

Beifert, Anatoli; Prause, Gunnar; Gerlitz, Laima

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Anatoli Beifert, Gunnar Prause and Laima Gerlitz

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As it was outlined in the EU Competition Policy Brief on the new state aid rules for a competitive aviation industry issued by the EU Competition Directorate-General in February 2014, the regulation for the financial public subsidies of any art on the EU national or regional level for the regional airports will be considerably stricter. The strategic aims of these new regulations, among other things, are to motivate and encourage the Member States (here: regional airports) to implement more efficient market stimulation measures, make airports work on cost efficient and profit-able basis and establish transition periods for regional airports. In practice it means that public subsidies may be granted only to those regional airports that proved to have a sustainable and realistic business model that shall clearly demonstrate the durable financial stability. The authors took part in two air transportation initiatives in the Baltic Sea regions (BSR) and were lead partner in the EU Project Baltic.AirCargo.Net, which deployed a number of empirical measures in regional airports in the BSR. The paper will present and discuss success factors of sustainable business development models for the regional airports in the Baltic Sea Region based on cases studied during the project lifetime.

Keywords: Business Models, Regional Airports, Sustainability

1 Introduction and Problem Definition

The transport sector, in direct and indirect meaning, is one of the main driving forces of European and global economies. The White Paper on Transport that is the main policy document on transport policy in the EU states: "Transport is fundamental to our economy and society. Mobility is vital for the internal market (...) enables economic growth and job creation". According to the report of European Court of Auditors 2014, the air transport is considered to be one of the dominant modes for the passenger traffic over long and middle distances in Europe and worldwide. Air transport is playing also a vital role for the cargo with a high value added or time sensitive goods. European airports responsible for employment over a million people, working directly or indirectly in aviation business: e.g. airlines, technical aircrafts' maintenance, logistics or catering services, retailing and or traffic control, etc. The aviation business in total contributes more than 140 billion euro to the European GDP. Air transport is gaining more and more an important role for manufactures trade. IATA forecasts that the value of international trade shipped by air in the year 2015 will be 7,3 trillion USD and the passengers using air traffic tourists will spend a forecast 644 billion USD. Furthermore, the liberalisation of the aviation market in Europe over the last two decades has been one of the dominant factors improving European airports' operational environment. Such hard factors as emergence of air hubs outside the Europe and the efficient integration and use of the Internet Services have positively contributed to the commercial development of the European aviation sector. This liberalisation refers also to the certain information freedoms and operational flexibilities for airports and airlines alongside with the freedom of choice that is

now available to passengers and logistics customers via Internet. However, in spite of the air transport importance, its growth and promising opportunities, ca. 48 % of Europe's airports were registered in 2010 as loss making (European Court of Auditors, 2014). That makes a special problem for small and regional airports. For such reasons as provision of accessibility or public socio-economic obligations, in spite of losses, the regional or national public authorities still keep on financing the airports. There are over 500 commercial airports in Europe that might be split into two categories (Horst, 2006): 1) Hub airports, which provide a full range of services, including business or leisure, domestic, European or inter-continental flights. The hub airports consolidate also air traffic from smaller and regional airports; 2) Regional airports connecting remote regions to the centres of economic activity, feeding hub airports but also having direct flights to other regional airports.

As it further stated in the Competition Policy Brief on the new state aid rules for a competitive aviation industry by the Competition Directorate-General of the European Commission in February 2014 it would be complicated for unprofitable airports, to get subsidies from the EU, national or regional public funds. In spite of the important social and economic role as well as positive impact of small airports on the regional development and general accessibility, the operating aid to the airports has to be cut out over a maximum of 10 years. Therefore, the majority of small and regional airports appeared to experience problems to cover at least their running operative costs. As it was further stated, the airport management is using the public funds mostly for hardware infrastructural investments, to cover operating losses or to attract price-sensitive airlines.

