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### REGIONAL AIRPORTS' POTENTIAL AS A DRIVING FORCE FOR ECONOMIC AND ENTREPRENEURSHIP DEVELOPMENT – CASE STUDY FROM BALTIC SEA REGION

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**Abstract.** Meanwhile it is generally acknowledged that accessibility belongs to major factors of economic attractiveness of metropolitan areas, other territories and peripheral regions. The aviation industry in general and airports' activities in particular contribute considerably to the improvement of regional accessibility. For some remote regions the airports are the only gateway to bigger hubs. However, due to the increasing competition in the aviation sector the airports and especially regional airports in Europe face structural and operational challenges nowadays. According to the report of the EU Commission: "The Future of the Transport Industry" the number of loss making small and regional airports in Europe is constantly growing. On the other hand the regional airports might crucial role in boosting economic development and entrepreneurship growth in regions. In this context, it is very urgent for regional airports themselves, as well as for regional policy makers, business and other relevant stakeholders to recognize the role of regional airports on the economic growth in their regions. As a response, this paper addresses to the evaluation and assessment of potential effects of regional airports on economic and entrepreneurship growth in their regions.

**Keywords:** regional airports, regional economic and entrepreneurship development

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## 1. Introduction

The transport sector, in direct and indirect meaning, is one of the main driving forces of European and global economies (EC, 2015a). 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". In the overall transport sector, 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 air cargo transport with a high value added or time sensitive goods (EC, 2014). European airports are responsible for employment over a million people, working directly or indirectly in aviation business, employed by airlines or by airports' operational environment, i.e. 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 (EC, 2015a, 2015b). Air transport is also considered as one of the main driving forces for the trade of innovative manufactures worldwide (IATA, 2015) and as an enhancer of the economic potential of a region (Goetz, 1992; Alkaabi & Debbage 2007; Debbage & Delk 2001). However, the number of loss making European airports (especially small and regional airports) is constantly growing (EC, 2014). In spite of growing losses, in order to secure accessibility to remote or peripheral regions, the regional or national public authorities keep on supporting the regional airports (Breidenbach, 2015). European regional policy makers have invested millions of euros in airports' infrastructure development, however today almost all regional airports depend on public subsidies. However, the new state aid rules for a competitive aviation industry, issued by EU Commission in February 2014, order the substantial cut of financial public subsidies of any art on the EU national or regional level for regional airports (EC, 2014). The main objective here is not to "recycle" the regional airports, but to stimulate them to operate on cost efficient, and profitable basis. On the other hand a number of experts argue that it is rather a false approach to focus on the monetary losses of the regional airports only, without recognising their importance for regional development and emphasize positive effects for the development of the regional industry (especially service and high-tech industry) benefit from airport's operation (cf. Sheard, 2014; Brueckner, 2003; Button & Taylor, 2000; Beifert, 2015, Rezk, et al. 2015). Bråthen (2003) merely economic point of view in terms of airports closure is not enough; he stressed the importance of regional development issues while conducting such an analysis. However, the provision and growth of transport services alone would not automatically lead to economic and regional development (Green 2007). In fact, it is economic and regional development that might lead to the growing demand for transportation services, and although the direct linkage between air transportation and economic growth does really exist, the causation is not completely clear (Button et al. 2010). Halpern & Bråthen (2011) pointed also that on the one hand the airports might act as primary facilitators for the economic and regional growth, providing accessibility and improving supply side components; on the other hand, it might be economic development (here: demand side) that determines demand and growth of transport services. Halpern & Bråthen further argue that the question if the demand or the supply in this context have the stronger effect.

In the framework of the EU funded project "Baltic.AirCargo.Net" (BACN, 2014) a number of regional airports in the Baltic Sea Region (BSR) have been analysed aiming, among other things, at assessing potential of regional airports and their role in the regional economic environment. The main findings of the BACN project demonstrated playing an essential role in improving regional accessibility and being an indispensable part of the European aviation system, especially regional airports face growing challenges; their relevance for regional development is being questioned now. This paper explores the potential of regional airports as economic and entrepreneurship driving forces for their regions. This paper is organised as follows: the theoretical framework showcases theoretical approaches to regional development, regional airports and their possible interdependencies. The following sections present, methodology, main findings of the case studies investigated in the framework of the BACN project and conceptual implications of regional airports that might improve their efficient participation in the regional economic growth, thus making the airports and their regions more profitable and attractive to invest in.

## 2. Theory and concepts

The roots of the location and regional theories related to transportation may be traced back to the works of Weber (1929), where he primarily focused on transportation costs, arguing that companies, while delivering raw materials and goods to the market, are trying to minimize the transportation costs (cf. Dawkins, 2003). The

works of Hoover (1937) discussing advantages from local agglomeration, such as large-scale economies, localization economies (i.e. businesses of the same industry collocate and cooperate in the same area) urbanization economies (i.e. colocation of companies from different industries), gave further impulses to the development of regional cluster theories (Porter, 1985). The works of Greenhut (1956) and Isard (1956) although focusing mainly on mathematical optimisation modelling of industry given the costs for transporting raw materials and final goods, argued that the business companies tend to locate near primary input sources, whereas the monetary weight of raw materials can be larger compared to the weight of the final goods.

The dedicated research studies focusing on the relation between air transport services and regional development may be traced to Ndoh and Caves (1995), investigating the influence of supply side of air transport on demand, arguing that the attractive accessibility may directly influence location decision-making and stimulate further economic activity. Percoco (2010) considers the role of infrastructure and especially of airports as one of the crucial factors of regional growth due to the increasing importance of air transport in connecting territories. The linkage between airports and regional development as well as the impact of accessibility on regional economic development by means of air transport has been also investigated in a number of other studies (Graham, 1995; Rietveld & Bruinsma, 1998; Shin and Timberlake, 2000; Horst, 2006; Hakfoort et al., 2001; Niemeier, 2001; Cherry, 2014). The scientific studies of Bogai and Wesling (2010), Baum et al. (2005), Hujer et al. (2008), Brueckner (2003) note the considerable effects of airports on regional employment structure, regional labour market and general regional economic growth. Boon et al. (2008), Hart and Mccann (2000) in their works also underline the economic effects and benefits from airports' operation on the regional development.

