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BUSINESS DEVELOPMENT MODELS FOR REGIONAL AIRPORTS – CASE STUDIES FROM THE BALTIC SEA REGION

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Abstract. According to the EU Competition Policy Brief on the new state aid rules for a competitive aviation industry issued in February 2014, the regulation for the financial public subsidies of any art on the EU national or regional level for regional airports will be a considerably striker. 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 profitable 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 Region (BSR) and were lead partner in the EU Project Baltic. AirCargo.Net, which deployed a number of empirical measures in selected regional airports in the BSR. This paper presents success factors of sustainable business development models for the regional airports in the BSR based on cases studied during the project lifetime

Keywords: business development models, regional airports, sustainability

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1. Introduction and problem definition

The EU White Paper on Transport Policy 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 in 2014, the air transport is considered to be one of the dominant modes for the pas-

senger 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 are 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 or traffic control or sky-guiding. The aviation business in total contributes more than 140 billion euro to the European GDP. However, in spite of the importance, growth and opportunities of the air transport industry, the European Court of Auditors registered in 2014 ca. 48 % of European airports as loss making. Aiming at provision of accessibility or public socio-economic obligations, in spite of the current losses, the regional or national public authorities keep on supporting 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 and positive impact of small airports on the regional development, the operating aid to the airports has to be cut out over a maximum of 10 years. 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. On the other hand, comparing to the airlines, the airports possess a competitive advantage in form of diversity of business and service models in the nearest operational environment. Current IATA studies reveal that the Return on Invested 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 and theory gap, the following 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 and research questions

The airport business experience a severe 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 it for the airports and especially for regional 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.

Casadesus-Masanell and Ricart (2009 and 2011) differentiate strategy and business model, by viewing a business model as so called "realized strategy". The strategy is seen by Casadesus-Masanell and Ricart as the specific plan, which aims to achieve specific business objectives (e.g. market expansion or improving of competitive advantage). The action framework including rules, resources, management structures, etc. represents so called the "raw material" to form a business model. The development, further development and the definition of the business model are considered part of the strategic process of a company. According to Casadesus-Masanell and Ricart The strategy is concerned "know-what", i.e. WHAT a company wants to be in the future and the business model describes the elements and logic, which are necessary for tactical implementation of already designed strategic objectives, i.e. business model is concerned with the "know-how". Other authors have tried to differentiate "strategy" and "business model" from each other, without bringing this separation in a particu-

lar hierarchical structure. For instance Magretta outlines that a business model describes various elements that must work together to make a company successful, while the strategy describes its difference in regard to the competition: “A competitive strategy explains how you want to do better than your rivals. And doing better by definition, means being different.” (Magretta 2002, p. 6). Magretta defines the term “business model” as a story that tells of how an organization works. The aim is a strategic business model to provide answers to three questions: „Who is the customer?, What does the customer value?, What is the underlying economic logic that explains how we can deliver value to customers at an appropriate cost?“ (Magretta 2002, p. 3). The further development or redesigning of a business model is in this view then nothing more else than writing a new story, whereas the “new” is often a variation of “already known”. By “writing the new story” a clear reference to the added value relationships must be made and it cannot be written without reference to the current situation. Furthermore, there are two essential parts in the business model innovation according to Magretta: (1) one part has to deal with the activities, dedicated to product development (e.g. development, purchasing, production); (2) in the second part the attention is paid to all the activities that are related to the sale of the product (e.g. attracting additional activity or business to the airport, pursue new air service opportunities, etc.).

Reviewing of the practical experiences demonstrate that airports’ success lies mostly beyond simple reflection of the needs of customers and delivering a sufficient return to investors or other stakeholders. Rather, strategic and operational success is 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; Prahalad and Hamel 1990, pp. 5-7). 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; Grant 1991), 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 (Thakkar 2008 and 2009). 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.