In comparison to the airlines, the airports possess a competitive advantage in form of diversity of business and service models in the nearest operational environment. Studies reveal that the Return on Capital (ROIC) for the players along the aviation value chain vary a lot, whereas the airlines noted the least ROIC index, i.e. practically every service, supply or distribution sector earned a higher return on capital than airlines. But same study also pointed out that ROIC of airlines suffer under a higher volatility and airports due to diversification options of airports related to a wider range of business models compared to airlines which are mainly active only in one business sector like pure passenger traffic. Thus, the airports due to business diversity possess a competitive advantage and the opportunity to develop in more sustainable, stable and profitable way.

The paper is organised as follows. The theoretical framework showcases key theoretical approaches, which serve for the analyses of regional airports performance. While the next section presents the methodology and results of the case studies analysed, the succeeding section formulates key implications for sustainable airport development and business sophistication. The paper ends with key concluding remarks showcasing tenets for regional airports business development across the Baltic Sea.

2 Theoretical Framework

The airport business is likely to experience a transformation, moving from the business based on growing traffic volumes, market share and political support. Stiffer competition and increasing role of networks and strategic positioning made the airports difficult to sustain their competitive position

on the market. To overcome the retrenching performance, airports are subject to development of new strategies and business models adopted to new value propositions on the local, regional and global markets. By echoing practical experiences, the success of airports mostly lies in going beyond simple reflection the needs of customers and delivering a sufficient return to investors or other stakeholders. Strategic and operational success is rather likely to derive from three key tenets represented in different strategic management and business research streams, namely: diversity, differentiation and innovation of airport business (Feldman, 2009, p. 1).

For this, the theoretical framework of the current research needed to recall theoretical approaches pinpointing diversification, differentiation and innovation potential internally (i.e. regional airport) and externally (market) for regional airports: Resource-Based View (RBV) (Wernerfelt, 1984; Barney, 1991, etc.), competitive advantage and cluster theory by Porter (1991; 2000) including innovation management process (Tidd and Bessant, 2013).

In order to develop capabilities for diversification and differentiation, regional airports need to change their performance strategy internally (organisation-based) and externally (market-driven). Regional airports need to shift from being reliant on a single revenue source. For doing this, organisational success and performance is likely to depend on strategic utilisation of resources, such as human, physical capital, intangible assets that are valuable, rare, imperfectly imitable and non-substitutable (Barney, 1991, pp. 105-106; Boxall, 1996, p. 65). Following Wernerfelt, a resource can be anything that can contribute to a strength or weakness of a given organisation (Wernerfelt, 1984, p. 172). Strictly speaking, in the RBV resources are all tangible and intangible assets, capabilities, organisational processes,

attributes, information and knowledge, which allow an enterprise to recognise and implement strategies that lead to organisational efficiency and efficacy (Barney, 1991, p. 101; Crook et al., 2008, p. 1150-1152). More specifically, a resource is a tangible or intangible asset and input to production that an organisation owns controls or has access to (Helfat and Peteraf, 2003, p. 999). The resource-based view model investigates the competitive environment from so called “inside-out” approach, dealing with the internal environment of a company (Prahalad and Hamel, 1990, p. 4).

According to the RBV, it is internal resources or capabilities that determine a future development or a strategic decision-making process and strengthen organisation’s competitive advantage (Prahalad and Hamel, 1990, p. 4; Porter, 1996, p. 70; Hoopes et al., 2003, p. 890). The core task of the management is to develop the demand and offer such products or services that potential customers surely need, but have not yet known or imagined them before. This brings to the second crucial element in the airport strategic plans – differentiation. Since today we face an increasing customer centricity, attempts to propose a unique, rare and valuable product or service to our customers, value proposition makes an important competitive advantage for regional airports. Echoing Feldman, airports now must to propose value that goes far beyond simply impressive architecture. Rather, at the core is customer experience associated with the airport, its products, services and assets, thus transforming airports into customer destination (Feldman, 2009, 4). In this regard, airports need to develop or recall such resources and capabilities that make them valuable among customers. Indeed, this can be facilitated by efficient marketing and branding activities of regional airports as well as additional products and services

proposed to its customers, e.g. organisation's image or brand that can be hardly replicated; tacitness in relationships between the market players or market structure limiting new entry (Kai, 1993). Prahalad and Hamel recommend operating across organisational limits and benefit from the core competences of an organisation. Thus an organisation's core competences may be seen as a cluster of intangible resources that make it possible to achieve competitive advantage through: providing an access to a variety of markets; contributing to the perceived customer benefits of the end product and making imitation or replication process for the competitors as very difficult, thus sustaining of competitive advantage (1990, p. 82)