According to the supply-side theory, the availability of adequate transport infrastructure and provision of transport services will lead to economic development, and therefore the airports may be seen as catalysts for regional economic development, on the other hand according to demand-side theory, economic growth will increase the demand for the transportation services (cf. Rodrigue & Notteboom, 2013). While the relationship and interdependence between airports and regional economic development is considered to be very strong, the availability of supply side or providing air transportation would not automatically lead to regional economic development (Halpern & Bråthen, 2011). However, the causality discussion still remains open, i.e. is it an airport that stimulates the growth and economic development or it is economic development in a region that may boost the demand for air transportation services (Ndoh and Caves 1995; Green 2007; Button et al., 2010). Mikkala and Tervo (2013) also stressed the existing causality of airports to regional development in peripheral regions, pointing also out that in core regions this causality is less clear, however they clearly underlined that air transportation is a very significant factor for boosting economic development in remote regions.

Generally, the researcher in the framework analysis of the airports' impact on regional development differentiate between following impact factors: direct, indirect, induced, purchasing power effects of an airport's activities on the regional economic growth (cf. Malina et al., 2007 and 2008) and so-called catalytic impacts relating to the wider role of the airport on regional development (cf. York Aviation, 2004). According to Malina et al., (1) direct impact relates to the operation of the airport itself, direct economic activities of firms located in the airport' operational environment, employment and investments; (2) indirect effects arise from value chain of suppliers of goods and services related to the airport and airport's region; (3) induced effects are caused by the consumption demand of direct and indirect airport employees; and (4) purchasing power effects arise due to an inflow or outflow of demand for goods by the passenger flows. Baum et al. (2004) explained direct, indirect, and induced effects of air transport on a region in economic metric terms, such as employment or production value. Beyond this, the airports have a so-called (5) catalytic or multiplier impact by improving location attractiveness for businesses and tourism.

Although a number of studies focus on the first four types of airports' impact factors, since they are relatively easy to measure (cf. Hakfoort et al., 2001), Halpern & Brathen (2011) argue that catalytic impacts are the most

essential function of an airport and regional development (cf. York Aviation, 2004). The catalytic impact of airports and air transport sector on regional development has been studied by several researchers (Robertson, 1995; Cezanne & Mayer, 2003; Cooper and Smith, 2005; Gloersen, 2005; Bandstein et al., 2009). The previous studies basically note that due to the fact that it not easy to differentiate catalytic impacts of an airport from other factors and due to their complex character, the identification and measurement of catalytic effects is seen as rather problematic. Halpern & Brathen (2011) identify two main types of catalytic impact of airports on regional growth: (1) catalytic impacts that relate to regional economic competitiveness, resulting from airports' export activities, business operations and productivity; (2) catalytic impacts that relate to regional accessibility and social development, arising from airports' potential to improve regional accessibility. Braun et al. (2010) differentiate catalytic impacts of airports on a region between (1) consumer surplus; (2) environmental social effects; and (3) economic spin-offs, whereas positive economic spin-offs may stimulate inbound investments, inbound leisure or business tourism and improved productivity; negative spin-offs relate to outbound tourism, outbound investment. Wittmer et al. (2009) noted also the importance of intangible economic catalytic effects of regional airports on economic growth, such as network capacity, skills and competences, structural and image effect, etc. Although the intangible impacts cannot be clearly measured, they also have a strategic economic and social effect on the regional development (Wittmer et al., 2009).

Technically, it is not an airport, but rather airlines or logistic services providers that execute passenger or airfreight services. An airport provides the required hard (e.g. runways, terminals, warehouses, catering, etc.) and soft (e.g. security regulations, air cargo screening, sky-guiding, etc.) infrastructure. In this perspective an airport might be also seen as a logistics cluster (Juchelka & Brenienek, 2016). The concept of industrial clusters is well recognized in academic research (Marshall, 1890; Porter, 2000). "A Cluster is a proximate group of inter-connected companies and associated institutions in a particular field, linked by commonalities and complementarities." (Porter, 2000, p. 254). The definition of logistics clusters however, is still disputable due to differences of spatial and economic approaches (Elsner et al. 2005). The researches generally identify global, national or regional logistics clusters (Rivera & Sheffi 2012). Wang (2015) views logistics clusters as "geographically concentrated sets of logistics-related business activities, which have already become one of the most important regional development strategies." Along with the classical advantages of the logistics cluster such as: know-how and expertise sharing, service and costs benefits, etc., the logistics cluster participants might utilise or develop common approaches in terms of (a) provision of the systematic services and acquire adequate benefits from other (regional, inter-regional, international) markets; (b) benefiting from positive feedback circle through cluster cooperation; (c) enhancing core regional and firms' competences; (d) acquiring sustainable driving forces for companies' competitive advantages (cf. Wang, 2015).

Furthermore, regional airports shall not be seen as simple locations that provide air transport services, but rather as an essential subject of regional development activities and regional planning policies, whereas their operational success might be one of the most important influencing factors (cf. Feldhoff, 2012; Beifert, 2013 and 2015). A number of researches argued a firm's (here: an airport's) impact on the regional development lies also on the strategic and operational success that mainly derives from the following three elements: diversity, differentiation and innovation of airport business (Prahalad & Hamel, 1990). In this context, the following theoretical concepts 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), competitive advantage and cluster theory by Porter (2000) including innovation management process are of a special importance. The resource-based view approach examines the competitive environment from "inside-out" aspect, dealing with the internal environment of a company (Prahalad & Hamel, 1990). In order to increase an impact on the regional development, the regional airports need to optimise their performance strategy internally (organisation-based) and externally (market-driven), thus enhancing also their diversification and differentiation potential. As one of the bottlenecks for economic prosperity of an airport is often not accessibility, but rather the deficit of qualified manpower or resources in the airport's operational environment



