

**The importance of air transportation for the  
regional economy of Mikkeli, Savonlinna and  
Varkaus**

**Final Report**

**July 31<sup>st</sup> 2003**





## *Acknowledgements*

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## *Suomenkielinen tiivistelmä*

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Mikkelin, Savonlinnan ja Varkauden lentokentät kärsivät alhaisista matkustajaluvuista ja kannattamattomuus uhkaa lentoliikenteen jatkumista näille kentille. Mahdollinen ratkaisu ongelmaan olisi ns. julkisen palvelun velvoite –statuksen hakeminen. Tämä tarkoittaa sitä, että Suomen viranomaiset voisivat rajoittaa reitin lentämisen vain yhdelle lentoyhtiölle, jonka operationaalisia menetyksiä valtio tukisi taloudellisesti. Julkisen palvelun velvoite statusta voidaan hakea Euroopan Unionin säädöksen 2408/92 mukaan ainoastaan silloin, kun lentoyhteys pidetään erityisen tärkeänä alueen taloudellisen kehittymisen kannalta. Joensuun yliopiston Savonlinnan koulutus- ja kehittämiskeskuksen toteuttaman tutkimuksen päätarkoituksena olikin selvittää kuinka tärkeä lentoyhteys Helsingin, Mikkelin, Savonlinnan ja Varkauden välillä on Etelä-Savon aluetaloudelle. Asiaa tutkittiin lähettämällä kysely Mikkelin, Savonlinnan ja Varkauden alueen yrityksille keväällä 2003.

Palautettujen kyselylomakkeiden perusteella voidaan sanoa, että useat yritykset käyttävät lentoyhteys. Mikkelissä noin 40% vastaajista käyttää lentoyhteys, Varkaudessa 75% ja Savonlinnassa jopa 94%. Yritykset, jotka työllistävät yli 100 henkeä, käyttävät lentoyhteys useammin kuin pienet yritykset. Myös yritykset, jotka ovat joko kansallisesti tai kansainvälisesti suuntautuneita lentävät useammin kuin muut. Tutkimuksen tärkein tulos on, että suurin osa niistä yrityksistä, jotka käyttävät lentoyhteys, pitävät sitä myös erittäin tärkeänä yritykselleen. Mikkelissä noin 60% niistä vastaajista, jotka käyttävät lentoyhteys, pitävät sitä tärkeänä yritykselleen. Savonlinnassa ja Varkaudessa tämä osuus oli molemmissa noin 86%. Monet yrityksistä vastasivat, että lentoyhteyden menettäminen vaikuttaisi yrityksen toimintaan. Tämän vuoksi lentoliikennettä tulisikin tukea julkisin varoin, jotta lentopalveluiden perustaso säilyisi alueen lentokentillä. Ainoa tapa tukea lentoyhtiöitä suoraan on hakea aiemmin mainittua julkisen palvelun velvoitteen statusta Etelä-Savon lentoreiteille.

Palautettujen kyselyjen analyysi kertoi myös siitä, miksi lentoyhteys käytetään. Pääsyy oli matkustaa Helsinkiin tapaamiseen, seminaariin tms. Lentoja Mikkelistä, Varkaudesta ja Savonlinnasta käytetään usein myös liittymälentona jatkettaessa toisella lennolla Helsinki-Vantaan lentoasemalta. Nykyiset lentoajat eivät kuitenkaan tyydyttäneet jatkolennoille matkustavia. Kun julkisen palvelun velvoite -statusta haetaan, tulisikin samalla tehdä

jatkotutkimus alueen yritysten erityistarpeista lentoliikenteen suhteen. Tämän informaation avulla voitaisiin suunnitella julkisen palvelun velvoitteen minimivaatimukset. Jos aikataulut sopisivat paremmin yritysten tarpeisiin, voisi se lisätä lentoyhteyden käyttöä ja siten myös vähentää julkisen tuen tarvetta. Toinen tärkeä lentämiseen vaikuttava asia on lentolipun hinta. Useat niistä yrityksistä, jotka eivät lentäneet, sanoivat pääsyyn siihen olevan lentolipun kalliin hinnan. Kun julkisen palvelun velvoitteen operationaalisia minimivaatimuksia mietitään, tulisi myös lippujen hinta ottaa huomioon.

Tutkimus paljastaa Mikkelin, Savonlinnan ja Varkauden lentoreiteillä olevan paljon potentiaalia tulevaisuudessa. Tutkimuksesta käy myös ilmi, että ne ovat sopivia tuettaviksi julkisen palvelun velvoite –statuksen alla. Julkisen palvelun velvoitesopimukset voidaan kuitenkin tehdä vain kolmeksi vuodeksi kerrallaan, minkä jälkeen tilanne on arvioitava uudelleen. Paikallisten, alueellisten ja kansallisten viranomaisten olisikin käytettävä tuo kolme vuotta lentoliikenteen käyttöasteen kohottamiseen sekä myös muun liikenteen kehittämiseen, jotta se voisi kilpailla lentoliikenteen kanssa matkustusajan ja saavutettavuuden suhteen. Näin lentoliikenteen tukemista tulevaisuudessa voitaisiin asteittain vähentää.

## *Summary in English*

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The airports of Mikkeli, Savonlinna and Varkaus suffer from low numbers of passengers. Unprofitability threatens the continuation of air transportation to these destinations. A possible solution for this problem is the application of a Public Service Obligation status to these air routes. This means the Finnish authorities can restrict the air route to one airline only and reimburse operational losses for the airline. PSO status can be applied under European Union regulation 2408/92 only when the air link is considered vital for the economic development of the region.