The current technological and socio-economic developments have led to significant changes in many business sectors. Many enterprises and new start-up have benefited from these changing business environment (Engelen 2015, p. 2). On the other hand for many companies these changes have brought significant disadvantages by turning existing and running business to unattractive or even unprofitable at all. Which driving forces stay behind these developments? Kuratko *et al.* (2011) distinguishes between the changes in the competitors' behaviour, in technological developments, in consumer behaviour and in the institutional context. Engelen pointed out that during recent decade, many competitive environments have changed dramatically, e.g. due to technology and Internet-oriented industries the complete or partial substitution on the certain business areas took place. (Engelen 2015, p 15). In fact, if we take a look at the aviation industry only, especially at the business area of integrators and intermediates companies like travel agencies or transport broker companies, it may be stated that the relevant liberalization of the information flows and Internet services for booking have changed the game rules in this area of business significantly. It may be hardly overseen that in particular newly formed start-up companies by implementing innovation business models and taking advantages of these new opportunities have managed to displace already established business partially or even wipe them completely out of the market. 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 2012; Stock and Lambert 2001). 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.

Furthermore, due to the disruptive innovations character in the aviation and airport business, some of new market opportunities are often seen by regional airports as not promising to invest in. However, if those opportunities start to grow, it is often too late; they might have been already occupied by other regional or national competitors (Downes and Nunes 2013). Therefore it may be recommended in this connection that regional airports must learn to identify these market opportunities and deploy them appropriately considering innovation business models in time and according to entrepreneurial use. 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 from 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" (Table 1). 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.

Table 1. Innovation Business Canvas by Osterwalder and Pigneur (2010)

Nr	Components	Process
1	Mobilising	Create an understanding that a business model restructuring is necessary. At the same time, all elements of the business model (nine Business Canvas) are collated and discussed
2	Understanding	Find and analyse the various elements of the business model in the light of possible future changes (e.g. customer requirements, new technologies)
3	Designing	Transfer various findings in several business model prototypes including intensive testing and checking. This is followed by the selection of the future business model
4	Implementing	Implement the selected future business model
5	Performing	Perform the necessary measures to stabilise the new business model, i.e. all the steps known from the successful reorganisation and transformation programs may be necessary (e.g. management structures, management processes, management decision systems, etc.).

Source: Adopted from Osterwalder and Pigneur (2010)

3. Identification of the research gap and research questions

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. However, it might be stated that too less attention has been paid to the special needs and operational requirements of the regional airports. In the framework of the evaluation analysis and further development of the business models the general approaches are applied. In the framework of this study the following research questions are investigated:

- 1) What are the relevant criteria elements that might be appropriate for the evaluation of regional airports and for the further development of the sustainable business models?
- 2) Could any discrepancies (here: overestimation or underestimation of the performance criteria) in the evaluation process between internal and external stakeholders be noticed?
- 3) Does the intensity of an airport’s cooperation with the regional/national public authorities or public private partnership have a positive and sustainable impact on the airport’s performance?

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 process, e.g. steps of identification, understanding or resources, capabilities and other tangible and intangible assets within organisations and on the markets. For these reasons and as a response to the first research question, the following matrix (based on RBV by Prahalad and Hamel and Innovation Business Canvas of Osterwalder) for the assessment and supporting sustainable airport’s development might be suggested (Table 2).

Table 2. Matrix for regional airports assessment and sustainable business model development

Criteria element of business modelling	Assessment criteria for business sophistication proposition
Diversification	Analysis of resources: tangible; intangible; organisation
	Analysis of resources: valuable, rare, imperfectly imitable and non-substitutable
	Analysis of capabilities: tangible; intangible; information-based organisational process and intermediate goods
Differentiation	Level of value proposition
	Level of customer experience creation (e.g. marketing, corporate identity and branding activities)
	Level of clustering activities:
	Level of competing sophistication (operational effectiveness and quality of micro-economic business environment (internal & external dimensions)

Criteria element of business modelling	Assessment criteria for business sophistication proposition
Business innovation level	Field of innovations: product, service, process, organisational (horizontal dimension) and their number incl. diffusion of those in the regional / national economy
	Innovation level in airports and their management (vertical dimension)
	Institutional and infrastructure framework in which airports operate
	Linkages of airports with other public vs. private R&D
	Linkage of airports with innovation policies
	Role of demand
	Governance level: multi-level; local; regional; national
	Level of technological specialisation (e.g. ICT)
	Level of coordination (e.g. networks), stakeholders, etc.