(EC, 2014), the airports shall not be reliant on a single or traditional revenue source, but rather on wider airports' potential and performance depending on efficient utilisation of the available resources in form of human or financial capital, intangible valuable or unique assets (Barney, 1991). In the framework of the opportunity-based entrepreneurship theory Drucker (1985) argues that entrepreneurs do not cause change, but use the opportunities that changes bring: "the entrepreneur always searches for change, responds to it, and exploits it as an opportunity". Stevenson (1990) further extends Drucker's opportunity-based model by including so called resourcefulness that identifies generally that the hub of entrepreneurial management means the "pursuit of opportunity without regard to resources currently controlled" (Stevenson, 1990, p 2). The entrepreneurship resource-based theory states that access to resources is an essential factor for the entrepreneurship growth (Alvarez & Busenitz, 2001). This theory underlines the important role of social, human and financial, resources; arguing that the access to resources stimulates the entrepreneurial ability to utilise discovered opportunities more efficiently (Davidson & Honing, 2003). Financial, social and human capital represents three classes of theories under the resource – based entrepreneurship theories. However, some regional airports often view new market opportunities as not promising or underestimate their strategic value due to their disruptive innovations character in the aviation and airport business (Beifert, 2015). But if those innovative concepts (e.g. Logistics Bonded Park or Airport Industrial Zone) are already utilised or offered by the nearest regional competitors, it might be often inefficient just to reduplicate them (Downes & Nunes, 2013). Osterwalder & Pigneur (2010) developed a comprehensive business model that includes nine elements: customer segments, value propositions, channels, customer relationships, revenue sources, key resources, key activities, key partnerships and cost structure, that might be considered as a basement assessment tool for a successful business operation. In this context it might be recommended that regional airports shall learn to identify these market opportunities and deploy them considering innovation business models and better bargaining potential of entrepreneurs, e.g. by utilizing of so called "air trucking services" (Beifert, 2013).

### 3. Methodology

Although a number of scientific research studies and empirical evidences are available nowadays that relate to such subjects as: logistics' clusters (e.g., Rivera & Sheffi 2012; Wang, 2015; Juchelka & Brenienek, 2016), airport's operational environment and their impact on the regional development (e.g. Malina et al., 2007, Braun et al., 2010; Halpern & Brathen, 2011), however it might be stated that much less attention has been paid to regional airports so far and the earlier studies have been focusing mostly on airport-hubs or metropolitan areas, whereas the perspective of regional airports and their potential impact on their region in terms of economic and entrepreneurship development has been studied less thoroughly (Mukkala & Tervo, 2012). Halpern and Bråthen (2011) also noted that catalytic impact of regional airports on regional development calls for deeper and wider research. Based on the above-mentioned theoretical concepts and earlier empirical evidences and it might be assumed that regional airports might have a strong potential to enhance economic growth and entrepreneurship activities in their regions. In the framework of this study the following research questions are investigated:

Question 1: What are the possible conceptual approaches to optimise or to enhance regional airports' impact on economic growth and entrepreneurship development in their region?

Question 2: What is the appropriate approach to evaluate potential of regional airports to boost economic growth and entrepreneurship development in their regions?

With regard to the above-presented concepts, it is argued here that regional airports acting as a gravity force for logistics cluster-building in a region and multi-layer business systems may be analysed by applying various assessment criteria found in the theoretical framework discussed above. The following presented assessment matrix is based on theoretical concepts of direct, indirect or induced effects of airports on regional economic development (Malina et. al., 2008; Baum et al., 2004), catalytic impact (Bandstein et al., 2009; Halpern & Brathen, 2011), airports' clustering effect (Rivera & Sheffi, 2012; Wang, 2015), airports' internal success

factors, i.e. RBV of Prahalad & Hamel (1990) as well as innovation and entrepreneurship growth of Osterwalder & Pigneur (2010).

As it has been mentioned before, due to the fact that the causality discussion of the impact relationship between airports' operation and regional growth still remains open, the author identifies here two main groups of the growth enhancers: (1) perspective of regional development (here: demand-side), by which regional airports may be considered as an object of regional economic growth where economic development in a region will boost the demand for the air transportation services and stimulate an airport's growth; and (2) regional airport's perspective (here: supply-side), whereby regional airports act as a subject of regional development, e.g. airport's activities may stimulate economic and entrepreneurship growth in its region. As a response to the first research question, the following assessment matrix evaluating regional airport's potential to influence economic and entrepreneurship growth might be suggested (Table 1).

**Table 1.** Regional airports' impact assessment and sustainable business model development

Perspective	Assessment criteria indicator
<b>Regional Development Perspective</b>  (demand-side enhancers for airport's growth, i.e. regional airport as an object of regional development)	Regional accessibility
	Regional economic competitiveness
	Regional business concentration
	Regional density of high-growth and innovative enterprises
	Regional level of entrepreneurial and innovation activities
	Regional density of population
	Regional labour market
	Regional prosperity and purchasing power
	Regional level of skills and competences
	Regional network capacity, governance and coordination level
	Linkages of airports with other public & private R&D
	Linkage of airports with innovation policies
	Regional marketing activities
	Regional awareness of airport's capacities and value proposition
<b>Regional Airport's Perspective</b>  (supply-side enhancers for economic and entrepreneurship growth, i.e. regional airport as a subject of regional development)	Airport's infrastructure
	Airport's extension potential for future clustering activities
	Level of direct airports' employment
	Level of indirect employment
	Level of value proposition
	Level of clustering activities, e.g. creating network of logistic service provider, building up logistical service centres, etc.
	Level of customer experience creation (e.g. airport marketing, corporate identity and branding activities)
	Value chain of suppliers of goods and services related to the airport and airport's region
	Level of competing sophistication (operational effectiveness and quality of micro-economic business environment)
	Level of entrepreneurship environment in airport's premises

*Source:* Author (based on airports' impact factors of Malina; catalytic impacts of Halpern and Brathen; RBV by Prahalad and Hamel; Innovation Business Canvas of Osterwalder and airports' clustering effects of Wang)

The author of this paper argues that the above-presented assessment matrix for the regional airports' assessment based on the consolidated theoretical frameworks based on airports' impact factors of Malina; catalytic impacts

of Halpern and Brathen; RBV by Prahalad and Hamel; Innovation Business Canvas of Osterwalder and airports' clustering effects of Wang enables comprehensive assessment of regional airports' potential on the economic and entrepreneurship growth.

