in many airports and it therefore influences how they are managed. (...) The question is if this arrangement makes any sense. (...) The question is whether PPL is going to act in their [regional airports'] best interest or whether it is going to protect the interests of WAW.

(June 2015)

The tensions between WAW/PPL/LOT and WMI escalated recently even more when PPL declared that it would like RDO (i.e. one of the least economically justified airports in Poland) to be developed further so that it becomes a back-up airport for WAW, all charter and low-cost connections are moved from WAW to RDO and more space for LOT is created at WAW (Piotrowski, 2018). While it cannot be questioned that WAW is gradually running out of capacity, the intention to invest in RDO (rather than WMI) is openly challenged not only by experts but also by those airlines (e.g. Wizzair) that will be asked to leave WAW (Piotrowski, 2018).

Overall, the policies of the central government are often considered by regional airports and local and regional authorities to be 'Warsaw-centric' (interview with an official from a Polish city, May 2015). Although this 'Warsaw-centricity' can be partly justified by the fact that Warsaw is the country's main business destination and that WAW is the national carrier's hub, such policies are deemed to be pursued at the expense of local/regional interests. This shows that the re-distribution of air-transport-related responsibilities between different levels of administration, which the Ministry of Transport promised in 2007 (AK, 2007), has not been really achieved. As various interviewees commented (May–June 2015), it is unlikely to be achieved as long as PPL remains a key shareholder of regional airports. While allegations against PPL, LOT and

WAW must be treated with caution, the tensions that they reflect serve as evidence that the strategic couplings with airlines that Polish airports spawn do not only depend on local/regional institutions, but are also shaped by the complex, multi-scalar and path-dependent patterns of power relations between different institutions that restrict the social agency of individual airports.

Conclusions

The main objective of this paper has been to explore how air transport and its catalytic impacts on regional development are shaped by local/regional institutions 'from below'. The paper has employed the economic-geographical ideas of strategic coupling, path-dependence and path-creation to explore the different ways in which local/regional authorities in Poland pressurise and support their regional airports to foster their developmental potential. The process of charging airports with developmental functions has been referred to as the 'agentisation' of airports. The ways in which airports are 'agentised' range from financing infrastructural improvements and covering losses to engaging in joint marketing of regions, airports and key air connections and setting challenging performance targets. The role that airports play is therefore twofold. While one on the one hand they serve as important regional assets, on the other they function as active agents of regional development, thus effectively becoming 'extensions' of the institutions that (co-) own them.

Although similar tendencies also occur in other deregulated environments (Bowen, 2010; Gillen, 2011; Graham, 2011), the shift from the public service paradigm to the commercial paradigm that Polish airports are undergoing has several peculiar dimensions. Given that regional development based on capitalist principles has been a priority for Polish local/regional administrations since the collapse of communism, the hopes that are pinned on the path-shaping potential of airports are more significant than in consolidated capitalist environments, where inter-regional competition is not a new thing. At the same time, the distribution of airport ownership between three levels of administration – a partial legacy of the

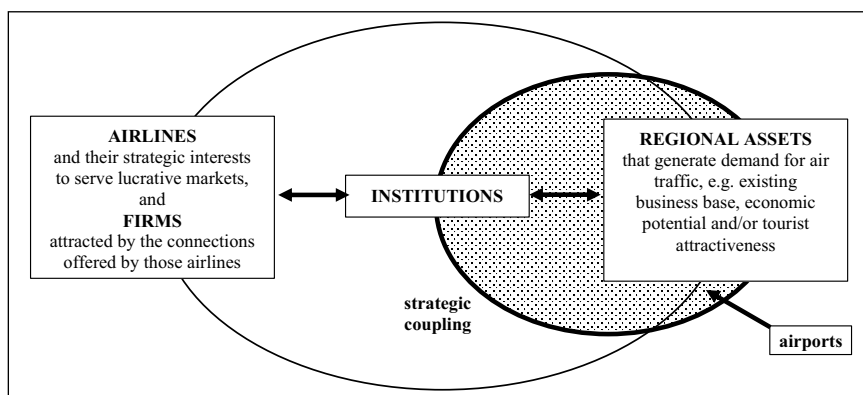


Figure 3. The place and role of airports in strategic coupling processes.

