Regional Airports and Urban Development of Small Cities in the U.S.

A Case Study about Gainesville Regional Airport and its Effects on the Economic Development of Gainesville, Florida

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1. Airport Orientated City Planning

1.1 Trends and Important Changes

The economic behavior of airports changed dramatically in the last quarter-century, with consequences on the internal management structure, the relationship with other competitive airports, and the way airports interact with their nearby city. Anne Graham identified three key developments for this change: airport commercialization, airport privatization and airport globalization (GRAHAM 2001). Airport commercialization is the transformation from a public transportation utility towards a profit-orientated enterprise. With this different business mentality, airport authorities diversified their revenue structure by emancipating from aeronautical depending revenues towards building the so called non-aviation segment. Parking lots, shops and shopping malls, restaurants, entertainment centers, hotels and congress facilities can be found at every bigger airport these days and belong to the non-aviation sector. Revenues created by non-aviation businesses sum up to 50 % and more of the airports income. The new spatial quality in this is that non-aviation activities are also placed outside the airport fence.

The second basic process marks airport privatization. It describes the transition of the management and to a great extent also the ownership from the public to the private sector. It seems like both processes are strongly linked with each other, but the commercialization process began earlier than the privatization (ibid.). On the other hand, the development of private airport management was necessary for the third trend: the airport globalization. Globalized airport management companies operate on an increasing number of airports worldwide with the result that business models are globally comparable. To name one example, the FRAPORT AG from Frankfurt (Germany) has management deals or ownership shares of airports in Antalya (Turkey), Riad (Saudi Arabia), Lima (Chile), and Xiangyang (China) (FRAPORT 2013).

Not only airports changed. In the same period, airlines adopted significant shifts in their network management. With the change from the point-to-point system towards the hub-and-spoke system, airlines can offer more connections with higher load factors of the airplanes making flying cheaper and more attractive. This also led to a high increase in passenger figures and destinations. Additionally, the launch of so called low cost carriers (LCC) or no-frills airlines – in opposite to flag carriers or full service carriers – reduced ticket prices enormously and helped to increase passenger volume worldwide.
Simultaneously, the relationship between city and airport was undergoing an modification, also. Driven by all these processes and global trends like suburbanization and globalization, airports became an important factor for urban planning. Several planning models were created which all highlight the airport as an economic gateway (FREESTONE&BAKER 2011; p. 7), and shall be introduced now.

1.2 Models of Airport and City Relationship

The best known concept is probably the Airport City by GÜLLER&GÜLLER (2001), because this planning model is realized in almost every bigger airport. In addition Airport City became a synonym and marketing name for the mixed used centers next to the terminals. The authors distinguish in different kinds of activities: core business (activities supporting the air traffic function), airport-related or ancillary activities (with direct relation to air-freight or passenger movements like logistic or hotels), and airport-oriented activities. The last category is located “in the airport region due to the image of the airport and of already established businesses, and its excellent […] landside accessibility” (ibid; p. 40). Even though GÜLLER&GÜLLER say that the latter two activities cannot always be distinguished with a clear-cut, they postulated an important approach in analyzing and planning the airport surrounding. In their concept, the terminal is the center of the Airport City hosting non-aviation airport-related activities already. Other activities are located in close proximity to the terminal. Due to high land prices a companies distance to the terminal is mainly determined by its produced goods and services.(ibid.). Key actors in this model are airport owners and lessees.
The Aerotropolis, according to KASARDA, is the evolution of the Airport City, which can be described as a combination of the Airport City and Garreau’s Edge City. Following the motto “survival of the fastest”, producers of time sensitive products and providers of high-valuable services locate next to the airport (KASARDA 2006). He adds to the Airport City model, where location and accessibility were the strongest raison d’être, the factor speed as an important location parameter. Totally new is the implication of residential housing in the Aerotropolis, which was initially seen as a problematic factor concerning the development of airports (air and noise pollution). This typical northern American model is driven by companies seeking for an efficient access to global production chains and real estate developers. It is marked by a high consumption of land and based on the paradigm of never ending growth (FREESTONE&BAKER 2011).