The following assessment results and main findings presented in this paper have been based on secondary and primary data, including qualitative expert interviews and surveys that have been collected and produced in the framework of the EU funded research project Baltic.AirCargo.Net (BACN, 2014), financed by the EU Programme "INTERREG IVB, Baltic Sea Region", ERDF Funds. The empirical data was collected from diverse sources of evidence during the project life 2011-2014, i.e. primary empirical data sources in form of quantitative and qualitative observations of the involved project experts, researchers and relevant stakeholders. The 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 Ministries 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 assessment matrix for regional airports' potential on regional development (cf. Table 2) has been chosen as a basement to present compliant evaluation analysis of the selected airport.

In the framework of the BACN project, in total nine regional airports from eight BSR countries have been analysed and evaluated. Parchim Airport (Germany) has been selected here as a demonstration case using an evidence-based method in order to assess the airports' potential as a driver for economic and entrepreneurship development in Mecklenburg-Vorpommern region (Germany). A case study approach shall generally draw an essential attention on contemporary study issues by addressing strategic question "know-why?" (Yin, 2009). Although the applied qualitative methods here may make it difficult to validate the presented events, it will enable to highlight the particularity and complexity of the single case evidences (Stake, 1995).

#### **4. Main findings and implications**

Parchim Airport is located in the county Ludwigslust-Parchim (area: ca. 4.752 square kilometre; population density ca. 45 per one square kilometre) near regional town Parchim in the State of Mecklenburg-Vorpommern, Germany. There are two main cities in the catchment area of Parchim airport, i.e.: Schwerin – ca. 44 km or 40 minutes by road, which is the capital city of Mecklenburg-Vorpommern region with ca. 91 thousand people and; and Rostock - ca. 111 km or 1,5 hours by road. The geographical transport and time distance by road from Parchim to the nearest airport-hubs are: to Berlin Tegel: 172 km, ca. 2 hours; to Hamburg: 131 km, ca. 1,5 hours. The geographical transport and time distance from Parchim to other operating regional airport, i.e. Airport Rostock-Laage is ca. 70 km or ca. 1 hour by road. The airport has been used for more than 70 years exclusively for the military purposes. In 2007 the airport was sold to a private investor LinkGlobal International Logistics Group Ltd. – a Chinese company that is the current owner of the airport. The airport has a direct connection to the highway A24, linking Hamburg and Berlin and beyond to the German and European long-distance transport network. Rail connections are limited to regional traffic, since no direct access to long distance train lines in Parchim traffic exists. No regular flights are offered in Parchim Airport at the moment. The new owners have planned the internationalization business model for the Parchim airport. The objective was to extend the site to an air cargo hub for transportation between Europe, Africa and Asia. Three flights a week were planned with an option for extension up to 30 flights a day. Furthermore, a sufficient logistics infrastructure was intended. These investments should be made in cooperation with Goodman Group. In 2007 two airfreight connections have been established, one to Zhengzhou (CGO) in the province of Henan and another to Urumqi (URC), the capital of the

Xinjiang Uyghur Autonomous Region of China. The targeted frequency of service on these flight connections has not been achieved so far. In 2010 only 8000 tons of air cargo were handled, a volume that has to be considered as completely insufficient to guarantee a cost-effective operation. For this reason more and more capacity utilization problems arise due to the fact that only a low activity rate can be achieved for the personnel and also the technical equipment (aircraft tugs, fire-fighting vehicles, etc.) needed for airport operations as well as for the offered logistic services. The current as well as the to-be expected volumes in air cargo transport are insufficient to generate the necessary revenues for maintaining operations at the airport. Relevant revenues coming from other business areas cannot compensate operational costs of Parchim Airport at the moment

#### *Regional Development Perspective Evaluation of Parchim Airport*

In the framework of the regional development perspective or evaluation demand-side enhancers for the airport's growth evaluation, the following assessment scale of the given criteria was applied (very good developed / provided: 5; adequate developed / provided: 4; average developed / provided: 3; insufficient developed / provided: 2; very poor developed / provided: 1). In the framework of BACN project, external experts (i.e. representatives from regional relevant business and policy structures, entrepreneurs and academic field) participated in the analysis of the Parchim Airport. The assessment of Parchim Airport's growth potential from the point of view of demand side perspective has shown the following results. The applied weighting scale of the assessment criteria has been based on the overall compilation of the experts' evaluations and the results of the experts' interviews fulfilled in the framework of the BACN project. The experts of the BACN project also pointed out that although this weighting scale might be very subjective, however it needs to be integrated in this or another form in the evaluation process, since the assessment criteria are not equal.

**Table 2.** Assessment of the demand side enhancer for the airport's growth

Assessment criteria (demand-side enhancers for airport's growth)	Weight scale	Criteria mean score	Total mean value
Regional accessibility	10%	3	0,30
Regional economic competitiveness	10%	3	0,30
Regional business concentration	10%	2	0,20
Regional density of high-growth and innovative enterprises	10%	2	0,20
Regional level of entrepreneurial and innovation activities	10%	3	0,30
Regional density of population	10%	2	0,20
Regional labour market	5%	3	0,15
Regional prosperity and purchasing power	6%	4	0,24
Regional level of skills and competences	10%	4	0,40
Regional network capacity, governance and coordination level	5%	3	0,15
Linkages of airports with other public & private R&D	2%	2	0,04
Linkage of airports with regional innovation policies	2%	1	0,02
Regional marketing activities	5%	4	0,20
Regional awareness of airport's capacities and value proposition	5%	1	0,05
<b>TOTAL</b>	<b>100%</b>		<b>2,75</b>

None of the given criteria has been evaluated as "very good developed / provided". The overall mean value of the evaluation of the demand-side enhancers on the airports' operation is slightly below average value. Only three criteria (i.e. regional prosperity and purchasing power, regional level of skills and competences and regional marketing activities) were evaluated as "good developed or provided" in the region. Two criteria indicators have been evaluated as "adequate developed / provided", i.e. linkage of airports with regional innovation policies and regional awareness of airport's capacities and value proposition. Although the criteria: "network capacity, governance and coordination level" in general has been evaluated as "average", a number of



BACN experts saw here a big potential for improvements. In fact, the BACN experts mentioned that certain gaps in networking and communication from the side of the Chinese owner and relevant regional stakeholders such as public admiration of County of Ludwigslust-Parchim (co-owners of the Parchim Airport), German Customs Authorities, Ministry of Transport of Mecklenburg-Vorpommern do really exist.