Source: Own elaboration inspired by Coe et al. (2004: 470, Figure 1).

previous system – has entangled Polish airports in multi-scalar patterns of politics, thus making airport development an inherently path-dependent process. The partial transfer of ownership to local/regional authorities and the devolution of developmental tasks to regions and municipalities have been the most important place-specific factors shaping the ways in which Polish airports utilise their newly acquired social agency to compete for air traffic, develop strategic couplings with airlines and catalyse strategic couplings with companies whose location decisions depend on the availability of adequate air services.

In this respect, the paper has contributed to two under-researched areas in economic geography: (1) the role of institutions in the evolution of strategic couplings; and (2) the role of social agency in the processes of path-dependence and path-creation. With regard to the first area, it has been shown that the laws of market are not the only factor shaping networks of air services and that the homogenisation of air transport, which ‘open-skies’ policies are fostering, is unlikely to be followed ‘on the ground’ at the sub-national level where local/regional institutions retain control over airport facilities. Instead, networks of air connections are often shaped by the strategic couplings between regions and airlines that are mediated by the institutional contexts in which airports are embedded. It has been also shown that the commercialisation of airports, which has transformed airports from passive utilities into

active business and that has equipped airports with social agency, has important developmental effects on the places that airports represent. Thus, given that airports are both regional assets and ‘extensions’ of the institutions that own and control them, the clear-cut distinction between assets and institutions, which the concept of strategic coupling assumes, is in the case of aviation blurred (Figure 3). With regard to the second area, the paper has demonstrated that the social agency that airports and the institutions that own them possess may be consciously and intentionally utilised to foster new forms of development. Although the ways in which airports market and represent their regions will always be path-dependent, airports are simultaneously equipped with the power to (at least partly) overcome this path-dependence. Thus, as Mackinnon et al. (2009) and Pike et al. (2009) argued, there is much to be gained from adopting a more pluralistic conception of social agency in EEG-informed research. Thus, as much as economic-geographical concepts can shed new light on passenger air transport, air transport is an interesting case through which some economic-geographical ideas can be re-visited.

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References

- Addie J-P (2014) Flying high (in the competitive sky): conceptualizing the role of airports in global city-regions through "aero-regionalism". *Geoforum* 55: 87–99.
- AK (2007) Lotniska to szansa na rozwój regionów – rozmowa z Eugeniuszem Wróblem, Podsekretarzem Stanu w Ministerstwie Transportu. *Rzeczpospolita*, 20 June. Available at: <http://geoland.pl> (accessed July 2018).
- Akbar Y, Nemeth A and Niemeier H-M (2014) Here we go again... the permanently failing organization: an application to the airline industry in Eastern Europe. *Journal of Air Transport Management* 35: 1–11.