In contrast to the Aerotropolis, the concept of the Airport Corridor tries to link the economic strength of an airport with the city. Especially those areas which are in the vacuum between city and airport, because they do not belong to one of them, can profit by improvements in infrastructure made by administrative agencies (SCHAAFSMA et al 2008). As Schlaak states, the concept has a “potential to sustainably integrate the airport area as a hub for development in the poly-centric metropolitan region and to enable a balance of economic benefits for the involved municipalities, communities and other stakeholders” (SCHLAAK 2009; p. 116).

Airport City, Aerotropolis and Airport Corridor were conceptualized for international hub-airports. A critical mass of both, airport size (annual passengers; freights; connections) and economic power by the city (city/regional GDP; SMA rank) is necessary for the implementation of these concepts. None of them define a minimum number of passengers or GDP for the city, but it is mentioned that the airport needs to have at least a hub function. Contrary, the Airfront concept by Whit Blanton was created amongst other on the example of Gainesville, Florida (BLANTON 2004). It is defined “as the myriad commercial, industrial, and transportation facilities and services intrinsically tied to the airport” (ibid.).
As a member of the American Planning Association, Blanton sets the focus on planning requirements to balance economic growth with a fitting land use plan and infrastructure investments on the one hand, and minimize conflicts produced by noise/air pollution and airport expansion on the other hand (ibid.). In his opinion, the Airfront becomes successful, when all participated stakeholders work together. These are the airport authority, the city, and the private investors (ibid.).

1.3 Causality Matters

The relationship of airport growth and economic growth of the region or city was the question of many researchers. Most of them use a multidimensional regression model with (instrumented) economic growth as depending variable and passenger growth as one explanatory variable. One of the first - and also most cited - study is the one from Jan Brueckner (2003). He discovered for US american airports, that a passenger growth of 10% generates a growth in service-related industries of approximately 1% in the region around the airport (ibid.). A direct respond to this study was given by Richard Green (2007). In analyzing the US 100 busiest airports, he came to the conclusion: “Passenger boardings per capita and passenger originations per capita in the nation’s largest metropolitan areas are powerful predictors of population growth and employment growth“ (GREEN 2007; p. 18).

In 2009 Kenneth Button et. al. were interested in economic effects induced by regional airports. Their data framework contains 66 small airports in the state of Virginia. The outcome was similar: even small airports contribute to a growth in per capita income (BUTTON et al 2009). In this paper some remarkable notices were added: first and foremost, the authors raise the awareness for the fact that small airports can facilitate economic growth, and do not necessarily implement it. (BUTTON et al 2009; p. 135). Secondly, an increase in passenger figures can also encourage non-work trips by residents, with the result, that expenditures leaving the local economy (BUTTON et al 2009; p. 136). Another study about network effects of regional airports in Switzerland emphasizes the importance of pilot training on small airports, what is usually not possible at busy hub-airports (WITTMER&BIEGER 2011). Furthermore, each airport contributes specific features to the airport system in Switzerland through historical unique specification (ibid.).

Major international hub-airports are widely seen as engines of the local economy and implement growth (COLIN BUCHANAN and Partners 2009). For small regional airports the discussion oscillates between a facilitator and engine for economic growth. Following studies intend to finally clarify the causality of airport development and economic growth, but the results still remain uncertain and can be classified as “indicative” (BUTTON 2013, p. 338). Two recent studies (BUTTON 2013 and MUKKALA&TRA VO 2012) using Granger causality to identify the direction of causality (see also GRANGER 1969). The study of Button (2013) deals with air freight and economic growth.
the basis of the top 35 cargo airports in the US, with the result of a small causality from air freight towards local economy (BUTTON 2013; p. 338). Even though the causality is small, the link between both is very strong (ibid.). The latter study did not focus on regional airports, nevertheless causality was questioned.

The other study focusses on regional airports in Europe and the author discriminates between peripheral and core regions. Especially in peripheral regions, the airports offer an easy accessibility and facilitate economic growth, which causes an increase of airport activity and this boosts again the regional development (MUKKALA&TRAVO 2012). In core regions, the result of the Granger method was the opposite, here it is the regional economic growth that leads to an increase of passengers (ibid.).