Linking up with resources and capabilities within organisations, a cluster of internal resources and capabilities residing in an organisation must be linked to the external environment. Following Porter, competitive advantage derives from an organisation's activities in the external environment or on the market, namely, how those activities fit strategically into the external environment or the market and, therefore, create economic and customer value (Porter, 1985, p. 35; 1991, p. 103). As a result, an enterprise gains a competitive advantage through fitting, for instance, its products, technology or marketing approach to the external setting (Porter, 1996, p. 70). Moreover, sustained performance is a result of relevant competitive advantages gained due to industry structure and appropriate positioning of an enterprise in an appropriate industry setting (Porter, 1991, pp. 99-100), i.e. cluster as "a proximate group of inter-connected companies and associated institutions in a particular field, linked by commonalities and complementarities. The geographic scope of a cluster relates to the

distance over which informational, transactional, incentive, and other efficiencies occur" (Porter, 2000, p. 16). Porter argues that a cluster is not just a bundle of single industries, but rather a system of interdependent industries and business entities that cooperate and complement each other in a given economic landscape. They might include suppliers of specialised resources and services as well as providers of specialised infrastructure. The identified requirements to „create“ a cluster are critical mass of companies in spatial proximity; companies, who's businesses are in the same business area; similar or supplementary business activities and common connections to branches (ibid., p. 16f).

A functioning cluster positively contributes to improving productivity and efficiency of the inter-related businesses, it stimulates a cluster-internal competition and innovations and finally a cluster provides a favourable framework for the new start-ups and entrepreneurial activities within the cluster. These positive effects are also achieved through efficient knowledge sharing and knowledge transfer within the cluster, multiplied by a learning process that does not require cost intensive investments; and where the cluster's players may utilise the cluster business canals to other economic spaces.

Most of the studied clusters in academic literature are related to ICT, life science, automotive industry and other industrial clusters, but there exists nearly nothing about logistics clusters until Yossi Sheffi (2012) published his book. In his understanding "logistics intensive clusters" are agglomerations of several types of firms and operations providing logistics services and logistics operations of industrial firms and operations of companies for whom logistics is a large part of their business. Such logistics clusters also

include firms that provide services to logistics companies like maintenance operations, software providers, specialised law firms or international financial services providers (Sheffi, 2013). Thus, an airport together with its surrounding business network can be considered as a logistics cluster in a comparable way, like it is well known for seaport clusters (DeLangen, 2004). By doing so it means that an airport shall focus on strengthening efficient interconnections with all its relevant industries, operating institutions and organisations, therefore improving competitiveness and its own sustainability. For a regional airport e.g. prioritising the air cargo business cluster approach may mean building up logistical service centres that would create a network of regional logistic service providers, thus the single services might be enlarged, structured and improved. That may lead to improved tangible and intangible resources of the involved cluster participants and help to identify distinctive capabilities of an airport.

If one may assume an airport not as a single branch or an entity, but rather as a cluster, it may mean that an airport shall focus on strengthening efficient interconnections with all its relevant industries, operating institutions and organisations, therefore improving competitiveness and its own sustainability. For a regional airport e.g. prioritising the air cargo business cluster approach may mean building up logistical service centres that would create a network of regional logistic service providers, thus the single services might be enlarged, structured and improved. That may lead to improved tangible and intangible resources of the involved cluster participants and help to identify distinctive capabilities of an airport.