Since a PSO status can only be applied to an air route if this route is considered to be vital for the local economy, the main goal of this research was to find out how important the air services between Mikkeli, Savonlinna, Varkaus and Helsinki are for the local economies in these regions. Therefore a questionnaire was held among companies in these three regions. Analysis of the returned questionnaires showed that many companies are using the air connections. In Mikkeli around 40% of the respondents is using the air services. In Varkaus this percentage is 75% and in Savonlinna even 94%. Companies that employ over 100 people are more likely to use the air services than smaller companies. Also companies that are nationally or internationally oriented use the air services more frequently than others. The most important result of this research is that most companies that are using the air services consider those to be important for their company. In Mikkeli around 60% of the respondents who are using the air connections consider them to be important for their company, whereas in Savonlinna and Varkaus this percentage is approximately 86%. Many companies indicate that their operations will be influenced if the air connections are lost in the future. Therefore, public investments should be made to continue flights and to secure a basic level of air services to the regions' airports. The only way to directly support the airline is by applying a PSO status to the air routes.

The analysis of the returned questionnaires also gave insights into the purpose for which companies use the air connections. The main reason for flying is to go to Helsinki for a meeting, seminar, etc. The flights from Mikkeli, Savonlinna and Varkaus are also often used to fly to Helsinki and transfer to another flight at Helsinki-Vantaa airport. The current timetables are not satisfying to the air connection users. Therefore, when a PSO

application process will be started, further research has to be done on the specific transportation needs of the local companies. Information gathered in such a research should be used to draw up the minimum operation requirements of the Public Service Obligation. If the timetables are better adjusted to the needs of the local businesses, this can increase the use of the air services and therewith reduce the amount of public money needed to subsidize the air connections. Another important aspect is the ticket prices. Many companies who are currently not flying mention the high ticket prices as the main reason for it. When setting the minimum operation requirements for the PSO application, ticket prices have to be taken into account.

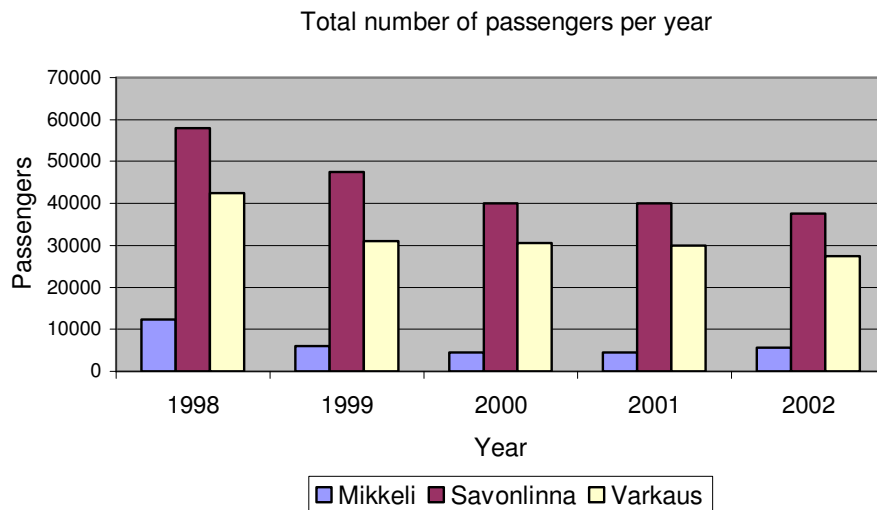
This research shows that there is a lot of potential for the air routes to and from Mikkeli, Savonlinna and Varkaus and that they are certainly suitable for public investment by a PSO application. However, the PSO contracts can only be signed for up to 3 years, after which the situation has to be reviewed. Those three years should be used by local, regional and national authorities to develop a successful policy to increase the use of the air connections or to further develop other modes of transportation to become competitive to the air services in regard to travel time and accessibility. If such policy is developed successfully, the involvement of public money in the provision of air services can be gradually reduced.



## *Introduction*

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South-Savo it has a high density of commercial airports. The airports of Mikkeli, Savonlinna and Varkaus are located within a 100 km distance of each other. All three airports are served by the Swedish commuter airline Golden Air, which operates flights from these airports to Helsinki. Statistics (see Figure 1) show that in recent years the airports have suffered from very low passenger numbers. The low numbers of passengers have caused an operational problem for the airline because the routes are unprofitable. This is mainly true for operations to and from the cities of Mikkeli and Savonlinna.



*Figure 1. Passenger Statistics*      *Source: Ilmalulaitos/City of Mikkeli (2003)*

In the last few months the local newspapers have published a number of articles on the possibility that Golden Air will stop operations on Savonlinna and Mikkeli due to non-profitability. Municipalities have intervened by supplying financial support for Golden Air. Due to European Union regulations it is not possible to give such subsidies. This means that the current situation is in breach with EU rules. To assure scheduled air traffic to the region in the future, another way of financing the services might be necessary.

This research aims to provide some insights into the ties between local businesses and the air connections to Helsinki. The main research question is: ‘what is the importance of

the air connection between Mikkeli, Savonlinna, Varkaus and Helsinki for the local and regional economies.’

In the first chapter of this report, the European regulations regarding financing air traffic to remote and developing destinations is explained. The chapter explains the history of regulation and deregulation of the European aviation market, as well as the European Union Public Service Obligation regulations and the way they are applied in other European countries. The second chapter deals with the link between infrastructure and regional development in general and the link between air transportation and regional development in particular. In chapter 3 the research outlines and objectives are presented, as well as the characteristics of the respondents. Afterwards the results of the analysis of the data are presented in chapter 4. In chapter 5 the data presented in chapter 4 is used to discuss the future of air transportation in the Etelä Savo region, after which the conclusions are summarized in chapter 6.

The first two chapters of this report have been published before as a separate report of this research project (Report 1. A review of EU regulations regarding subsidized air traffic and the importance of accessibility for regional economies. May 18<sup>th</sup> 2003.). It is however important to see the final results of this research project in the light of the information given in that report and that is why these two chapters are included in this final report as well.