After this brief introduction of selected planning concepts, the attention should be drawn to the case study in Gainesville, Florida. To become more familiar with the local conditions the economy of Gainesville and the development patterns will be described in the next chapter.

2. Gainesville Economy and Urban Patterns

2.1 Employment in Gainesville

The city of Gainesville has about 125,000 inhabitants (estimation from CENSUS 2010) and is located in Alachua County in north-central Florida. With the relocation of the University of Florida (UF) from Ocala to Gainesville in 1906 (UFL 2011), the city found its dominating factor of city development. In October 2012, there were 49,913 students enrolled (UFL 2012) and with 14,723 employees the UF is the biggest employer in the city (CAFR 2011; p. 153). The second biggest employer in Gainesville is Shands Hospital (belongs to UF) with 12,588 employees followed by the Veterans Affairs (VA) Hospital with 4,317 employees (ibid.). In general, the public sector is very strong in Gainesville. Educational services, and health care and social assistance employs 39.8% of all employees in Gainesville (U.S. Census Bureau, 2007-2011 American Community Survey). It is reported that Gainesville has a high amount of 35% people below the US poverty level (U.S. Census Bureau, 2007-2011 American Community Survey), amongst other reasons caused through the high amount of students living in the city. Nevertheless, there are deprived neighborhoods in Gainesville like Sugar Hill in the south-east, just to mention one.
Figure 3: Location of Gainesville in Florida. 

Source: blogspot

Figure 4: Overview map of Gainesville, Florida.

Source: http://www.ineer.org/events/icee2004/images/map_gville.gif
The domination of the UF has an impact on the private sector as well. A lot of consulting agencies are orientated towards the UF and offer research orientated services. The demand of approximately 50,000 students explains higher loadings of the location quotient in following segments: real estate and renting and leasing, warehousing and storage, and food and beverage stores. The location quotient (LQ) is based on the Quarterly Census of Employment and Wages and compares the percentage of employees in a North American Industrial Classification System (NAICS) of a region of interest (here Alachua County) to the total U.S. distribution. A value of 1 in the LQ means, that the percentage of employees in one industry in Alachua County is equal to the percentage of employees in the same industry all over the United States.

With a LQ of 3.03 miscellaneous manufacturing has the highest factor, but a further specification is not included in the data set of the location quotient (see Bureau of Labor Statistics). In the census description, miscellaneous manufacturing is defined as what they produce rather than how it is made (CENSUS 2002). To name some examples, “establishments in this subsector manufacture products as diverse as medical equipment and supplies, jewelry, sporting goods, toys, and office supplies” (ibid.). With the city’s specialization in medical facilities, it is most likely that the production of medical equipment causes the high number of miscellaneous manufacturing in the LQ.
It is not necessary to name all the industries which are underrepresented in Alachua County, but the fact that air transportation has a LQ of only 0.09 and truck transportation of 0.11 should be mentioned. These facts lead to following conclusions: Firstly, the high LQ of warehouses and storage is not related to logistic activities, but with temporal migration of students or faculty members of the university. Secondly, ground transportation seems to be more important than air transportation. This will become clearer after the introduction of the development patterns in Gainesville.

### 2.2 Development Patterns in Gainesville

Gainesville has two city centers: the first is the “classical” Downtown around the crossroad of Main Street (running from north to south) and University Avenue (from east to west). The second is Midtown, about 1 mile west of Downtown along University Avenue. Numerous bars, night clubs and restaurants are located in both centers. The main difference is, that the city administration is located in Downtown, whereas Midtown gained its importance by the close proximity to the UF campus. Between Downtown and Midtown exists an abandoned area. The city seeks to close this gap with the Innovation Hub (iHub), an incubator for entrepreneurs supported by funding from the city, UF, and Florida state.

Since the construction of the Interstate 75 (I-75) in the west of Gainesville, the development of commercial and residential areas went towards west. Numerous apartment complexes were built on the axis between UF-campus and I-75. Likewise, space intensive commercial areas like the Oak Mall or the Butler Plaza were developed with a strong link towards the I-75. The north of Gainesville can be characterized as a suburban area dominated by single-family houses and dispersive located commercial entities.