Coming to the third tenet – innovation, it is needed in order to stay ahead and develop future trends. As today's markets and customer needs evolve,

inflexibility in terms of operations, strategy, etc. can be crucial for airport's failure. The importance nowadays about business model prototyping including identification of strategic supply and demand drivers, macroeconomic environment, megatrends, the level of innovation, business sophistication, technological readiness, financial market development, labour market efficiency, hard/soft infrastructure, etc. has been outlined and mentioned in a range of scientific publications and research papers (Eckert, 2014, pp. 7-9). Furthermore, the upcoming threat in form of so called "multipolar world", which describes the far-reaching changes in the relevant competitive fields as a result of the growing importance of emerging markets for economic development is about a global competition for labour, capital, commodities, new consumer markets and for innovations. (Scholtissek, 2008, p, 27f). Thus, it may be stated that the most intensive competition has been already started for the global innovation leadership. Innovation introduces a new meaning and value for its consumers, i.e. a new or significantly improved good or service, process or new marketing method, new organisational methods in business practice, workplace organisation or external relations (OECD/ European Communities, 2005, p. 46). Innovation implies a process during which all the necessary activities such as problem resolving and/or idea generation; development; manufacturing and marketing of a new construct (would it be product, service, or process itself) are effectively and efficiently managed and commercially and practically exploited to the market (Trott, 2012, p. 12-15). Innovation is to be viewed as a process of turning opportunity into new ideas, ensuring its practical application in the reality (Tidd and Bessant, 2013, p. 18-22) and bringing value through its availability and access to it for its users via the

market and/or other channels or distributed peer-to-peer and/or by the market (Gault, 2011, p. 9). Launch of innovations also require specific capabilities, knowledge, skills, facilities, resources, market knowledge, financial resources and certain level of infrastructure. It is, in other words, knowledge and entrepreneurial know-how that makes innovations successful on the market. Innovations are likely to come to the market as a result of technology push (e.g. Christensen, 1997, p. 72f), can be pulled by the market after having analysed users' needs and in order to satisfy users needs by firms to increase revenues and safe costs.

Similar to well proved step-by-step innovation process including search for new ideas / opportunities; selection of ideas; implementation of ideas and capturing ideas and commercially benefiting form their exploitation (Tidd and Bessant, 2013, p. 47), Osterwalder and Pigneur (2010) identify five components that make up a business model, so-called "Business Canvas". Nevertheless, a comprehensive business model developed by them include nine elements: customer segments, value propositions, channels, customer relationships, revenue sources, key resources, key activities, key partnerships and cost structure. The business model of Osterwalder and Pigneur may be considered as an example of an operative business model approach, which serves to derive from the corporate strategy, the operative business model as an intermediate step to the organisational model.

With the wide variety of definitions of terms related to innovation business models and a variety of approaches have appeared on how business models might be developed or redesigned within a company. It may be stated

that those phase concepts are closely connected to the known phase concepts of strategic management, innovation management or even the transformation management.

With regard to all concepts integrated within this theoretical framework, it is argued here that regional airports as complex, open and multi-layer ecosystems can be analysed and assessed by applying different factors, which were found in the strategic management and business modelling literature discussed above, such as resources, value propositions, internal and external structures. It is evident that most of the theoretical approaches do share the same common thread – would it be processes (e.g. steps of identification, understanding, etc.) or resources, capabilities and other tangible and intangible assets within organisations and on the markets. For this reasons, the research introduced the following matrix when assessing and supporting airports development.

Table 1 Matrix for airports assessment and business model development

Business model- ling criteria	Assessment criteria for business sophistication proposition
Diversification level	Analysis of resources: tangible; intangible; Analysis of resources: valuable, rare, imperfectly imitable and non-substitutable; Analysis of capabilities: tangible; intangible; infor- mation-based organisational process and inter- mediate goods

Business model- ling criteria	Assessment criteria for business sophistication proposition
Business innova- tion level	Innovation capacity and readiness: product, ser- vice, process, organisational (horizontal and verti- cal dimension) Linkage of airports to innovation policies and R&D Governance level: local; regional; national Level of technological specialisation (e.g. ICT)
Differentiation level	Level of value proposition Level of customer experience creation (e.g. mar- keting, corporate identity and branding activities) Business sophistication (clustering activities, sup- pliers quality and quantity, value chain breadth, extent of marketing)

The authors of this paper argue that the above-presented matrix for the regional airports' assessment based on the consolidated theoretical frameworks of RBV by Prahalad and Hamel; Innovation Business Canvas of Osterwalder and Pigneur and Competitive Advantage and Cluster Theory of Porter enable comprehensive evaluation of airports.