Source: Author (based on RBV by Prahalad and Hamel and Innovation Business Canvas of Osterwalder)

The author 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.

4. Methodology and research approach

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 case study approach has been applied here as a technique in exploring entrepreneur activities and performance in the airport’s operational environment (Gunesekaran and Nagi, 2003; Bernal et al., 2002 etc.). According to Yin (2009), a case study research draws a special focus on contemporary phenomena by addressing questions “how?” and “why?”. Although this qualitative method may leave a little room for researchers to control events (Yin, 2009, p. 2), it enables to catch the particularity and complexity of a single case evidences (Stake, 1995, p. xi). 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” (hereafter: BACN) financed by the EU Programme “INTERREG IVB, Baltic Sea Region”, ERDF Funds. The empirical data was collected from diverse sources of evidence over the project life 2011-2014, i.e. primary empirical data sources in form of 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.

Following target groups and relevant stakeholders participated in the surveys and expert interviews a) representatives from Transport Ministry and Airport Management; b) representatives from Transport and Logistics companies from participating regions; c) representatives from the academic side, c) expert from aviation sector, air cargo security and air cargo freight sector. In terms of the presented investigated case studies, 67 qualitative interviews were conducted and evaluated. The above-presented matrix for regional airports’ business assessment and development (cf. Table 2) has been chosen as a basement to present compliant evaluation analysis of the selected airport.

Within the BACN project, nine regional airports from eight BSR countries have been analysed and evaluated. Grodno Airport (Belarus) has been selected here as a main demonstration case for this study. The selected findings from Kalmar Airport (Sweden) is used as supplementing case in order to outline the role of the efficient cooperation between an airport and relevant regional structures, including private public partnership, regional responsibility of an airport as well as the importance of the ICT competence and deployment. The motivation of showcasing the following two airports in this paper is the consideration of the two opposite cases: in the first case (Grodno Airport) the total dependency of the airport on public subsidies and state regulations, absence of any cooperation structures and any regional development considerations may be notified as critical feature. The supplementing case of Kalmar Airport provides a supplementing best case study on cooperation structures and the role of the airport in the regional development.

5. Case Study – Grodno Airport (Belarus)

Grodno Airport belongs to five regional airports in the Republic of Belarus that is situated near Grodno city in Western part of Belarus with approximately 325 thousand inhabitants. 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 1,1 Mio. Road is the most used transport mode for the passengers and the cargo transport in the region. One regular flight to Kaliningrad (Russia) 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 100% state-owned airport operated by national Transport Ministry – BELAERONAVOGATSIA. The navigation services for the over-flights are the main revenue source of Grodno Airport at the moment.

Diversification analysis of Grodno Airport has shown a number of gaps in the evaluation between internal stakeholders and external experts. The interviewees have been asked to identify the distinctive resources, evaluate the named resources from 1 (bad) to 10 (excellent) and distribute the weighting scale (of total 100%) between the named resources. The internal stakeholders identified the following distinctive resources as the internal strengths and opportunities in the following priority order:

Table 3. Internal distinctive resources evaluation of Grodno Airport by internal stakeholders

No.	Internal Resources	Resources description	Mean Value	Mean weight scale
1	Intangible	Favourable geographical location	7,89	0,28
2	Tangible	Radar/Navigation and supporting hard ware infrastructure	7,78	0,28
3	Intangible	Competences of the personnel	7,56	0,24
4	Tangible	Runway	3,67	0,13
5	Intangible	Internal security regulation system	3,56	0,04
6	Intangible	Low costs for aviation fuel compared to EU countries	1,44	0,02

Source: based on own primary data, EU project BACN

Airports Management and the airport’s stakeholders have identified also that information-based organisational process and the quality of the offered intermediate services can be considered as distinctive resources. 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 refuelling 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. In the framework of the diversification analysis, the cross-referencing of the evaluations that were done by the airport’s stakeholders and external experts has been carried out. The interviewees have been asked to evaluate the given criteria according to scale: poor (1), satisfactory (2), good (3) (Table 4).