With the construction of the UF and the I-75, the focus of development went in direction west from downtown. Since then, East Gainesville has to cope with socioeconomic challenges. East Gainesville’s population has a share of 43 % whites and also 43 % blacks. Whereas in all Alachua County the mix is 70 % white and 19 % black (EGCP; p. 4). In the same time, it is a rather dangerous area with 40% reported crimes from Gainesville, but only 20 % of the total population (EGCP; p. 7). The unemployment rate is not significantly higher, but it is mentioned that the majority of jobs does not require high qualification. That has an impact on the salary of the East Gainesville inhabitants (ibid).
Figure 6: Land annexation in Gainesville by year.

Annexation History

Year of Annexation


Note: This is a generalized map and should not be used for parcel specific information. For precise boundaries, refer to the legal descriptions in the appropriate annexation ordinances.

Prepared by Planning & Development Services, 3/12

Source: Gainesville GIS Map Library.
Enclosed by the city boundary in the north east, that is where the Gainesville Regional Airport (GNV) is located. The concept of the Airfront from BLANTON (2004) is actually based on the experience of the author as a member of the Renaissance Planning Group, which was in charge of creating the Plan East Gainesville. In the Plan East Gainesville, the planners propose to the city government to focus economic development towards the airport (EGCP; p. 12). This shows already, and it will be more obvious after this chapter, that Gainesville’s city center is between the two poles of traffic infrastructure. While the development went west (towards the I-75) since the 1960’s, the new trend could go to the east (towards GNV).

2.3 Relevant Segments of Gainesville’s Economy for Research Question

In analyzing the influence of the airport to the city, it is necessary to focus on certain aspects of the city’s economy. Those are the ones described in the Airport-City concept. In addition, knowledge-intensive services should be part of the study, as a key factor of urban development in high-developed service oriented societies.

In projecting the concepts of Airport-City and Aerotropolis on small regional airport, it will become obvious, that those concepts were developed for major airports. Consequently, a ‘real’ Airport-City does not exist, but some features of it can be found. For example some typical services like car rental companies and parking lots. But still, the terminal is the only building so far. Entertainment and accommodation facilities do not exist next to the airport. And it does not seem that they are required. A basic touristic infrastructure can be found around the UF campus, which indicates the main purpose for visitors in Gainesville already. Other airport-related businesses which are aviation relevant, exist in the west of the runways. Here is the University Air Service (responsible for fueling, charter flights, pilot training) and a maintenance facility for Silver Air (see also chapter 3). Both are inside the airport fence.

Outside the fence is the Airport Industry Park (AIP), and the companies located here could belong to the airport-oriented businesses. To remind the definition, those are activities located there because of (1) the image of the airport region, (2) already established businesses, and (3) excellent landside accessibility. In the AIP there are basically two kinds of companies: the first ones are technical and chemical industry plants (“Heat Pipe Technologies”, “Fabco-Air”, “SiVance” – now “Milliken”).

The second category are producers and distributers of food (“Florida Food Group”, “Kraft Food”) and clothing distributers (“Nordstrom”). To what extent air-freight is relevant for their transportation demands remains uncertain. There are some hints indicating a predominantly truck-oriented transportation system of those firms. Regarding the three point definition of airport-oriented activities, the image of the airport region is rather less important than low regulations for air- and noise pollution. It can also be questioned, that the companies searching for proximity to competitors, at least for the first firms of the industrial category. Only the food producers might look for clustering effects. But again, the number of companies and their size is pretty small. And for the third dimension of the definition, land accessibility is optimal next to the I-75 on the opposite of town. High land values next to the I-75 and the declaration of an Enterprise Zone around the airport might be explaining factors for the settlement here. All together, airport-oriented activities in the AIP exist to a small extent, but not entirely in the meaning of the Airport-City theory.