3 Methodology

An evidence-based approach has been applied here to assess airports' competitive environment as well as investigating of favourable preconditions for the successful SMEs operations in the airports. The degree of competition between airports or the competitive constraints have not been included in this study.

Original primary and secondary data have been applied here. Expert interviews and empirical data were obtained in the frame of the project "Baltic.AirCargo.Net" financed by the EU the Programme "Baltic Sea Region Programme 2007-2013", ERDF Funds. The empirical material was collected from diverse sources of evidence over the period of project life cycle (2011-2013): qualitative observations of researchers involved into the project activities, external experts' evaluations, project documentation and observations gathered from respective project activities such as workshops, conferences as well as from the field notes from project meetings.

The following target groups participated in the surveys and expert interviews: a) representatives from Airport Management; b) representatives from Transport and Logistics companies from participating regions; c) representatives from the academic side, c) expert from the air cargo security and air cargo freight sector.

The above presented matrix for regional airports business assessment and development has been chosen as a basement to present the analysis of the selected airports.

Within the Baltic.AirCargo.Net project, a number of regional airports from the BSR have been analysed. Grodno Airport (Belarus) has been selected as

a demonstration case for this study. The selected findings from Kalmar Airport (Sweden) will be used as supplementing case in order to outline the role of the efficient cooperation between an airport and relevant regional structures, including private and public sector as well as regional responsibility of an airport.

4 Case study: Grodno Airport (Belarus)

Grodno Airport is one of the five regional airports in the Republic of Belarus that is situated near Grodno city with about 325 thousand inhabitants in West Belarus. Grodno is located close to the borders of Poland and Lithuania (about 20 km and 30 km away respectively). Grodno is the capital of Grodno Region that may be considered as the airport's catchment area with a population of about 1,1 Mio. Road is the most used transport mode for the passengers and the cargo transport. One regular flight to Kaliningrad (2 times per week) is offered at the moment. The logistical and time distance from Grodno to: Minsk: 280 km, ca. 3,5 hours (via road); Vilnius: 167 km, ca. 2,5 hours (due to cross border procedure time costs of traveling to Vilnius may vary from 2,5 hours to 4 hours); Warsaw: 274 km, ca. 3,5 hours (due to cross border procedure time costs of traveling to Warsaw may vary from 3,5 hours to 5 hours). International Airports in Minsk, Vilnius and Warsaw are the main competitors for the Grodno Airport. Grodno Airport is a state-owned airport run by a special department of the national Transport Ministry. The main source of revenues for Grodno Airport is the navigation

services for the over-flights that constitute up to ca. 85% of the total revenue income. Diversification analysis of Grodno Airport has shown a number of gaps in the evaluation between internal stakeholders and external experts. The interviewees evaluated the given criteria according to the following scale model: "poor", "satisfactory", "good".

Airports' internal stakeholders, incl. management team and the representatives from the governance body clearly tend to overestimate the quality of the distinctive resources. Favourable geographical location, radar/navigation (incl. supporting hard/software infrastructure), runway, internal security regulation system, low costs for aviation fuel were named by internal experts as distinctive competitive resources of the airport. External experts have identified the relative low costs of the aviation fuel as one of the main intangible distinctive resources of Grodno Airport for the potential refueling of the air cargo over flights Eastbound (e.g. Europe-China) direction. In contradiction to the evaluation of the internal stakeholders, it shall be noted that the external experts pointed out that the runway is obviously too short for large cargo aircrafts.

Table 2 Diversification evaluation of Grodno Airport

Assessment criteria	internal view	external view
Tangible; intangible resources	good	satisfactory
Valuable, rare, imperfectly imitable and non-substitutable resources	satisfactory	poor
Capabilities	good	poor

In the framework of the diversification analysis, the cross-referencing of the evaluations was done by the airport's stakeholders and external experts.