# *Chapter 1*

## *European Aviation Regulations*

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### *1.1 The aviation sector – A history of regulation and deregulation*

In the past, the aviation sector has been under strict control of state governments. A fear for market failure, the importance of aviation for the national airplane industries, as well as prestige and nationalism, resulted in numerous state regulations on air transport. In the mid-1970's the view on economic regulation by governments changed, this mainly due to a restored trust in free markets and competition (Button et al., 1998). This led to the deregulation of the American aviation market by the adoption of the "Airline Deregulation Act" in 1978. Great governmental influence on the economy did not fit in the new role of the government anymore. State influence on the aviation sector was diminished to ensure free access to the market, and with that, a greater efficiency and competition in the aviation sector (Graham, 1995). At first this deregulation of the American aviation market led to the desired result. A lot of new air carriers were established, mainly flying shorter regional routes. Though, in the years that followed the new airlines suffered from major financial difficulties, which eventually resulted in a renewed ascendancy of the older and bigger air carriers (Goetz et al., 1997).

The American aviation market was deregulated in a very rapid way. This however was not the case for the European aviation market (Burghouwt, 1998). The deregulation of the European market started with the adoption of the first package of measures in 1987. These measures included for example a limited possibility for governments to influence ticket prices. A second wave of measures was imposed on the European Union member states in 1990. Finally in September 1996 Euro commissioner Neil Kinnock, announced the completion of the deregulation of the European aviation market in 1997 (Kinnock, 1996). With the adoption of all these new measures, all air routes in the Union were now accessible for all air carriers in possession of a 'Community Air Transport Operators License', which basically means all air carriers in the European Union. The aviation market in Europe functions as a single market where all carriers registered in the European Union are equally treated.

Before the liberalisation of the aviation market in Europe was completed, a high level of state intervention characterized the air transport sector. After the deregulation state aid is regarded as a serious disruption of normal competitive forces and therefore prohibited by the EU Treaty (European Communities, 2000). Of course this ban also applies to state aid to airlines and therewith it lies at the base of the problems with air transportation to Mikkeli, Savonlinna and Varkaus. The support the Finnish state offered to air carrier Golden Air to provide services to the airports mentioned above is considered to be in breach with the European Union competition regulations (see European Union 94/C 350/07).

### ***1.2 Public Service Obligation***

After the introduction of the second package of measures for deregulation, some member states of the European Union were concerned by the lack of adequate services to some isolated and non-profitable destinations (Skreikes, 2003). The main concern was that airlines would stop operations on isolated and non-profitable destinations because the deregulation of the aviation market forced the airlines to operate in an economically viable way. To deal with this concern, the third package of measures included a few exceptions to the ban on state aid to airlines. Article 4 of the Council Regulation (EEC) No 2408/92 of 23 July 1992 on access for Community air carriers to intra-Community air routes, provides the member states with the possibility to impose a so called Public Service Obligation on certain air routes to remote locations. With a Public Service Obligation (PSO) a state can ensure an adequate air service with fixed standards of continuity, regularity, capacity and even pricing, which commercially operating airlines would never provide if they consider their commercial interest. This however only applies for scheduled air traffic to an airport serving a peripheral or development region or on a thin route to any regional airport, if such route is considered vital for the economic development of the region in which the airport is located (European Council, 1994).

Before a decision concerning the application of PSO status to an air route is taken, the authorities should take several things into account. First of all the state must assure the public interest of the air service. Besides that, the state has to take other modes of transport into account. A PSO status is not possible when other modes of transport can provide an adequate and uninterrupted service when the capacity of that service is more

than 30.000 seats per year. In the PSO agreement the state can draw up standards for adequate services to the destination. However, usually there is no airline that wants to operate these routes under the standards set in the PSO agreement, without getting financial support for it. To tackle this problem the state can make an exception to the ban on state aid to airlines. If there is no airline that wants to provide the air services in accordance to the PSO statement, then the state can limit access to that route to only one air carrier for a period of up to three years (European Council, 1994). Not only can the state restrict access to only one carrier, the state can also reimburse operational losses for the airline, which basically means that with these PSO regulations there is a legal way of financing air transport to remote destinations.

#### *The PSO Procedures*

The application of a PSO status to an air route is bound by some rules and procedures. Although this paper will not discuss the detailed procedure of the PSO application, it is important to mention the core of this procedure. A PSO status is only applicable if an air route is considered vital for the regional development of the area it serves. The member state has to take measures to ensure that any decision on application of PSO status can be reviewed effectively. Although the member state is responsible for the application of PSO status, the European Commission has the right to carry out an investigation but hardly ever uses this right. The Commission's right to carry out an investigation also applies for the way in which the airline to fly the PSO route is selected. If the member state restricts the route to one airline, this has to be done by a public tendering process. The member state has to invite all air carriers in the European Community to present an offer to the member state, which includes that financial reimbursement needed for compensation of operational losses. The rules for calculating this compensation are clearly established by the Commission. The call for bidding has to be published in the Publications of the European Communities, after which all community carriers can prepare their offer. The selecting criteria are simple; the airline that demands the lowest amount of compensation wins the contract. The contract can be signed for a maximum of 3 years, after which the situation has to be evaluated. The PSO procedures cost time. This especially is a problem because the financial problems regarding air traffic to Mikkeli, Savonlinna and Varkaus are very acute. A solution for the first few months has to be found, since the PSO status cannot be applied so quickly.

### *Application of PSO status in other European countries*

Because the European regulations on the application of the PSO status are quite vague, there are many different practices in how the status is applied. There are also differences in the motivations of member states for the application of the PSO status. Some states use the PSO to connect islands or very isolated regions (e.g. Spain, Portugal, England, Sweden), others also use it for regional development purposes (e.g. France, Germany, Ireland). Another difference between EU Member States is the governmental body that is in charge of applying PSO status. In some countries it's the local and regional authorities, in others it's a national governmental body. This paragraph will give some insights in the way Sweden, Norway and France handle the application of PSO status to their air routes.