- Augustyniak W, Lopez-Torres L and Kalinowski S (2015) Performance of Polish regional airports after accessing the European Union: does liberalisation impact on airports' efficiency? *Journal of Air Transport Management* 43: 11–19.
- Baker D, Merkert R and Kamruzzaman M (2015) Regional aviation and economic growth: cointegration and causality analysis in Australia. *Journal of Transport Geography* 43: 140–150.
- Boschma R and Martin R (2007) Editorial: constructing an evolutionary economic geography. *Journal of Economic Geography* 7(5): 537–548.
- Boschma R and Martin R (2010) The aims and scope of evolutionary economic geography. In: Boschma R and Martin R (eds) *The Handbook of Evolutionary Economic Geography*. Cheltenham: Edward Elgar, pp. 3–39.
- Bowen J (2000) Airline hubs in Southeast Asia: national economic development and nodal accessibility. *Journal of Transport Geography* 8(1): 25–41.
- Bowen J (2002) Network change, deregulation, and access in the global airline industry. *Economic Geography* 78(4): 425–439.
- Bowen J (2010) *The Economic Geography of Air Transportation: Space, Time, and the Freedom of the Sky*. London: Routledge.
- Bowen J (2012) A spatial analysis of FedEx and UPS: hubs, spokes, and network structure. *Journal of Transport Geography* 24: 419–431.
- Bowen J and Cidell J (2011) Mega-airports: the Political, economic, and environmental implications of the world's expanding air transportation gateways. In: Brunn S (ed.) *Engineering Earth: The Impacts of Mega-Engineering Projects*. Dordrecht; Heidelberg; London; New York: Springer, pp. 867–888.
- Bowen J and Leinbach T (2006) Competitive advantage in global production networks: air freight services and the electronics industry in SE Asia. *Economic Geography* 82(2): 147–166.
- Bradshaw M and Stenning A (2004) Introduction: transformation and development. In: Bradshaw M and Stenning A (eds) *East Central Europe and the Former Soviet Union*. Harlow: Pearson, pp. 1–32.
- Button K and Taylor S (2000) International air transportation and economic development. *Air Transport Management* 6(4): 209–222.
- Button K, Doh S and Yuan J (2010) The role of small airports in economic development. *Journal of Airport Management* 4(2): 125–136.
- Cidell J (2006) Air transportation, airports, and the discourses and practices of globalization. *Urban Geography* 27(7): 651–663.
- Cidell J (2013) When runways move but people don't: the O'Hare Modernization Program and the relative immobilities of air travel. *Mobilities* 8(4): 528–541.
- Coe N (2009) Global production networks. In: Kitchin R and Thrift N (eds) *The International Encyclopedia of Human Geography*. Oxford: Elsevier, pp. 556–562.
- Coe N and Hess M (2011) Local and regional development: a global production networks approach. In: Pike A, Rodriguez-Pose A and Tomaney J (eds) *Handbook of Local and Regional Development*. London: Routledge, pp. 128–138.
- Coe N, Hess M, Yeung H, Dicken P and Henderson J (2004) 'Globalizing' regional development: a global production networks perspective. *Transactions of the Institute of British Geographers (New Series)* 29(4): 468–484.
- Dawley S (2011) Transnational corporations and local and regional development. In: Pike A, Rodriguez-Pose A and Tomaney J (eds) *Handbook of Local and Regional Development*. London: Routledge, pp. 394–412.