Table 3 Differentiation evaluation of Grodno Airport

Assessment criteria	internal view	external view
Level of value proposition	good	poor
Level of customer experience creation	satisfactory	poor
Business sophistication	good	poor

The cross-referencing of the results gained by internal and external experts in the framework of the differentiation assessment has demonstrated a tendency of overestimation of the assessment criteria by the internal stakeholders. The external experts identified specifically the following diversification criteria in Grodno Airport as "poor":

- a. Poor availability, quality and level of value added services, including deficit of specialized services and support;
- b. Poor availability, quality and level of specific and targeted marketing activities, including low regional image;
- c. Poor level of competing sophistication mainly due to national regulations imposed by National airline, i.e. Belavia;
- d. Low level of logistics services and absence of cargo terminal;

The evaluation of the business innovation criteria done by internal stakeholders and external experts have shown the following results:

Table 4 Differentiation evaluation of Grodno Airport

Assessment criteria	internal view	external view
Innovation capacity and readiness	good	poor
Innovation policies and R&D	satisfactory	poor
Governance level	good	satisfactory
Technological specialisation	good	poor

The airport's internal stakeholders identified linkages of the airport to public / private R&D and linkage with innovation policies as "satisfactory", the other business innovation criteria have been evaluated as "good". The external experts evaluated the only criteria in Grodno Airport as "satisfactory", i.e. governance level. It was mainly explained by the fact that the airport has a sustainable financial support, investments and also the guidance in terms of innovation hardware and software infrastructure that is regular monitored by the national Ministry of Transport of Belarus. On the other hand, the experts pointed out that too close attention and monitoring from the Government side might be a hinder for the realization of innovative business models, since e.g. it is linked to a relative high bureaucracy level and every tactical or operational decision shall be communicated and approved with / by the responsible government body.

5 Supplementing Case: Kalmar Airport

The following supplementing case is mainly based on the expert interviews carried out with the representatives of the Kalmar Airport Management and relevant public authorities from the City of Kalmar.

Kalmar Öland Airport is situated near Kalmar - a town with ca. 40 thousand inhabitants, located in South-East Sweden at the coastline of the Baltic Sea Region. In 1983 the city of Kalmar took over the airport's ownership the military forces. The airport's area and the corresponding infrastructure became the property of the city of Kalmar. The catchment area of Kalmar Airport consists of ca. 300 thousand people. The transport and time distance by road from Kalmar to the nearest airport hub Copenhagen is ca. 330 km or ca. 4 hours; and to Stockholm: 415 km and 4,5 hours correspondingly.

Due to a relative long traveling distance (here: by road) to the nearest air hub, in order support local business community, 5 daily flights to Stockholm–Arlanda are offered by SAS airlines. Beside that another 4 – 6 daily flights to the city airport Stockholm Bromma are offered as an important business destination. From 2013 the 5 daily flights to in Berlin-Tegel are offered by “Sparrow Aviation” (till 2014 “Flyglinjen”). Thus, Kalmar Airport with a catchment area that is almost 3 times less than in Grodno is capable to offer regular flights to the national and to international airport hub. Currently, the flights to and from Stockholm are filled by ca. 60% with the business travellers and 40% of leisure travellers. The leisure travellers fill up the empty business seats, so that the passenger load factor amounts ca. 70%. Växjö Airport, that is situated ca. 100 kilometres westbound of Kalmar and close to a train link Malmö–Stockholm, has a lower demand for the aviation services.

The flights to Copenhagen and Stockholm are stopped during vacation time because of low demand in Växjö area during this time. Thus, it may be stated that an underdeveloped ground-based infrastructure in Kalmar region belongs to the competitive advantages of Kalmar Airport. This remote situation in South Sweden is also one main reason because Kalmar Öland Airport is outperforming in passenger growth with a sustainable development tendency compared to other regional airports in Sweden. Furthermore, the interviewees stated that since the airport's related decisions have to be taken locally in Kalmar region, the regional responsibility for the airport, i.e. the needs for local skills, knowledge and political culture, increased considerable. Kalmar needed almost 20-30 years for building up efficient customer experience base, creation of operational effectiveness and quality of micro-economic business environment and the relevant local know-how. The City of Kalmar created a special fund-foundation to support marketing and to establish new flight links from Kalmar. Being aware of the role of Kalmar Airport for the accessibility, the local businesses also invested in this special supporting fund. The capital for the foundation originated 50% from City of Kalmar and the other 50% from local business sector. This is an important precondition, since the City of Kalmar on its own is not allowed to finance flights. This financial instrument makes development and implementation of new air routes possible and realistic (e.g. initiation of the Kalmar-Berlin air connection in 2013), since new flights, in general, need a pre-financing of ca. 1,5 year before a destination becomes profitable.