#### *Norway*

Although Norway is not part of the European Union, European regulations regarding state aid to companies also apply to Norway, this because Norway is part of the European Economic Area (EEA). This means that Norway has become part of the European Union single market system. In Norway there are 26 airports, many of which are served under a PSO status. Most destinations served under PSO agreements in Norway were already subsidized since the 1960s, -70s and -80s, when these destinations were opened. Only few routes have been added to the PSO route network after 1997, mostly when regular commercial services were suspended, leaving the communities with an unsatisfying transport standard. The selection of air routes to be operated under a PSO agreement is strictly a political process. Some smaller research projects have been carried out for individual airports and a more extensive research has been carried out for the whole Norwegian route network (a cost benefit analyses). However, the decision to implement PSO status to certain routes remains a political one and should be seen in relation to the Norwegian transportation policies. In reply to questions from the European Commission on this matter they provide the Commission with a table of travel times and distances if other modes of transportation are used. This table shows that air transport is by far the most appropriate way of reaching remote destinations (for example in northern Norway) and with that they justify the application of PSO status.

The EU regulation 2408/92 states that a EU Member State can impose PSO status to an air route. The implementation of this European law into the Norwegian law (aviation act

of 11 June 1993, No.101), has given decision power on PSO applications to the Norwegian Ministry of Transport and Communications. Local authorities are not involved in this process. The Norwegian government has arranged tenders in groups, for more than one route at the time, to enable tendering airlines to achieve economies of scale benefits, this due to the very low number of passengers on most Norwegian PSO routes (Air Transport Group, 2002). Norwegian PSO contracts are highly regulated and contain minimum requirements regarding aircraft size, fares, frequencies, capacity and timetables.



#### *Sweden*

In Sweden there are also several air routes that are operated under PSO agreements. As is the case in Norway, most of the Swedish air routes under PSO agreement have been subsidized before. Sweden is still expanding its PSO route network. Although more routes are added to the PSO network, many routes are subsidized without a PSO agreement. In these cases the Swedish situation is very similar to the current situation of air traffic to Mikkeli and Savonlinna. The Swedish support to air traffic without a PSO agreement is considered in breach with EU regulations.

As in Norway, the Swedish national government is in charge of applying PSO status to air routes. Regional and local authorities have no decision power in this matter, although they use political means to influence the national authorities. The Swedish Riksdag has accepted a new transportation policy in June 1999, which included the installation of a new governmental agency called Rikstrafiken. Rikstrafiken is dealing with the coordination of long-term collective transport system and is in charge of application of PSO status to air routes as well (Rikstrafiken, 2003). The application of PSO status has to be seen in the light of the Swedish national transportation policies and can be considered a political decision. In the decision-making process the national transportation policy as well as the regional development policies are taken into account. Although the focus is on the political arena in the decision making process, the Swedish authorities are trying to define a model to support their decisions. The goal is to provide facts in order to be able to determine the appropriate conditions for a PSO status. Methods to see if a certain air route is eligible for a PSO status vary from a accessibility analyses to a regional impact analyses and a questionnaire survey analyses. This last one focuses on the view of the transport users, mainly local business (Holmer, 2003).

The minimum operating requirements in the Swedish PSO contracts are less decisive than is the case in Norway. For the older PSO agreements there are no requirements for capacity, nor for aircraft type or fares. The only requirement is a minimum frequency of two round-trips per weekday (Air Transport Group, 2002). The newly issued PSO agreements however, contain more operating requirements.



### *France*

Approximately half of the Public Service Obligations in Europe are in France. In recent years an extensive network of PSO routes was established to connect the French regions to the capital Paris. Two things can explain the high number of French PSO's. First of all the French authorities are more willing to intervene in free market systems, especially in the transportation sector (Air France was one of the most heavily subsidized carriers in Europe). Another reason for the high number of PSO's in France is the strong centralization tradition. France has long been focused around the Paris region, which makes it important for other regions in France to have good connections with the capital (Skreikes, 2003). An interesting detail of the French PSO network is that also some routes with a relatively high number of passengers are included in the network, even though these routes can be considered economically viable (Air Transport Group, 2002). The French PSO network also includes some international routes, which is highly unusual. The reason for this is that these PSO routes connect Europe with Strasbourg, the second seat of the European Parliament.

Local and regional authorities are in charge of applying PSO status to air routes. The decision to apply PSO status is mainly a political one, which should be seen in the light of the French centralization tradition as mentioned above. The PSO contracts include some minimum requirements regarding frequencies (usually two round trips per day). No minimum seat capacities are required. The French authorities also require certain type of aircraft to fly certain routes. Besides that there are requirements regarding timetables (Air Transport Group, 2002).

### *Decision-making powers in PSO procedures*

The given examples of PSO applications in other European countries show the difference of involvement of local and regional authorities in the decision-making



process. According to EU Regulation 2408/92, European Union Member States have the authority to impose PSO to certain air routes. This however does not mean that this authority only belongs to a national body. This clears the way for regional and local authorities to be involved in the decision-making. In general, countries with a low population density and with remote areas (for example Norway and Sweden) have given the decision-making power to authorities at a national level. In the report of the Finnish Ministry of Transport and Communication, which was published on the 17<sup>th</sup> of April this year, the working group advises a strong involvement of regional and local authorities in the PSO procedures (Liikenne- ja Viestintäministeriö, 2003). With the involvement of regional and local authorities in the decision-making process, Finland would form an exception to the general practice of PSO applications in countries like Sweden and Norway.

## *Chapter 2*

### *Regional Development and Transportation*

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In this section the development goals for the region of Etelä-Savo will be discussed. Emphasis will be placed on the European Objective I programme. This section will also include a short theoretical introduction to the relations between (air) transport and regional development.

#### *2.1 The European Union*

The European regional and structural policy aims at increasing social cohesion in the member states and at reducing disparities between the levels of development of various regions. A great part of Finland benefits from the different European programmes. The study area of this research, the regions of Mikkeli, Savonlinna and Varkaus, lie within the European Objective I programme area (figure 2.1). Two of the strategic priorities of this programme are to strengthen existing businesses and to eliminate obstacles to development, improving employment and preventing exclusion. The development of the business environment is an important objective (Ministry of the Interior, 2001a). The vision for 2007 is stated as: “The economies of the regions of Eastern Finland are internationally competitive and growing rapidly” (Ministry of the Interior, 2001b). The fourth goal of the programme is the development of the internal and external networks to improve regional competitiveness, promote the mobility of the population and to improve the efficiency of transport systems and different modes of transport. The importance of airports in this respect will be discussed below.