### *Regional Airport's Perspective Evaluation*

In the framework of the regional airports perspective or evaluation supply-side enhancers for the economic and entrepreneurship growth in the region, the same assessment scale of the given criteria were applied as by the demand-side enhancers (cf. Regional Development Perspective Evaluation of Parchim Airport). The assessment of Parchim Airport's potential impact on economic and entrepreneurial growth in the region, i.e. from the point of view of supply-side perspective has shown the following results.

**Table 3.** Assessment of the airport's impact on regional development

Assessment criteria (supply-side enhancers for regional development)	Weight scale	Criteria mean score	Total mean value
Airport's infrastructure, incl. tangible and intangible resources	10%	4	0,40
Airport's extension potential for future clustering activities	10%	4	0,40
Level of direct airports' employment	5%	1	0,05
Level of indirect employment	5%	1	0,05
Level of value proposition	15%	4	0,60
Level of clustering activities, e.g. creating network of logistic service provider, building up logistical service centres, etc.	15%	1	0,15
Level of customer experience creation (e.g. airport marketing, corporate identity and branding activities)	10%	2	0,20
Value chain of suppliers of goods and services related to the airport and airport's region	10%	2	0,20
Level of competing sophistication (operational effectiveness and quality of micro-economic business environment)	10%	2	0,20
Level of entrepreneurship environment in airport's premises	10%	2	0,20
<b>TOTAL</b>	<b>1</b>		<b>2,45</b>

None of the given criteria has been evaluated as “very good developed / provided”. Three criteria indicators (i.e. airport's infrastructure, incl. tangible and intangible resources, airport's extension potential for future clustering activities and level of value proposition) have been evaluated as “adequate developed / provided”. In fact, the airport's infrastructure belongs to one of the main tangible resources of Parchim airport: the new tower was built in May 2015, the length of the runway is 3000 meter, the airport has appropriate passengers and cargo terminals, including required security screening technologies. The following attributes have been mentioned by the experts as the airport's distinctive intangible resources:

- low costs operation airport;
- 24/7 operation, i.e. aircrafts are allowed to land and departure 24 hours daily and 7 days a week; no restriction to night flight operations;
- all types of aircrafts (incl. AN124 and A380) can be accommodated and handled at the airport, over-size cargo operations are possible;
- efficient customs services, that makes Parchim Airport's cargo terminal to dry a port.

So called “24/7” operation was mentioned as valuable or non-substitutable intangible resource of Parchim Airport. Comparing to other German airports, nowadays a number of official and civil discussion have been started to introduce a night ban for the state owned airports. Since Parchim Airport is in the private hands, the owners and the airport management claim that in the mid-term and in the long-term perspective, the 24/7 operation will be still valid for Parchim Airport and might not be questioned. Although considering expanding of the passenger traffic, Parchim Airport is clearly positioning itself as an international gateway to China with a strong focus on the air cargo. According to the current development plan, the airport will be upgraded to ICAO 4F class airport. The experts evaluated the level of value proposition as “adequate” considering the air-cargo development model and cost-performance ratio.

It has to be mentioned that a number of various value added services does already exists or is being developed and implemented in Parchim Airport:

- Bond Logistics Park (partly realized)- a customs free zone, where cargo may be stored in the Customs Bond Warehouse, there is no time limitation and is treated as outside the boundary of EU or Germany, tax or duties will not be applied if cargo is purposed to be transit to other countries or Bond Zones, air cargo transit to other countries or Bond Zones via the Customs Bond Warehouse may be exempted for import procedures
- Customs Bonded Industrial Park (in planning) - the commodities could be assembled by various value added model under Customs bond. The commodities could be considered as “Assembled in Germany” or “Made in Germany” with value-added determination in the Bond Zone by EU regulations and policies. The goods from the EU countries’ “preferential origins” can enjoy reduced or zero tariffs in some countries (mutual agreements)
- Bond Trade & Procurement Centre (in planning) - the commodities can be exhibited for trading or auction purpose. Import procedures will be required and tax & duty will apply only when cargo need to enter into EU markets. Cargo transit to other countries or Bond Zones via the Customs Bond Warehouse in Parchim International Airport is exempted for import procedures

However, in spite of above mentioned plans and already realized activities, the level of clustering activities in Parchim Airport has been ranked as “poor”. The experts underline the deficit of attracting factors for potential investors that might be connected also to a lack of targeted or direct communication as well as rather weak regional economic structure and the absence of the critical mass of local industries and companies. It has been further noticed to improve the level of operational effectiveness and quality of micro-economic business environment. In spite of the appropriate infrastructure, like runway and the newly built tower, the institutional and infrastructure framework in which the airport operates has been considered as “poor”. Furthermore, it has been stated that the current competitive advantage of Parchim Airport is based nowadays mostly on low costs model than on unique/innovative products and services.

## 5. Discussion

Due to growing social and political responsibility in terms of environmental issues, such aspects or impact analysis of an airport’s operation on environment might be also discussed. There are already a number of EU funded project that have started to examine airports as so-called environmental sensors. The possible implications of an airport in this direction might be mitigation of environmental impacts and risks, implementation of strategic plans to minimize noise and air pollution effects on the environment. At the moment some relevant regulations and standards imposed by EU and national current legislations shall motivate airports to pay more attention, in other words to invest in innovative and “green” technologies, e.g. technologies for the production of renewable energy on an airport’s territory, producing so-called ecological corridors that reconnect

parts of the territory through environmental linear infrastructure, etc. This entire legislative framework, acting as demand-side enhancer may stimulate new entrepreneurship and innovation business activities within the nearest airports' operational environment.

Furthermore, in according to the guidelines of the European infrastructure development plan for 2014-2020, the airport connectivity (especially in some remote regions) will be improved aiming at improving territorial synergy or networking between nearby airports as well as better integration of smaller and regional airports in common the organizational logistical network though extensive airports' integration with local transport systems, e.g. railways and local buses. All these initiatives may also give an impulse for an airport's growth, thus increasing complementarities, improving value proposition, diversification and specialisation of airports.