The current business plan for the Kalmar Öland Airport focuses on 3 main targets:

1. Increase of leisure flight passengers, especially for incoming flights
2. Increase of the attractiveness of the Kalmar region by offering charter flights and flights to Stockholm and Berlin
3. Improvement of the possibilities to do global business from and in Kalmar

6 Implications for Grodno Airport

In the long-term perspective, liberalization of the aviation market must be initiated in the Republic of Belarus. The development and planning of sustainable business models for Grodno Airport currently are only possible, if they do not contradict with the development strategies of the national Airline “Belavia” and national regulations. In the short-term and in the mid-term perspectives Grodno Airport may focus on:

- a. Air Cargo Growth, including development and implementation of the Road Feeder Services (flying trucks) with the EU airports.
- b. Fuelling and re-fuelling business opportunities.

Along with the availability of the internal resources one of the main reasons for recommending the Air Cargo Growth strategy are the legal frame-restrictions imposed by the National Airline, i.e. Belavia. In the short-term and mid-term run it might be realistic for Grodno Airport to start with the objectives that do not contradict with the current framework policy restrictions of Belavia that, among other things, makes it almost impossible in terms of

inbound or outbound regulation of aviation traffic in Belarus for regional airports to cooperate with the non-national air lines, in spite of some potential requires from other airlines have been already received.

The development and implementation of the Road Feeder Services (flying trucks) connected to ACC3 certificated air cargo destinations outside the EU via Grodno Airport with other EU airports might be the first realistic step to enter air cargo market. Here a close collaboration with relevant national authorities, regional logistics companies (business Lobby) and foreign airlines will be necessary.

For the air cargo destinations outside the EU that do not have an ACC3 certification, Grodno Airport can be developed to a long haul air cargo base, due to its proximity to the EU transport corridors. The business model for Grodno Airport can be an air cargo link to non – ACC3 destinations, where incoming and outgoing cargo is forwarded by normal truck/rail e.g. via “Rail Baltica” and “East-West Transport Corridor” and Grodno over the Belarus border. This solution would offer an efficient air cargo link between the EU countries and long haul destinations without ACC3 certificate. However, it requires detailed action plan that shall make cross-border procedures between EU-States (here: Poland and Lithuania) and Belarus more time-efficient and reliable.

Geographical location has been identified as one of the distinctive intangible resources of Grodno airport. The close location to Lithuanian and Polish border obviously provides huge opportunities for the regional transport industry. The high cross-border procedures (e.g. 3-4 hours, esp. for the road transport) provides a certain advantage for the development of the Road Feeder Services or “flying truck” connections between Grodno Airport and

other European air hubs. A flying truck connection e.g. between Grodno Airport and Vilnius Airport assumes that the normal cargo is officially declared, transferred and handled to air cargo in Grodno Airport security zone. Further is handled to the registered flying truck operating company and is transferred by a schedule road-“flight” to Vilnius Airport. This concept assumes also that the registered “flying trucks” must have a special treatment (here: “no control regime”) on the cross-border, since among other things, they the flying trucks operate de-jure as an air cargo plane with an Air Way Bill letter and all security procedures that are applied to the air cargo. That implies that no border control for the secured and transported goods on the registered “flying trucks” is needed. Furthermore, the flying trucks will benefit from a certain number of privileges comparing to normal trucks, e.g. they dare operate during the official holidays or weekends.