*Figure 2.1. Objective I Programme Area. Source: Ministry of the Interior (2003)*

#### *2.2 A changing economy*

Regional and national economies have transformed into interrelated and worldwide operating economies. With this the relation between economy, government and society

changed completely. Greater flexibility, decentralisation and the development of network relations (between different parts of one company, as well as between different companies) have been the results of these changes. Slowly a network society emerged, no longer organised around physical places on earth, but around flows of information, money and people (Castells, 1996). Companies become footloose and can locate at any place where they have access to those flows of information, money and people. This implies that connections to these flows, have become more and more important for the successful development of a region. In regard to air transport this means that the airports in Mikkeli, Savonlinna and Varkaus, provide a link with the international flow of people. Because the European Objective I programme has the goals to improve the networks in which businesses operate and promote the mobility of persons, it is important to take the role of air traffic in reaching these goals into account.

### ***2.3 Connectivity and economic development***

Although relations between infrastructure, connectivity and regional economic development are very complex, many researchers share the view that good accessibility benefits the economic development of a region (e.g. Bergman, 1996). The presence of good infrastructure and with that a good accessibility to a region can play an important part in the location decision of a company. Infrastructure is one of the location factors that a company, which is looking for a new location, is taking into account (Lambooy, 1997). In their study on locational choice of Finnish firms, Tuomo Nenonen and Hannu Littunen conclude that business managers regard good transportation connections as very important in the locational choice (Nenonen, 1994). To provide a competitive business environment the importance of connectivity and accessibility shouldn't be underestimated.

#### *Air transport and economic development*

In general airports are seen as important economic engines of the region. This is particularly true for bigger airports like Amsterdam Airport Schiphol or Frankfurt Airport. These airports create large economic spin-off effects to the surrounding area. Airports are generators of economic activity in a certain region and are therefore considered important for regional development. The situation regarding small regional or local airports is slightly different. Here the airport is not so much a generator of economic developments, but more a facilitator. The smaller airports are much less

capable of stimulating additional jobs and economic activities in their regions (Graham, 2003). In a study on the importance of air transport for economic development of Northern Ireland the Oxford Economic Forecasting (OEF/ASM, 2002) concluded that in terms of inward investment, air services do not seem to have played an important role in the locational decision-making of companies in Northern Ireland. Nevertheless, companies present in the region are making extensive use of the air services provided. Air transport is an important factor in regional economic development, but it should be seen as an enabling factor. Aviation in remoter regions itself doesn't create regional development, but it facilitates other development processes. Regional development requires transport infrastructure and air transportation is part of such infrastructure. The importance of air transportation in the regional transport infrastructure is more important in peripheral regions (Graham, 2003). Fitzpatrick and Mottram (1992) share this view. According to them, airports certainly contribute to economic development of an area, but they have mainly followed economic development rather than led it. Although airports are usually seen as very important for economic development in a region, this has to be in respect to their size. There is a sharp distinction between airports that are generating economic activity and airports that are facilitating economic activity. In general the smaller the airport, the less generating and the more facilitating it is.

As can be concluded from this chapter, there are possibilities to legally support air transportation to the airports in Etelä-Savo. The European Union regulations on state aid provide the Public Service Obligation regulations to deal with air transportation to developing and/or remote regions. The focus hereby is on importance for economic development. From the theoretical review the conclusion can be drawn that the importance of air transportation in attracting economic activity to a region is often overestimated. Often air transportation is seen as a economic generator where it, in most cases of small airports in remote regions, should be seen as a facilitator of local economic activity.

## *Chapter 3*

### *The Research Project*

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#### *3.1 Research questions*

In chapter 2 of this report, the procedures regarding the application of a Public Service Obligation status to a certain air route were discussed. The decision to apply a PSO status to an air route is based on the economic importance of the route. Therefore, the main goal of this research project is to find out what the economic importance of air transportation to and from Mikkeli, Savonlinna and Varkaus is for the local economies. To answer this question, the research focused on finding out whether businesses located in the region are locally, nationally or internationally operating and if and how they are using the air services provided from their local airfield. This resulted in the following research questions:

1. Are the local businesses using the air services from/to Mikkeli, Savonlinna and Varkaus?
2. How do they use the air services? (Is Helsinki the final destination? Do they travel somewhere else with a connecting flight? Do they invite customers to visit the company? Etc.)

In addition questions were asked on the importance of the air connections for the operations of the companies. Since the link between infrastructure and economic development is difficult to establish by calculations, the research focuses more on the opinions of the local business managers regarding this issue. This brings up additional further research questions.

3. Do business owners consider the air connection with Helsinki of vital importance to their business' operations?
4. Would a loss of air connections affect the companies' operations?
5. Would a loss of air connections be a reason to move the company in the future?

Finally, some research questions focus on the level of service currently provided by Golden Air. The answers to these questions can be used to possibly improve the service level in the future.

6. Is the current timetable convenient for your travel needs?
7. Does the ticket price influence your travel behaviour?

It is important to mention that these questions are not meant to draw up a new timetable or set a new price level. The questions are only indicative and should only be used in that way.

### 3.2 The research area

Three different airports are included in this research, namely: Mikkeli, Savonlinna and Varkaus. However, the service area of these airports goes beyond the city boundaries of Mikkeli, Savonlinna and Varkaus. Therefore the surrounding municipalities were also included in the research area. Figure 3.1 shows the area in which the research was conducted.



Figure 3.1 Research area

(Map produced by Pellervo Kokkonen)

The municipalities of Pieksämäki (including Pieksämäen mlk.), Jäppilä and Virtasalmi were assigned to the catchment area of Varkaus airport.

### **3.3 Methodology**

The goal of this research project is to provide an insight into the importance of air traffic for the regional economies of Mikkeli, Varkaus and Savonlinna. To be able to say something about the importance of air traffic for the economy, information about travel behaviour of companies and their opinion about air transportation (do the businesses in the region consider the air transportation important for their operations?) had to be gathered. This means that the research population consists of all companies registered in the regions mentioned above. The most appropriate way to gather information of such a big group of companies is by sending them a questionnaire (see appendix 1).