- Dawley S (2014) Creating new paths? Development of offshore wind, policy activism and peripheral region development. *Economic Geography* 90(1): 91–112.
- Dawley S, MacKinnon D, Cumbers A and Pike A (2015) Policy activism and regional path creation: the promotion of offshore wind in North East England and Scotland. *Cambridge Journal of Regions, Economy and Society* 8(2): 257–272.
- Debbage K (1994) The international airline industry: globalization, regulation and strategic alliances. *Journal of Transport Geography* 2(3): 190–203.
- Debbage K and Delk D (2001) The geography of air passenger volume and local employment patterns by US metropolitan core area: 1973–1996. *Journal of Air Transport Management* 7(3): 159–167.
- Forsyth P (2003) Airport policy in Australia and New Zealand: privatization, light-handed regulation and performance. In: Winston C and de Rus G. (eds) *Aviation Infrastructure Performance*. Washington, DC: Brookings Institution Press, pp. 65–99.
- Gillen D (2011) The evolution of airport ownership and governance. *Journal of Air Transport Management* 17(1): 3–13.
- Goetz A (2006) Transportation geography: reflecting on a subdiscipline and identifying future research trajectories – the insularity issue in Transport Geography. *Journal of Transport Geography* 14(3): 230–231.
- Goetz A, Vowles T and Tierney S (2009) Bridging the qualitative-quantitative divide in transport geography. *The Professional Geographer* 61(3): 323–335.
- Graham A (2011) The objectives and outcomes of airport privatization. *Research in Transportation Business and Management* 1(1): 3–14.
- Graham A (2013) Understanding the low cost carrier and airport relationship: a critical analysis of the salient issues. *Tourism Management* 36: 66–76.
- Graham A and Ison S (2014) The role of airports in air transport. In: Goetz A and Budd L (eds) *The Geographies of Air Transport*. Farnham: Ashgate, pp. 81–101.
- Graham B (1998) Liberalization, regional economic development and the geography of demand for air transport in the European Union. *Journal of Transport Geography* 6(2): 87–104.
- Graham B and Guyer C (2000) The role of airports and air services in the United Kingdom. *Journal of Transport Geography* 8(4): 249–262.
- Hakfoort J, Poot T and Rietveld P (2001) The regional economic impact of an airport: the case of Amsterdam Schiphol Airport. *Regional Studies* 35(7): 595–604.
- Hall D (1993) Impacts of economic and political transition on the transport geography of Central and Eastern Europe. *Journal of Transport Geography* 1(1): 20–35.
- Hall D (2010) Transport geography and new European realities: a critique. *Journal of Transport Geography* 18(1): 1–13.
- Hall P, Hesse M and Rodrigue J-P (2006) Guest editorial: reexploring the interface between economic and transport geography. *Environment and Planning A* 38(8): 1401–1408.
- Halpern N and Brathen S (2011) Impact of airports on regional accessibility and social development. *Journal of Transport Geography* 19(6): 1145–1154.
- Henderson J, Dicken P, Hess M, Coe N and Yeung H (2002) Global production networks and the analysis of economic development. *Review of International Political Economy* 9(3): 436–464.
- Hess M and Yeung H (2006) Guest editorial. *Environment and Planning A* 38(7): 1193–1204.
- Hesse M and Rodrigue J-P (2004) The transport geography of logistics and freight distribution. *Journal of Transport Geography* 12(3): 171–184.
- Horner R (2014) Strategic decoupling, recoupling and global production networks: India's pharmaceutical industry. *Journal of Economic Geography* 14(6): 1117–1140.
- Johansson O (2007) Inter-urban competition and air transport in the deregulated era: the Nashville case. *Journal of Transport Geography* 15(5): 368–379.
- JS (2016) Lotniska regionalne w Polsce: potencjał, plany, perspektywy rozwoju. *Portal Samorządowy*, 9 December. Available at: www.portalsamorzadowy.pl (accessed July 2018).
- Keeling D (2007) Transportation geography: new directions on well-worn trails. *Progress in Human Geography* 31(2): 217–225.
- Krystek A (2015) Likwidacja lotniska nie jest fantastyką [Liquidation of the airport is not an absurd], 25 Oct 2015. Available at: www.dzienniklodzki.pl (accessed October 2016).
- Lohmann G, Albers S, Koch B and Pavlovich K (2009) From hub to tourist destination – an explorative study of Singapore and Dubai's aviation-related transformation. *Journal of Air Transport Management* 15(5): 205–211.
- MacKinnon D (2012) Beyond strategic coupling: reassessing the firm-region nexus in global production networks. *Journal of Economic Geography* 12(1): 227–245.
- MacKinnon D, Cumbers A, Pike A, Birch K and McMaster R (2009) Evolution in economic geography: institutions,