The BACN experts underlined also the importance for every region to be accessible. In our innovation-driven economies regional accessibility is very important both for people (both: tourists and businessmen) and companies. The regional airports might positively contribute to improving their regional accessibility and herewith economic and entrepreneurship growth in a region. The BACN experts mentioned that it might be also achieved through improved horizontal or networking cooperation between regional airports in the Baltic Sea Region. The distribution of the "weight" between the assessment criteria in the presented assessment model may represent a subject of future disputes and discussions. The experts of the BACN underlined that although this weighting scale might be very subjective, however the it needs to be integrated in this or another form in the evaluation process, since the assessment criteria are not equal. It has been further noted by BACN experts that this weighting scale is not a "universal" for every regional airport, but on the contrary the evaluation approach and the correspondingly applied weighting scale must be very individual, respecting the regional peculiarities, economic perspectives and regional stakeholders' interests.

Specifically for Parchim airport it might be mentioned that one of the basic prerequisites for the successful realization of the current strategies is the assumption that innovative Chinese companies and entrepreneurs will start to settle in the airport area and build up a critical mass of interconnected companies, thus creating a cluster. However, the creation of such extraterritorial low-wage areas will be hardly possible today to enforce on a political level, as by adopting such a procedure fundamental structures of the German labour and social law would be questioned. The second problem is the use of the established brand Made in Germany which image would be permanently damaged and will cause severe and long-lasting loss of image to the German industrial reputation going far beyond the Parchim location if the quality standards are not properly met. Whether and to what extend the presented concepts can be realized, remains open. A key issue is the question for which companies the Parchim International Airport can be an attractive alternative to other airport locations in the Northern and Central German region. The visions with respect to the possible development of the site that have been propagated for a number of years will be presented in the next paragraph.

LinkGlobal presents visions of the future of a Parchim Bond Business Park with the aim to find users for the airport and the local logistics facilities. Advantages of this location are the favourable geographic situation in Europe, the technical equipment for all aircraft types, the cost effective structures with an operating time of 24 hours as well as the status of a customs free zone. The Bond Logistics Park, the Bond Industrial Park and the Bond Trade & Procurement Center essentially constitute the fundamentals of the Parchim Bond Business Park serving as its economic core. The Parchim Business Park will be complemented with an Asia Center as well as with a Business Cooperation Zone. With the help of these two the attractiveness of the Parchim location is to be increased.

## Conclusions

Although the role of the European airports for socio-economic development can be hardly overestimated today, the number of loss making small and regional airports in Europe is growing. The regional airports face structural and economic challenges. Since the causality discussion about interdependent relationship between airports and regional economic growth still remains open, the author argues that the approach in evaluating of an airport's potential influence on economic and entrepreneurial activities in a region shall be balanced, i.e. assessment of both perspectives might be necessary. The regional airports shall not be viewed as a transport infrastructure that provides air transport services, but rather as an essential subject and an object of regional development activities and regional planning policies, whereby an airport's operational success might be one of the most important influencing factors on regional economic and entrepreneurship growth.

The main findings indicate that regional accessibility is very important nowadays, whereas normally it is not the absence or inadequate airport's infrastructure or an airport's extension capacities (e.g. for industrial bonded parks, warehouses, etc.) that make an airports' impact on regional development insignificant, but rather soft factors that might be improved, such as level of level of customer experience creation, level of value chain of suppliers of goods and services related to the airport and airport's region or level of competing sophistication (operational effectiveness and quality of micro-economic business environment. A special attention shall be paid to enhancing of clustering activities, e.g. though structuring and combining regional logistics services, creating efficient network of regional and inter-regional logistic service providers, coordinating airport's own service structure with relevant regional political and business stakeholders, etc.

The above-presented results demonstrated that the regional airports should better recognize their important role for the economic and entrepreneurship growth in their regions as well as accept their own dependence on regional prosperity, as well as improve their operational activities through better coordination with relevant stakeholders of their region.

## References

- Alkaabi, K.A., Debbage, K.G. (2007). Air passenger demand and skilled labor markets by US metropolitan area. *Journal of Airport Management* 13, pp. 121-130
- Alvarez, S., Busenitz, L. (2001), "The entrepreneurship of resource based theory", *Journal of Management*, 27, pp. 755-775
- Bandstein, S., Stenérus, A.-S., Espinoza, N. (2009). A Social Analysis of Stockholm-Arlanda Airport: Impact of the Airport on Sweden and the Stockholm Region. FOI Swedish Defense Research Agency, Stockholm
- Baum, H., Schneider, J., Esser, K., Kurte, J. (2004). Standortfaktor Flughafen Frankfurt Main – Bedeutung für die Struktur, Entwicklung und Wettbewerbsfähigkeit der Wirtschaft der Region Frankfurt/Rhein-Main. Köln
- Barney, J. B. (1991). Firm Resources and Sustained Competitive Advantage, *Journal of Management* 17(1): pp. 99-120
- Beifert, A. (2015). Business Development Models For Regional Airports - Case Studies From The Baltic Sea Region. *Journal of Security and Sustainability Issues*, Vol. 5, pp. 199–212
- Beifert, A.; Maknyte, L.; Prause, G. (2013). SMEs Behaviour in the Air Cargo Supply Chain: Engagement, Performance and Strategy. A Regional Approach on SMEs Practices and Future Directions in Mecklenburg-Vorpommern. In: *Social Sustainability and Economic Security*, Proceedings of the International Entrepreneurship Forum
- Bråthen, S. (2003). The viability of regional airports in Norway – are the regional development issues adequately addressed? The Regional Science Association conference: reinventing regions in a global economy, Pisa, Italy, pp. 12–15