According to the statistics, there are currently over 7.000 businesses registered in these regions (Yritystele CD-ROM, 2003). Due to this very high number, it is not possible to include the whole population in the research. A sample had to be drawn from this large number of registered companies. For methodological reason it is preferred to draw an a-select sample from the research population. Although it seems easy to draw such sample from the list of registered companies, it proved to be rather difficult. The list consists of all kinds of companies, differing from small to large and from active to inactive. To give an insight into the importance of air traffic for businesses, it is essential to include all the major players in the regional economy. This makes it impossible to draw an a-select sample from the research population, because the risk that the main players in the regional economy are excluded from the research is too big.

With the conclusion that the list of registered companies in the region is not suitable for this research, the decision was made to include all members of the chamber of commerce in the research. The members of the chamber of commerce are usually active companies. However, local branches of big international corporations are not always members of the chamber of commerce. For the reliability of the results it is important to include also those companies in the research. Officials representing the cities in the study area were asked to mention the most important companies in the region and those were then added to the membership list of the chamber of commerce.

The problems with drawing an a-select sample from the research population influence the reliability of the results. It has to be taken into account that especially companies from the manufacturing sector and the commercial service sector are members of the

chamber of commerce. With an a-select sample it is not possible to make sure that the results of the questionnaire apply generally for the research population, so in this case all the companies are registered in the region. However, most of the main players in the regional economy of the study area are chamber members and those who are not, were added to the research group. Therefore the results of this research can be considered viable for the whole regional economy, although this cannot be confirmed by statistical calculations.

The way this sample was drawn affects the results of this research. Certain parts of the economy are excluded from the research by using the membership list of the chamber of commerce. For example, many SME's are not members of the chamber of commerce, while their use of air transportation might be significant. This also goes for small companies in the new economy sectors of ITC and technology, as well as for example teleworkers. Although all these groups are potential users of the air connections, it has not been possible to include them in this research. This has to be taken into account when interpreting the results of this study.

### 3.3 Respondents

The questionnaire was sent to 417 companies in the research area. Of those, 185 went to companies in the area around Mikkeli, 153 to the Varkaus region and 79 to the Savonlinna area. The response rates in all three areas were extremely high (figure 3.2).

Region	Sent	Returned	Response rate
Mikkeli	185	111	60,0%
Savonlinna	79	49	62,0%
Varkaus	153	81	52,9%
<i>Total</i>	<i>417</i>	<i>241</i>	<i>57,8%</i>

Figure 3.2. Response rates

To increase the response rate the chamber of commerce was asked to send out a letter to their members to pursue them to answer the questions. In addition to that a message was posted on the chamber's website. After two weeks a reminder letter was sent, which also further increased the number of returned questionnaires. A possible explanation for the slightly lower response rate in the Varkaus region can be that the chamber of commerce members there didn't receive a letter from their chamber of commerce to pursue them to answer. The high response rate alone shows the topicality of the subject and the involvement of the business community regarding the issue of air transportation.



To be able to see if certain companies are using the air connections more often than others, the questionnaire contained several questions concerning the company's characteristics. One of those characteristics is the sector in which the company operates. An overview of the number of respondents per sector is given in figure 3.3.

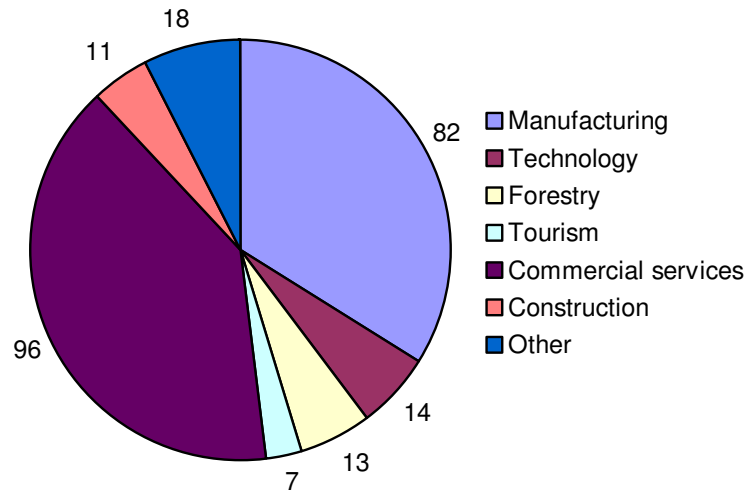


Figure 3.3. Number of respondents per sector of the economy in which their business operates.

Most respondents are operating a business in the manufacturing sector or the commercial service sector. In all the three airport areas the manufacturing and commercial service sectors are the main sectors in which companies operate. However, Savonlinna shows a little higher percentage of companies in the technology sector and a slightly lower percentage of companies in the commercial service sector.

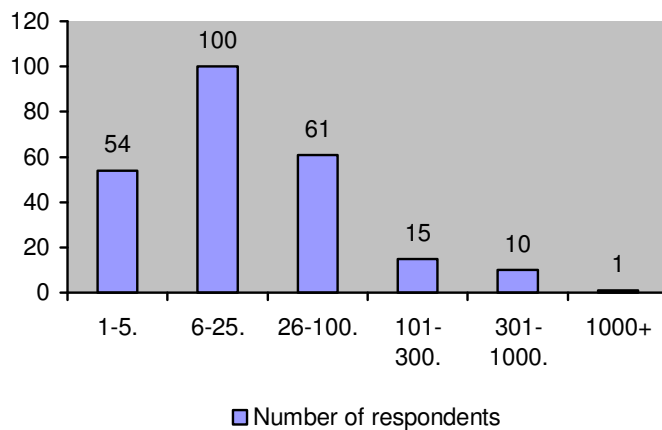


Figure 3.4. The number of employees of the respondents

varies very much among the respondents. However, most companies employ between 6

Another characteristic of the companies is the number of employees they have. This is particularly important because the local and regional governments fear job losses if the air connections are lost. The number of employees

and 100 people. Figure 3.4 shows the differentiation in company size among the respondents. Over 10% of the respondents operate a business with over 100 employees. There are 11 companies among the respondents that have more than 300 employees. These bigger companies are of special importance to the local and regional authorities, which are mainly concerned about the effects the discontinuation of air services would have on the number of jobs. The three areas show a similar distribution of companies among the different categories regarding the number of employees.