Table 4. Differentiation evaluation of Grodno Airport by internal stakeholders and external experts

No.	Differentiation Assessment Criteria	Airport’s stakeholders view	External experts’ view
1	Level of value proposition	2	1
2	Level of customer experience creation (e.g. marketing, corporate identity and branding activities)	1	1
3	Level of clustering activities	2	1
4	Level of competing sophistication (operational effectiveness and quality of micro-economic business environment (internal & external dimensions))	2	1

Source: based on own primary data, EU project BACN

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 level of competing sophistication mainly due to national regulations imposed by National Air Line, i.e. Belavia;
- c) Low level of logistics services;
- d) Absence of cargo terminal;

The evaluation of the business innovation criteria done by internal stakeholders and external experts have shown the following results (Table 5):

Table 5. Business Innovation level evaluation of Grodno Airport by internal and external experts

No.	Business Innovation Assessment Criteria	Airport's stakeholders view	External experts' view
1	Level of ICT deployment and technological specialisation	2	1
2	Field of innovations: product, service, process, organisational (horizontal dimension) and their number incl. diffusion of those in the regional / national economy	2	1
3	Innovation level in airports and their management (vertical dimension)	3	1
4	Institutional and infrastructure framework in which airports operate	2	1
5	Linkages of airports with other public vs. private R&D	1	1
6	Linkage of airports with innovation policies	1	1
7	Role of demand	2	1
8	Governance /cooperation level: multi-level; local; regional; national	3	2
9	Level of coordination (e.g. networks), stakeholders, etc.	2	1

Source: based on own primary data, EU project BACN

External experts drew a special attention to the non-appropriate and poor deployment of the existing ICT infrastructure and ICT competence, incl. poor availability, quality and level of specific and targeted marketing activities, including poor web design presentation, low regional image in Grodno Airport. Furthermore, the Airport internal stakeholders identified linkages of the airport with other public / private R&D and linkage with innovation policies as poor, the other business innovation criteria have been evaluated as “satisfactory” or “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 Grodno Airport has a sustainable financial support, investments and guidance in terms of innovative hardware and software infrastructure, the national Ministry of Transport of the Republic of Belarus provides a financial support to the airport. 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 and operation decision shall be communicated and approved with / by the responsible government body.

In response to the second research question, the collected empirical data in the given case study demonstrated that considerable deviations between internal and external stakeholders in the evaluations do really exist. Whereas, the general tendency may be noted that the airport's internal stakeholders (e.g. airport management team and representatives of the Transport Ministry, i.e. direct and indirect airport's stakeholders) tend to overestimate airport's own tangible and intangible criteria; parallel to this, an underestimation of risks or inadequate availability of the innovation or differentiation criteria has been noted. Although, the readiness to take appropriate risks is considered as indispensable prerequisite for the sustainable and well-established business attainment nowadays (Engelen 2015), the obvious risks underestimation may distort decision-making process for the business development plans of the given regional airport and imply severe and irreversible impact for the business sustainability with long-lasting negative consequences (cf. Machina and Viscusi 2014).

6. Supplementing Case – Kalmar Airport (Sweden)

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

Kalmar Öland Airport situated near Kalmar - a town with ca. 40 thousand inhabitants, located in South – East Sweden at the coastline of the Baltic Sea Region. The airport had been a military airport till 1983 when the city of Kalmar took over the airport's ownership. The airport's area and the corresponding infrastructure became the property of the city of Kalmar. The catchment area of Kalmar Öland Airport consists of about 300 thousand people. The geographical / transport and time distance by car from Kalmar to the nearest airport hubs are: Copenhagen: ca. 330 km, ca. 4 hours; Stockholm: ca. 415 km, ca. 4,5 hours. Due to relative long traveling distance (here: by car), in order support local business links to national and international partners, ca. 5 daily flights to the Swedish hub 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 by the local airline Kalmar Flyg. Five daily flights to in Berlin-Tegel have been offered by “Sparrow Aviation” (until 2014 “Sparrow Aviation” was named “Flyglinjen”). Thus, Kalmar Airport with a catchment area that almost 3 times less than Grodno region, offers 5 regular weekly flights to the national hub (Stockholm-Arlanda) and one regular 5 weekly flights to international airport hub (here: Berlin-Tegel).