- Bråthen, S., Eriksen, K.S., Hjelle, H.M., Johansen, S., Lillebakk, L.M., Lyche, L., Sandvik, E.T., Strand, S., 2006. Social Impact of Aviation, Part 2: Case Studies, Report 0606b. Møreforsking Molde, Molde
- Braun, T., Klopheus, R., Lueg-Arndt, A. (2010). Wider economic benefits of air transport: estimating consumer surplus for Germany. Proceedings of 12th World Conference of Transport Research, pp. 11-15
- Breidenbach, P., (2015). Ready for Take-off? The Economic Effects of Regional Airport Expansion. Ruhr Economic Papers, Ruhr-Universität Bochum (RUB), Bochum, p. 4
- Bogai, D., Wesling, M. (2010). Großflughafen Berlin Brandenburg: Analyse Airport Beschäftigungspotenziale in Berlin und Brandenburg. IAB-Regional, Berichte und Analysen aus dem regionalen Forschungsnetz, IAB-Regional Berlin-Brandenburg 02/2010, Berlin-Brandenburg
- Boon, B., Davidson, M., Faber, J., Nelissen, D., van de Vreede, G. (2008). The economics of Heathrow expansion. Final report. CE Delft, Delft
- Brueckner, J. (2003). Airline traffic and urban economic development. Urban Studies, Vol. 40( 8), pp. 1455–1469
- Button, K., Doh, S., Yuan, J. (2010). The role of small airports in economic development. Airport Management, 4(2), pp. 125-136
- Cantos, P., Gumbau, M., Maudos, J. (2005). Transport infrastructures, spillover effects and regional growth: evidence of the Spanish case. Transport Reviews 25, pp. 25–50
- Cezanne, W., Mayer, A. (2003). Flugplatz als Wirtschaftsfaktor Möglichkeiten und Formen der Landeplätze als Wirtschaftsfaktor, Analyse der im Land vorhandenen Situation, Ministerium für Stadtentwicklung des Landes Brandenburg, Cottbus
- Cherry, J. (2014). The Economic importance of airports; ICAO. Aeroports de Montreal
- Cooper, A., Smith, P. (2005). The Economic Catalytic Effects of Air Transport in Europe, Report EEC/SEE/2005/004. Eurocontrol, Brussels.
- Davidson, P., & Honing, B. (2003), “The role of social and human capital among nascent entrepreneurs”, Journal of Business Venturing, pp. 20,121
- Dawkins, C.J. (2003). Regional Development Theory: Conceptual Foundations, Classic Works, and Recent Developments. Journal of Planning Literature, Vol. 18,No.2(November2003), p. 136
- Debbage, K.G., Delk, D. (2001). The geography of air passenger volume and local employment patterns by US metropolitan core area: 1973-1996. Journal of Air Transport Management 7, pp. 159-167
- Downes, L., Nunes, P. (2013). Big Bang Disruption: Why classic business rules don't apply, Harvard Business Review.
- Drucker, P.F. (1985). Innovation and Entrepreneurship. New York: Harper & Row Publishers
- Elsner, W., Hübscher, JA., Zachial, M. (2005). Regionale Logistik-Cluster. Statistische Erfassung, Stärken und Schwächen, Handlungspotentiale. Frankfurt am Main
- Feldhoff, T. (2012). Japan's regional airports: conflicting national, regional and local interests. Journal of Transport Geography 10 (2002), pp. 165–175
- Gloersen, E. (2005). The importance of airports in securing accessibility and the role of demographics. In: Cranfield University, 4th Forum on Air Transport in Remoter Regions, Stockholm, Sweden, May 2005. pp. 24–26
- Goetz, A.R. (1992). Air passenger transportation and growth in the U.S. urban System, 1950-1987. Growth and Change 23, pp. 218-242
- Graham, B. (1995). Geography and Air Transport. Wiley, Chichester
- Greenhut, M.L. (1956). Plant location in theory and in practice. Chapel Hill: University of North Carolina Press
- Green, R.K. (2007). Airports and economic development. Real Estate Economics, Vol. 35(1), pp. 91-112.



- Isard, W. (1960). *Methods of regional analysis: An introduction to regional science*. Cambridge, MA: MIT Press.
- Juchelka, R., Brenienek, J. (2016). Evaluation of Impacts of Logistics Clusters in the Corridor Rotterdam–Genoa. *Integrated Spatial and Transport Infrastructure Development, Contributions to Economics*. Springer International Publishing Switzerland 2016, pp. 172-173
- Hakfoort, J., Poot, T., Rietveld, P. (2001). The regional economic impact of an airport: the case of Amsterdam Schiphol Airport. *Regional Studies* 35 (7), pp. 595–604
- Halpern, N., Bråthen, S. (2011). Impact of airports on regional accessibility and social development. *Journal of Transport Geography* 19 (2011), pp. 1145–1154
- Hart, D.A. & Mccann, P. (2000). The continuing growth of London Stansted airport: Regional economic impacts and potential. *Regional Studies*, Vol. 34(9), pp. 875-882
- Hoover, E.M. (1937). *Location theory and the shoe and leather industry*. Cambridge, MA: Harvard University Press.
- Horst, M. (2006). *The Role of German Regional Airports in Logistics Networks*, Westminster
- Hujer, J. (2008). *Regionalökonomische Effekte von Flughäfen*. Peter Lang, Sozialökonomische Schriften Vol. (31), Frankfurt am Main
- Kanafani, A., Abbas, M.S. (1987). Local air service and economic impact of small airports. *Journal of Transportation Engineering*, Vol. (113), pp. 42-55
- Kasarda, J.D., Lindsay, G. (2011). *Aerotropolis: the way we'll live next*, 1st edn. Farrar, Straus and Giroux, New York
- Kupfer, F., Lagneaux, F. (2009). *Economic Importance of Air Transport and Airport Activities in Belgium*, Report 158. National Bank of Belgium, Brussels.
- Lian, J.I., Gjerdåker, A., Rønnevik, J., Jean-Hansen, V., Rypdal, K., Skeie, R.B., Berntsen, T., Fuglestedt, J., Torvanger, A., Alfsen, K., Thune-Larsen, H. (2007). *The Economic and Environmental Impact of Air Transport*, Report 921/2007. Transport Economics Institute, Oslo
- Malina, R., Wollersheim, C., Peltzer, S. (2007). *Die regionalwirtschaftliche Bedeutung des Dortmund Airport*. Industrie- und Handelskammer zu Dortmund, Dortmund
- Malina, R.; Luttmann, J., Wollersheim, C. (2008). *Prognose der regionalwirtschaftlichen Effekte des Dortmund Aiport für das Jahr 2020*. Münster
- Marshall, A. (1890) *Principles of Economics*, vol. I. Macmillan, London
- Mukkala, K., Tervo, H. (2012). “Regional airports and regional growth: which way does the causality run?”. *ERSA conference papers ersa12*, European Regional Science Association, p. 642
- Niemeier, H.M. (2001). On the use and abuse of impact analysis for airports: A critical view from the perspective of regional policy. In: Pfähler, Wilhelm (ed.) (2001): *Regional Input-Output Analysis. Conceptual issues, airport case studies and extensions*. Nomos, Baden-Baden
- Ndoh, N.N., Caves, R.E. (1995). Investigating the impact of air-service supply on local demand a causal analysis, *Environment and Planning A* 27(3), pp. 489 – 503
- Orlikowski, W. (2002). Knowing in Practice: Enacting a Collective Capability in Distributed Organising, *Organisation Science*, 13, pp. 249-273
- Osterwalder, A., Pigneur, Y. (2010). *Business model generation. A handbook for visionaries, game changers, and challengers*. Frankfurt a. M.: Campus
- Percoco, M. (2010). Airport Activity and Local Development: Evidence from Italy, *Urban Studies*, Vol. 47(11), pp. 427-443