Knowledge-intensive services have mostly a strong link to the UF and Shands Hospital. So that a lot of R&D activities are in the medical segment. Other observed activities of knowledge-intensive service providers are in the segment of consultancy, especially related to law and environmental. The location of them is quite dispersive, but some trends can be identified. Numerous companies are found for example in the northern parts and along Waldo Road towards the airport, and also in the direction to the I-75 along Archer Road. However, there exist two incubators for new entrepreneurs in Gainesville. The iHub was already mentioned above, and the second one is Gainesville Technology Enterprise Center (GTEC) in East Gainesville. GTEC is also heavily linked with the UF. Beyond that, both incubators have specific tasks for the urban development. The iHub is designed to fill the gap between Midtown and Downtown. And GTEC should elevate the socioeconomic level in East Gainesville.

Those incubators are important for this research project, because young entrepreneurs are expected to have long-range personal networks, and they have reflationary dynamics of growth. That is why air transportation might be a crucial factor. On the other hand, they are biased in some aspects: firstly, because the incubators are strongly related to the UF, it will be also the most important reason for those entrepreneurs to settle here. Secondly, even though young entrepreneurs have long-range personal networks, the business networks need to build in the early phase of establishing. So if they really use and need air transportation can be questioned.
2.4 Patterns of Property Values

In common theories about airport precincts, the land value around airports is estimated very high (see GÜLLER & GÜLLER and KASARDA, especially TOMKINS et. al. 1998). These theories were all developed on major international airports, which attract multiple businesses. In the study of Tomkins et al (1998) for Manchester International Airport (UK), the most valuable housing dwellings were the once with the smallest distance to Manchester Airport, even if they have to cope with highest noise levels. Good access to transportation facilities is more important in this example (ibid.).

If these theories apply on small airports too, the estimated value of parcels should be very high in close proximity to the airport. With the help of a data-set from 2010, where the Just Value of every parcel in Alachua County is available, the hot spot of residential land-value could be calculated (data from FGDL). After putting the Just Value of the properties with residential use (also vacant residential use) in relation to the living area, the land value became comparable. Afterwards a hot-spot analyses was done using the Getis-Ord Gi* statistic with a Inverse Distance Method and the Euclidian Distance between the parcels. This method is helpful to find hot-spots (or cold-spots), where high z-scores of a variable tend to cluster (for further explanations see ESRI developer network). Red areas have a high housing value and their neighbors have high values, too. For blue areas it is the opposite case.

The result of this analysis verifies the previously written observations. Hot-spots are identified in north of UF and slightly in the east of the campus. Another minor hot-spot can be located in the North East District next to Downtown. All three hot-spots have an inner-city location and are very close to Midtown or Downtown.

Cold-spots are identified in East Gainesville and next to the I-75. The area from Downtown towards the airport is characterized by low value housing. And the closer the distance to the airport the fewer is the residential use. These results are in opposition to the findings of Tomkins et al (1998), but not to aspects of the Airport-City and Aerotropolis theory. It emphasizes on the one hand the attractiveness of the inner-city in Gainesville for residential use. Short average commuting times of only 16.2 minutes in Gainesville supports this finding. And on the other hand, the results show that the airport area is attractive for commercial use.

Definition Just Value: Rule 12D-1.002(2), Florida Administrative Code: “The price at which a property, if offered for sale in the open market, with a reasonable time for the seller to find a purchaser, would transfer for cash or its equivalent, under prevailing market conditions between parties who have knowledge of the uses to which the property may be put, both seeking to maximize their gains and neither being in a position to take advantage of the exigencies of the other.” (The Florida Real Property Appraisal Guidelines 2002)
Figure 7: Map of hot-spot analysis.

Hot-Spot Analysis (Getis-Ord Gi*) of Property Values of Residential Use in Gainesville, FL

Legend

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Source: Florida Geographic Data Library www.fgdl.org
Map: Fabian Zepezauer
3. Aviation in Gainesville – Introduction of Gainesville Regional Airport (GNV)

Gainesville Regional Airport (GNV) is categorized by the Federal Aviation Administration (FAA) as a primary non-hub airport and offers commercial services to Atlanta (ATL) with Atlantic Southeast Airlines (regional carrier for Delta Connection), to Miami (MIA) with American Eagle (regional carrier of American Airlines), and to Charlotte North Carolina (CLT) with Mesa Airlines (regional carrier for US Airways). In April 2012, a fourth carrier started its service from GNV to Key West (EYW) via Tampa (TPA), to Atlanta (ATL), to Orlando (MCO), and to Fort Lauderdale (FLL). The carrier is called Silver Airways and offers flights in code sharing with United Airlines. Silver Airways is an exception in many ways for GNV: On the one hand, they operate with turboprop engines, while the other carriers use regional jets. On the other hand, they offer several destinations. And last but not least, this is the only intra-regional carrier, whereas the others only fly to their nearest major hub-airport. A strong reason for Silver Airways to include GNV into their routes was a state-of-the-art and vacant maintenance facility (GNV-Press Release 01/20/12).