Finally the respondents are sorted by their so-called area of operation. This indicates the scale where the companies are doing business. Figure 3.5 shows an almost even distribution of respondents among the different categories. The locally oriented companies mainly serve the local

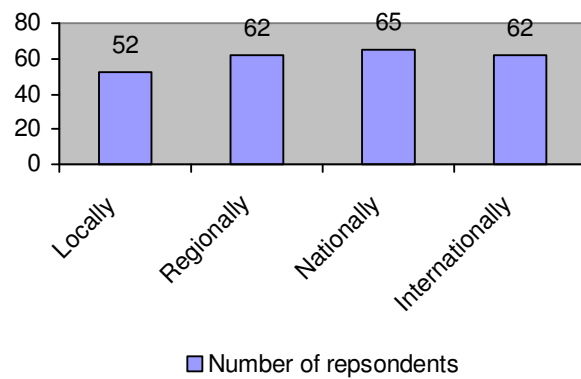


Figure 3.5. Respondents' area of operation

population, where as the regionally operating businesses have their main market in the Savo region. Nationally oriented companies have their main business in Finland and finally the internationally operating companies are doing business worldwide. Here there is a small difference between the three airport areas. In Mikkeli and Varkaus approximately 25% of the respondents are companies with a national orientation and 25% with an international orientation. In Savonlinna the percentage of national and international companies is slightly higher, with around 35% in each category.

## *Chapter 4*

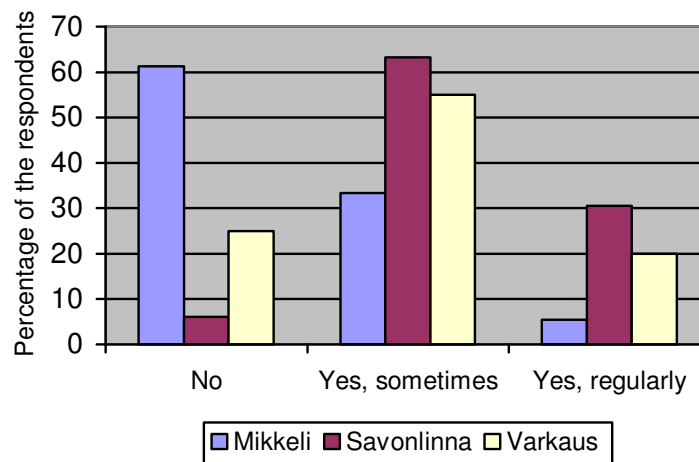
### *The Research Results*

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In this chapter the results of the questionnaire will be presented. The results are presented for the airports separately, which makes it possible to see differences and similarities between the three airport regions.

#### *4.1 The use of air transportation*

To be able to say something about the importance of air transportation for the local economy, it is first of all important to find out if companies are using the air connections or not. The answers to this question show that very many companies do actually use the air services (Figure 4.1)



*Figure 4.1. The use of air services by the respondents*

There is an interesting difference between the three airports. In Savonlinna only 6% of the respondents say they are never using the air connection. On the other hand, over 63% uses the services sometimes and almost 31% is flying regularly. Similar figures are shown for Varkaus, where 20% makes regular use of the air services and 55% does so sometimes. Only 25% indicates that the company is never using the air connection. In Mikkeli the situation is different. Over 61% of the respondents in the Mikkeli region are never using the airplane for travelling. However, over 33% indicates that they sometimes use the air connections and over 5% does so regularly, which is still a considerable number. If the numbers are added up, the conclusion is that in Mikkeli around 40% of

the companies are using air transportation, where as in Varkaus this percentage is 75% and in Savonlinna approximately 94%.

#### ***4.2 Who are flying and who are not?***

With these high numbers for the use of the air connection, it is interesting to see if there are any specific kinds of companies that are using the air connection more than others. Therefore, the answers to the question if the company is using the air connection should be linked to the characteristics of the company. Doing this shows that there is no statistical link between the sector of the economy in which the company is active and their use of air transportation. Figure 4.2 shows a cross tab of the use of air transportation and the number of employees for the three airports (the numbers indicated in the table are the actual numbers of responses per category). The figure shows that companies with a larger amount of employees are more likely to use the air connection. This is the case for all the three airports. Although the table in Figure 4.2 suggests a link between the company size (number of employees) and the use of air transportation, this cannot be confirmed statistically. Statistical analyses of the data show no correlation between the number of employees and the use of air transportation. However, a reason for this can be that the number of respondents among the companies with over 100 employees is too low to use for statistical calculations. When only looking at the cross tab of figure 4.2 the cautious conclusion can be drawn that bigger companies fly more and possibly this could be confirmed by statistical measures if the response rate among the bigger companies would have been higher.

		Does the company use the air connection?		
	Number of employees	No	Yes, sometimes	Yes, regularly
Mikkeli	1-5	20	6	0
	6-25	33	11	3
	26-100	13	12	0
	101-300	1	4	3
	301-1000	1	4	0
	1000+	0	0	0
Savonlinna	1-5	0	4	3
	6-25	3	14	4
	26-100	0	10	5
	101-300	0	2	1
	301-1000	0	1	2
	1000+	0	0	0
Varkaus	1-5	7	14	0
	6-25	8	19	5
	26-100	4	11	5
	101-300	1	0	3
	301-1000	0	0	2
	1000+	0	0	1

*Figure 4.2. Cross tabulation of the use of air connections and the number of employees.*

A similar table can be drawn for the link between the use of the air connections and the company's area of operation (Figure 4.3). The numbers presented in that table show that the companies that are operating on a higher scale, travel more often by airplane. This is especially the case in Savonlinna and Varkaus, where all the internationally oriented companies that responded to the questionnaire say they are using the air connections sometimes or even regularly. In Mikkeli this link between operation area and the use of the air connection is not so strong as in the other two areas. However, also in Mikkeli the general trend is that companies that are operating on a higher scale are flying more often. Although statistical calculations show that there is a link between the operation area of the company and the use of air transportation, this link is weak. This can be explained by the low number of respondents in each category. If the sample was bigger and there were more respondents in the different categories, it is likely that the statistical calculations would have shown a stronger link between the use of the air connections and the company's operation area.