In the long-term perspective such topic as liberalisation of the air market must be initiated. If we the possibilities of attracting new aviation businesses to Grodno Airport are considered, then it is most likely that international direct air-connections (from/to Grodno Airport) must be initiated. This assumption requires, however the most important prerequisite, i.e. liberalization of the air market in the Republic of Belarus. The realization of the business model of Kalmar Airport (Sweden), i.e. regionalization with the future option for privatisation also indirectly requires the fulfilment of the same preconditions, i.e. liberalization of the air market framework regulations in Belarus. The requirement is mentioned here as “indirect”, since even though the “technical” and / or “formal” fulfilment of the regionalization model might be possible and is not directly demanding the granting

certain freedom of air to other national or international airlines in Grodno Airport, however the Kalmar Model makes only then sense, if the given freedom of air does already exist (e.g. 5th or 6th freedom of air as minimal prerequisites). Possible realization of the Costs Leadership might be implemented e.g. through formally existing branch of Belavia, i.e. Grodno Airline in form of establishing of the low cost carrier (LCC) strategy for Grodno Airline with the permission to serve domestic as well as international air routes.

Following the Kalmar Model the success example of "regional responsibility", Grodno Airport might be privatised, whereas the City of Grodno will be the co-owner. The board of Grodno Airport might involve experts from City of Grodno, Grodno Region and Free Economic Zone (FEZ) "Grodnoinvest" due to regional development character and the direct link between FDI and air connectivity (Sellner and Naglb, 2010; Banno et al., 2011). Further board members might be selected from regional business association(s). For a certain transition period a board members from the national level may be involved. It might be recommended in cooperation with Regional Development Agency, (here: Grodnoinvest) to consider perspectives of creation and development of so-called "Free Customs Zone" or "Bonded Industrial Park" in the area of Grodno Airport. A more detailed and deeper analysis on this matter must be fulfilled. In case of privatisation, financial sustainability of Grodno Airport shall be secured already at the initial stage, e.g. new investments, demand for the financial resources for the establishment of the new air connections between Grodno and other destinations since break-even time for new air connections may vary up to 1.5 years. This measure could be realised together with liberation of the Belarus air market so that the

regional airports will be able to decide about the serving airlines and destinations. Concerning the passenger flights it is recommendable to establish regular flights from Grodno to 2 important air hubs. One hub might be in CIS area, i.e. air links to Minsk or Moscow; and to an international hub in Europe (e.g. Berlin or Vienna). Both links are important to allow business trips to support the economic development and to offers the possibility of one day business flights from Grodno to Europe and CIS countries.

7 Conclusions

Due to growing competition and changing frame condition of the EU, the European aviation business is in a reconstructing process. The majority of regional airports in the BSR does not reach the break-even point and relies to a large degree on different forms of public subsidies and aids. However, according to the new master plans of the EU, the subsidies to the airports, if not justifiable and sustainable, will be limited or cut in the short and mid-term perspective. Therefore, regional and small airports have to find sustainable business models to sustain cost efficiency and profitability of operations. According to findings of the Baltic.AirCargo.Net project, a number of regional airports continue focusing on passenger traffic, whereas the benefits of the airfreight market and air cargo related business opportunities are underestimated or even completely ignored. The considered cases pointed out how air cargo business can contribute to high revenue yield parts and open up international development possibilities towards airport clusters despite the fact that air cargo volumes may be small. The related

business models can lead to sustainable development concepts for the regional airports and the surrounding business clusters.

The research results have also shown the lack and deficit of cooperation between the regional airports. Although the airports have been developing and implementing their business development plans and models, however this process takes place mostly isolated, i.e. experience, knowledge or even plans sharing between the airports has been hardly noticed. Therefore, it may be recommended to the airports' management to pay attention to the horizontal cooperation, learning from each other experiences. The availability of the needed tangible (e.g. required infrastructure, incl. runway, parking slots, security and screening equipment) and intangible resources (e.g. internal competences and skills) is considered as important preconditions for the airport's operations. However, those resources alone would never guarantee the sustainable and successful business growth. Nowadays, the airports shall identify and activate their distinctive tangible or intangible resources that shall further lead to provision of unique or innovative services, positively contribute to clustering activity and improve operational effectiveness and quality business environment on internal and external dimensions.

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