In 2012 an amount of 388,797 passengers flew from and to GNV. Caused by the financial crisis in 2008/09, the number of passengers per year (PAX) increased to the level of 2004, but recovered pretty fast and is growing again. A load factor of slightly over 80% indicates that flying from/to GNV is profitable for the Airlines. Only Silver Airways as a new service provider at GNV suffers with load factors of under 50%.

**Figure 8: Yearly passengers and load factors of commercial airplanes at GNV 2003-2012.**

*Source: Own calculation using FAA data.*
By analyzing the total number of flights, it becomes visible, that commercial air services has a rather minor part of the plane movements at GNV. The majority of movements were made by general aviation (GA). These are private jets, flight school, planes for aerial photography and many others. Detailed data about GA are not available. Like Alan Penksa (CEO of GNV) explained to me, the purpose of most private jets is to leave no trails. So GA data are treated very confident.

![Figure 9: Airport operation by different plane types.](image)

*Source: Own calculation using FAA data.*

The airport is located in the north-east of Gainesville and is on land owned by the City. In charge of overseeing the airport management is the Gainesville-Alachua County Regional Airport Authority (GACRAA). It consists of members from the city, the county and the state and meets monthly for strategical planning. Current projects are a new access road to the airport, because the recent one follows several penitentiaries. Another project of the airport is the Road Warrior Program. It is a fidelity program which awards passengers choosing GNV as start point of their travel. This comes along with a buy-local campaign – here it is called “fly-local” – to engage business travelers from Gainesville to support their own community.
In a study from Florida Department of Transportation (FDOT a) from 2010, the economic impact from GNV was measured. Including indirect and multiplier effects, the total amount of employees is 2,391 with a total payroll of about $73 million USD (ibid.). The total economic activity is calculated with $ 231 million USD (ibid.) In comparison with Melbourne International Airport (MLB) in southeast Florida with similar enplaned passengers per year, the total effect seems pretty low. MLB has an overall effect of approx. $1,151 million USD (FDOT b). But it needs to be mentioned that MLB supports a Foreign Trade Zone and an industrial/business park. It seems rather unreasonable to compare these total different economic environments, but it illustrates the economic potential of smaller airports. Additionally, it raises awareness for presumptions about the economic impact only based on passenger numbers.

4. Results of Interviews

In the following segment I would like to present the results of the interviews and questionnaires hold in Gainesville regarding to the impact of GNV on the economy in Gainesville. A Questionnaire was send to entrepreneurs in the two incubators, the companies in the AIP, and consultancies spread disperse over Gainesville. The poor respond rate does not allow any statistical inference. Nevertheless, the respondents are useful to receive a first impression of important location factors and the “relationship” to the airport.

After introducing my research project to different people from Gainesville, the first reaction was related to the small size and the few direct connections of the airport. The same reaction came also from the interviewed entrepreneurs, who all criticized the lack of direct connections. On the contrary, GNV’s CEO Alan Penksa said, due to fast connections to the hubs, every possible destination can be reached very easily. Still, changeovers are seen as negative and time-consuming by the interviewees. It is important to consider the perception of the passengers regarding the convenience of using the airport, because it has a direct impact on the decision to fly from Gainesville or not. Another very important aspect is the ticket price. Most of the interviewees mentioned too expensive tickets. The airport management already reacted on this well known critic and implied a cost-calculator as a marketing tool on their webpage. In this way, they want to show the customers the real costs they have to face if they go to the next bigger airports (Jacksonville, Orlando or Tampa).
Regarding the question, if the entrepreneurs have the feeling that GNV is helping them to develop their business, the answer was mostly negative. The airport is not seen to boost economic development, but nevertheless the existence of GNV was seen positive. They also do not look for a location close to the airport, and the statement “I do not need to be close to the airport, because other location parameters are more important for me and I can reach the airport in a short time“ was consistently evaluated positive.