- Porter, ME. (2000). Location, competition, and economic development: local clusters in a global economy. *Econ Dev Q* 12:15–42
- Prahalad, C.K., Hamel, G. (1990). The core competence of the organization, *Harvard Business Review*, 68(3), pp. 79-91
- Rezk, M. R. A.; Ibrahim, H., H.; Tvaronavičienė, M.; Sakr, M. M.; Piccinetti, L. (2015) .Measuring innovations in Egypt: case of industry, *Entrepreneurship and Sustainability Issues* 3(1), pp. 47-55. DOI:[http://dx.doi.org/10.9770/jesi.2015.3.1\(4\)](http://dx.doi.org/10.9770/jesi.2015.3.1(4))
- Rietveld, P., Bruinsma, F. (1998). Is Transport Infrastructure Effective? *Transport Infrastructure and Accessibility: Impacts on the Space Economy*. Springer, Berlin
- Rivera, L., Sheffi, Y. (2012). Logistics clusters in the US: an empirical study. MIT CTL Research Paper CTL/1-A-12, Vol. January
- Robertson, J.A.W. (1995). Airports and economic regeneration. *Journal of Air Transport Management* 2 (2), pp. 81–88
- Rodrigue, J-P., Notteboom, T. (2013). *The Geography of Transport Systems*. Hofstra University, New York
- Sellner, R., Nagl, P. (2010) Air accessibility and growth: The economic effects of a capacity expansion at Vienna International Airport. *The Journal of Air Transport Management*, 16 (6). pp. 325-329.
- Sheard, N. (2014). Airports and urban sectoral employment. *Journal of Urban Economics*, Vol. (80), pp. 133-152.
- Shin, K.H., Timberlake, M. (2000). World cities in Asia: cliques, centrality and connectedness. *Urban Studies* 37 (12), pp. 2257–2285.
- Stake, R.E. (1995). *The Art of Case Study Research*, Sage Publications, Thousand Oaks: California.
- Stevenson, H., Harmeling, S. (1990). “Entrepreneurial Management’s Need for a More "Chaotic" Theory”, *Journal of Business Venturing*, 5, pp. 1-14
- Wang, S. (2015). Study of Core Competence of Logistics Cluster: The Integration and the Extension of Value Chain. *American Journal of Industrial and Business Management*, 5, pp. 20-26
- Weber, A. (1929). *Theory of the location of industries*. Chicago: University of Chicago Press
- Wernerfelt, B. (1984). A Resource-Based View of the Firm’, *Strategic Management Journal* 5, pp. 171-180
- Wittmer, A., Weinert, R., Romer, D., Scherer, R., Strauf, S., Walser, M. (2009). *Regionalflugplätze und deren Wirkung auf das Luftfahrtsystem der Schweiz - Analyse der intangiblen regionalwirtschaftlichen Effekte*, CFAC-HSG, St. Gallen
- Yin, R.K. (2009). *Case Study Research: Design and Methods*, Sage Publications: London 2009
- Policy papers and other web sources:
- Baltic.AirCargo.Net (2014). INTERREG IVB Programme, Baltic Sea Region 2007-2013, ERDF Funds (BACN, 2014): <http://www.balticaircargo.net> (access: January 2016)
- EU Commission (2015a). JRS Technical Reports: The Future of the Transport Industry, EU Commission, JRC93544, Brussels.
- EU Commission (2015b). Annual Analyses of the EU Air Transport Market 2013, Brussels.  
[http://ec.europa.eu/transport/modes/air/internal\\_market/observatory\\_market/doc/annual-2013.pdf](http://ec.europa.eu/transport/modes/air/internal_market/observatory_market/doc/annual-2013.pdf)  
 (access: January 2016)
- EU Commission (2014). European Court of Auditors: EU Funded Airport Infrastructures: poor value for money.  
[http://www.eca.europa.eu/Lists/ECADocuments/SR14\\_21/QJAB14021ENC.pdf](http://www.eca.europa.eu/Lists/ECADocuments/SR14_21/QJAB14021ENC.pdf)  
 (access: January 2016)
- EU Commission (2013). ADES report: Airports as Drivers of Economic Success in Peripheral Regions. Targeted Analysis 2013/2/17, ESPON 2013  
[http://www.espon.eu/export/sites/default/Documents/Projects/TargetedAnalyses/ADES/DFR/01\\_ADES\\_DFR.pdf](http://www.espon.eu/export/sites/default/Documents/Projects/TargetedAnalyses/ADES/DFR/01_ADES_DFR.pdf) (access: January 2016)

IATA (2015). Economic Performance of the Airline Industry, 2015-end-year Report, [www.iata.org/economics](http://www.iata.org/economics) (access: January 2016)

York Aviation, (2004). The Social and Economic Impact of Airports. ACI-Europe, Geneva

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