The study done by WSP Group, Sweden form 2011 estimated the impact of Kalmar Öland Airport from the view of regional development. In his study the air links to Stockholm region were analysed. The study results revealed that:

- 3.500 people are moving daily between Kalmar and Stockholm each (all modes included);
- 700 – 1000 people are moving every day between Kalmar and Stockholm by plane, including transit passengers;
- Approximately 100 people travel Kalmar-Stockholm-Kalmar by plane every day;

The flights Kalmar-Stockholm are filled by ca. 60% with business and 40% with leisure travellers. The leisure travellers are very important to compensate the gap of business seats so that the passenger load factor may reach 70%. 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. The next distinctive competitive advantage is related to the local business sector, which demonstrated better development after financial crisis than areas with prevailing of the big companies. The interviewees stated that with the local responsibility for the airport, the needs for local skills, knowledge and political culture increased that is connected to the fact that the airport decisions have to be taken locally. Kalmar needed almost 20-30 years for the building up efficient customer experience, creation of operational effectiveness and quality of micro-economic business environment and the local know-how. The transition period was supported by the financial and intellectual support to the airport by the national government. With the regional responsibility, the airport had entered into a competition with other transport modes (i.e. train, road and sea). Nevertheless, it had been noticed that Kalmar could be considered as a remote region and the other transport links had been underdeveloped. Thus, in order to sustain an efficient accessibility, the people of Kalmar, Kalmar industry and business need airport. Local businesses invested correspondingly and became shareholders in order to build the local airline Kalmar Flyg for possible new destinations. Beside that Kalmar Municipality created a foundation to support marketing and to establish new flight links from Kalmar. The capital for the foundation originated 50% from Kalmar municipality and the other 50% from local business sector. This is an important precondition, since the city of Kalmar is not allowed to sponsor flights on its own. These financial instrument make the pre-financing of new airline connections possible and realistic (e.g. as it was the case of initiation of the Kalmar-Berlin air connection in 2013), since new flights in general need a pre-financing of ca. 1,5 years before a destination becomes profitable.

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

- Increase of leisure flight passengers, especially for incoming flights;

- Increase of the attractiveness of the Kalmar region by offering charter flights and flights to Stockholm and Berlin;
- Improvement of the possibilities to do global business from and in Kalmar;

In response to the third research question, it may be stated that the above-presented supplementing case clearly demonstrates the positive impact of the intensive and efficient cooperation between airport and relevant public authorities. Having recognized the potential of the airport in the regional development activities, the public authorities of Kalmar Region have been not only providing financial support, but rigorously and consequently Kalmar Airport has been involved in the regional development actions both on strategic and operational level.

7. Business Models implications for Grodno Airport

The strategic development and planning of successful and efficient business models for Grodno is required today as never before. In the strategic and long-term perspective such topic as liberalization of the air market must be initiated, i.e. in the long-term perspective, liberalization of the aviation market must be initiated in the Republic of Belarus. However, the development and planning of sustainable business models for Grodno Airport nowadays are only possible, if the plans do not contradict to the development strategies and interests of the national Airline “Belavia”. In the short-term and 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 regulations, i.e. 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” and the identified third research question, during evaluation internal and external stakeholders indicated the governance/cooperation level (multi-level; local; regional; national) as “good” and “satisfactory”. However, it may be stated that no adequate cooperation between Grodno Airport and relevant public authorities (on regional or national level) does really exist; we are dealing here rather with strictly regulated top-down management system, where Ministry of Transport as well as national Airline Belavia dictate and imposes regulations and development plans to the airport. These circumstances can hardly be named as appropriate for the deployment of “regional responsibility” scenario and close cooperation between Grodno Airport and relevant public authorities in Grodno Region.

Grodno Airport might be privatised, whereas the City of Grodno may 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.

8. Conclusions

European aviation business is in a reconstructing process due to strong competition and changing frame condition of the European Union. The majority of regional and small airports in the Baltic Sea Region are not reaching the break-even point and mostly rely 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. The “regional responsibility” case practice of Kalmar Airport may serve as best example for positive and fruitful cooperation with public authorities (here: not only financial subsidies, but also support in form of the active involving of the airport in the strategic regional development plans and actions).

According to findings of the BACN project, a high number of regional airports focus mainly 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 as well as their adequate assessment 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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