Congruent to the general economic structure in Gainesville, the existence of the UF was an important reason to locate their business at the present location for the majority of entrepreneurs. The highest rates of the location factors received ‘quality of life’. Possibly caused by the natural environment (climate, landscape) and man-made environment with (for american standard) dense urban patterns, short commuting times, and lifestyle amenities (restaurants, bars).

The overall impression I received from the entrepreneurs leads me to the conclusion, that personal reasons are very important. In second position comes the UF as the most important infrastructural reason. Transportation does not seem to be as important as presumed. Neither is the tendency to cluster, all interviewees neglected the question if they choose their current location to be close to other competitors.

In the end, the airport could be important for their further development, but only if the airport accommodates the demand of the passengers for cheaper tickets and more direct flights. Otherwise, a different airport will be chosen, even though it includes a longer ride with the car. Rising passenger figures and a growing flight-network at GNV indicates, that the airport management and the airlines understood the situation. But no evidence could be found that GNV implied directly the location of companies in Gainesville. Following the observations from MUKKALA&TERVO (2012) in Europe, GNV seems to facilitates the economic development of Gainesville as a small city in a core region.

The interview with Erik Bredfeldt, director of Planning and Development Services Department for the City of Gainesville, showed the awareness of the city regarding to dynamic growth of airport precincts. Even though they do not follow one of the mentioned theories, the Plan East Gainesville, the further development of the Airport Industry Park, and the will to change the institutional (penitentiaries) land use near the airport indicates this. The airport plays an important part for Gainesville further development in general, and especially for the socioeconomic development of East Gainesville.
5. Conclusion

The first chapter illustrated the economic significance of airports these days. They play an important part in urban and economic development for cities and regions. The question about causality came up in recent studies, as it turned out to be important for this research project. Even though first results were presented, further research is necessary about the causality and impact of small airports, and the categorial definition of ‘Regional Airport’ as well.

While taking a close look at the City of Gainesville and its economy, it became clear that the University of Florida (UF) dominates the ancient, recent and further development. The UF offers structural advantages to Gainesville. Because of the UF, Gainesville is attractive for knowledge-intensive services, especially for R&D. This potential is actively supported by the city authorities.

The housing market is also affected by the UF and the I-75, but no evidence was found that proximity to the airport influences the value of the residential housing. Because of the small size of the city, good accessibility towards the airport is given almost everywhere in Gainesville.

A close look at the Gainesville Regional Airport (GNV) pointed out that the airport is growing. The growth is happening regarding to passengers, destinations, services provided, and physically with improvements in infrastructure (access road, car rental branch).

With the help of the interviews it was shown, that more distant airports requiring longer driving times but offering more direct flights, compete directly with GNV. On the other hand, the entrepreneurs would like to use GNV more often, if the tickets are cheaper and more destinations are offered. In general, the city supports the development next to the airport and also in the whole corridor. Based on these observations and general catalytic effects of airports, GNV facilitates economic development in Gainesville.

My overall conclusion is, that in opposition to the presented theories in the beginning, it is assumed that regional airports facilitate economic development in non-peripheral regions, equally to the results of MUKKALA & TERVO (2012). However, the city administration is aware of potential impacts and fertilizing effects on the city’s economy and supports further development projects. As a fast transportation facility, GNV is an important location factor for companies which are attracted by the UF and the urban qualities of Gainesville.
6. Sources

Literature:


FDOT b - Florida Department of Transportation (2010): The Economic Impact of Melbourne International Airport (MLB). [http://www.dot.state.fl.us/aviation/pdfs/Melbourne%2520Int.pdf](http://www.dot.state.fl.us/aviation/pdfs/Melbourne%2520Int.pdf) Retrieved 02/14/2012.


Figures:


Gainesville GIS Map Library: http://www.cityofgainesville.org/GOVERNMENT/CityDepartmentsNZ/PlanningDepartment/MapLibrary/tabid/259/Default.aspx