- political economy and adaptation. *Economic Geography* 85(2): 129–150.
- Martin R and Sunley P (2006) Path dependence and regional economic evolution. *Journal of Economic Geography* 6(4): 395–437.
- Martin R and Sunley P (2015) Towards a developmental turn in evolutionary economic geography? *Regional Studies* 49(5): 712–732.
- Ministerstwo Transportu (2017) *Program Rozwoju Sieci Lotnisk I Lotniczych Urzędzeń Naziemnych*, 8 May 2007. Warsaw: Ministerstwo Transportu. Available at: www.gov.pl (accessed June 2018).
- Morrell P (2010) Airport competition and network access: a European perspective. In: Forsyth P, Gillen D, Mueller J and Niemeier H-M (eds) *Airport Competition: The European Experience*. Farnham: Ashgate, pp. 11–25.
- Mukkala K and Tervo H (2013) Air transportation and regional growth: which way does the causality run? *Environment and Planning A* 45(6): 1508–1520.
- Niewiadomski P (2016) The globalisation of the hotel industry and the variety of emerging capitalisms in Central and Eastern Europe. *European Urban Regional Studies* 23(3): 267–288.
- Niewiadomski P (2017) Global production networks in the passenger aviation industry. *Geoforum* 87: 1–14.
- Pancer-Cybulska E and Olipra Ł (2016) Porty lotnicze jako strategiczny czynnik rozwoju regionów w świetle regionalnych dokumentów programowych. *Studia Oeconomica Posnaniensia* 4(7): 127–150.
- Pavlinek P (2004) Regional development implications of foreign direct investment in Central Europe. *European Urban and Regional Studies* 11(1): 47–70.
- Pickles J and Smith A (eds) (1998) *Theorising Transition: The Political Economy of Post-communist Transformations*. London and New York: Routledge.
- Pike A, Birch K, Cumbers A, MacKinnon D and McMaster R (2009) A geographical political economy of evolution in economic geography. *Economic Geography* 85(2): 175–182.
- Piotrowski M (2018) Prezes LOT: Nie wykluczam, że zaczniemy latać z lotniska w Radomiu. Available at: www.fly4free.pl (accessed July 2018).
- Redondi R, Malighetti P and Paleari S (2013) European connectivity: the role played by small airports. *Journal of Transport Geography* 29: 86–94.
- Shaw J and Sidaway J (2010) Making links: on (re)engaging with transport and transport geography. *Progress in Human Geography* 35(4): 502–520.
- Shibata K (1994) Airline privatisation in Eastern Europe and ex-USSR. *Logistics and Transportation Review* 30(2): 167–188.
- Sipiński D (2013) Lotniska: zysk od 1,6 mln pasażerów [Airports: Profits from 1.6 mln passengers], 28 August 2013. Available at: www.pasazer.com (accessed October 2016).
- Smith A (1997) Breaking the old and constructing the new? Geographies of uneven development in Central and Eastern Europe. In: Lee R and Wills J (eds) *Geographies of Economies*. London: Edward Arnold, pp. 331–344.
- Smith A (2015) The state, institutional frameworks and the dynamics of capital in global production networks. *Progress in Human Geography* 39(3): 290–315.
- Sokol M (2001) Central and Eastern Europe a decade after the fall of state-socialism: regional dimensions of transition processes. *Regional Studies* 35(7): 645–655.
- Stratford E and Wells S (2009) Spatial anxieties and the changing landscape of an Australian airport. *Australian Geographer* 40(1): 69–84.
- Taylor P, Derudder B and Witlox F (2007) Comparing airline passenger destinations with global service connectivities: a worldwide empirical study of 214 cities. *Urban Geography* 28(3): 232–248.
- Taylor Z (1998) Polish transport policy: an evaluation of the 1994/95 White Paper. *Journal of Transport Geography* 6(3): 227–236.
- Toplensky R (2017) EU eases competition rules for state aid to regional airports. *Financial Times* 17 May 2017. Available at: www.ft.com (accessed June 2018).
- van Grunsven L and Hutchinson F (2016) The evolution of the electronics industry in Johor (Malaysia): strategic coupling, adaptiveness, adaptation, and the role of agency. *Geoforum* 74: 74–87.
- Walków M (2017) Ekspert: nie ma potrzeby budowy nowych lotnisk, z jednym wyjątkiem. *Business Insider Polska*, 31 October. Available at: <https://businessinsider.com.pl> (accessed July 2018).
- Williams A and Balaž V (2002) The Czech and Slovak Republics: conceptual issues in the economic analysis of tourism in transition. *Tourism Management* 23(1): 37–45.
- Yang C (2009) Strategic coupling of regional development in global production networks: redistribution of Taiwanese personal computer investment from the Pearl River Delta to the Yangtze River Delta, China. *Regional Studies* 43(3): 385–407.
- Yang C (2012) Restructuring the export-oriented industrialization in the Pearl River Delta, China: institutional evolution and emerging tension. *Applied Geography* 32(1): 143–157.

- Yang C (2014) Market rebalancing of global production networks in the Post-Washington Consensus globalizing era: transformation of export-oriented development in China. *Review of International Political Economy* 21(1): 130–156.
- Yang C (2017) The rise of strategic partner firms and reconfiguration of personal computer production networks in China: insights from the merging laptop cluster in Chongqing. *Geoforum* 84: 21–31.
- Yang D, Hsu J-Y and Ching C-H (2009) Revisiting the Silicon Island: the geographically varied ‘strategic coupling’ in the development of high-technology parks, Taiwan. *Regional Studies* 43(3): 369–384.
- Yeung H (2009) Regional development and the competitive dynamics of global production networks: an East Asian perspective. *Regional Studies* 43(3): 325–351.
- Yeung H (2016) *Strategic Coupling: East Asian Industrial Transformation in the New Global Economy*. Ithaca, NY: Cornell University Press.