		Does the company use the air connection?		
	Area of operation	No	Yes, sometimes	Yes, regularly
Mikkeli	Locally	19	4	1
	Regionally	21	14	0
	Nationally	18	7	1
	Internationally	10	12	4
Savonlinna	Locally	2	3	1
	Regionally	0	7	1
	Nationally	1	12	4
	Internationally	0	9	9
Varkaus	Locally	8	10	4
	Regionally	5	11	3
	Nationally	7	12	2
	Internationally	0	11	7

*Figure 4.3. Cross tabulation of the use of air connections and the respondents' operating area.*

When looking at the characteristics of the companies and their use of the air connections, the conclusion can be drawn that the sector in which the company operates does not influence their use of air transportation. However, there are strong indications that the size of the company, in regard to the number of employees, does have an effect. Companies with more employees seem to be using the air connections more often than companies with fewer employees. Also the area in which the company does its business seems to affect the use of air transportation. Companies with an orientation on a national or an international scale tend to fly more often than those that focus on local and regional markets.

#### ***4.3 For what purpose is the air connection used?***

In this paragraph the focus will be on the companies who are using the air connection. For future improvements of the air services, it is important to know what the customers are using the connections for. Therefore, the questionnaire included a question where companies could indicate the reasons for using the airplane. Figure 4.4 shows the answers given to that question.

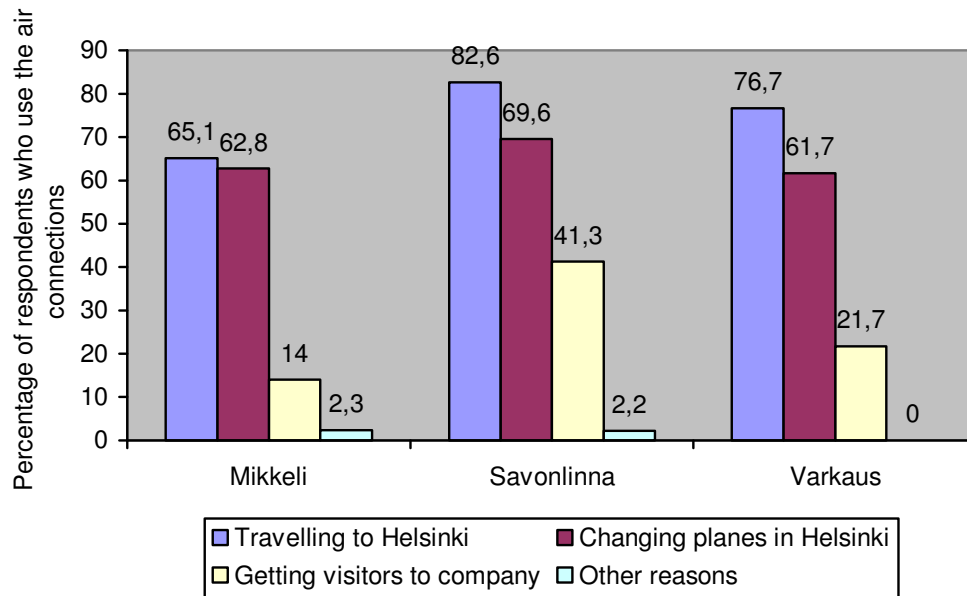


Figure 4.4. Reasons for using the air connections.

Of the respondents in the Mikkeli area that indicated that they are using the air connections, over 65% is using the air connections with Helsinki to fly to the capital for meetings, seminars, etc. For these trips Helsinki is the final destination. Another very important reason for using the air connection between Mikkeli and Helsinki is to change planes at Helsinki Vantaa airport, to fly on to another destination within Finland or abroad. The timetable of flights to and from Mikkeli is clearly adjusted to the transfer passengers; however, figure 4.4 shows that companies also use the air connection for trips where Helsinki is the final destination. Of lesser importance is the use of flights for getting people to visit the company's location in Mikkeli, only 14% of the users of air transportation are using it for this purpose. An explanation for this can be found in the current timetables, which are not suitable for this purpose.

In Savonlinna the situation is different. The flight connections are much more often used for flying to Helsinki (as a final destination) than is the case in Mikkeli. On the other hand, the use of flights for changing planes in Helsinki does not differ much from the figures in Mikkeli. Another difference with Mikkeli is the use of the air connection for flying in visitors to the company. Over 41% of the companies in Savonlinna that indicated that they are using the air services, are using it also for bringing guests to their location in Savonlinna.

The situation in Varkaus is comparable to the one in Savonlinna. Many companies use the air connections for flying to Helsinki for their meetings, etc. and connections are also often used for changing planes at Helsinki Vantaa airport. With 21,7% the use of the air services for getting visitors to the Varkaus location is also significantly high.

Conclusions from this question can be that the air connections are mainly used for two things, flying to Helsinki as the final destination, or changing planes in Helsinki to fly to another destination. It is widely believed that the flights to and from Mikkeli are mostly used for changing planes in Helsinki to fly on to another destination. This survey however, shows that also the visits to Helsinki as a final destination are of importance for the local businesses.

#### 4.4 Are the air connections important for local companies?

The results presented above suggest that, with such high percentages of companies using the air connections, the air connections are important to the business community. As stated in the theoretical part of this report, it is very difficult to measure the importance of the air connections for the local economy. Although the preceding figures can indicate the importance of air transportation for the local economy, companies that are using the air connections were also asked directly if they consider the air services important for their business. Figure 4.5 shows the results of that question.

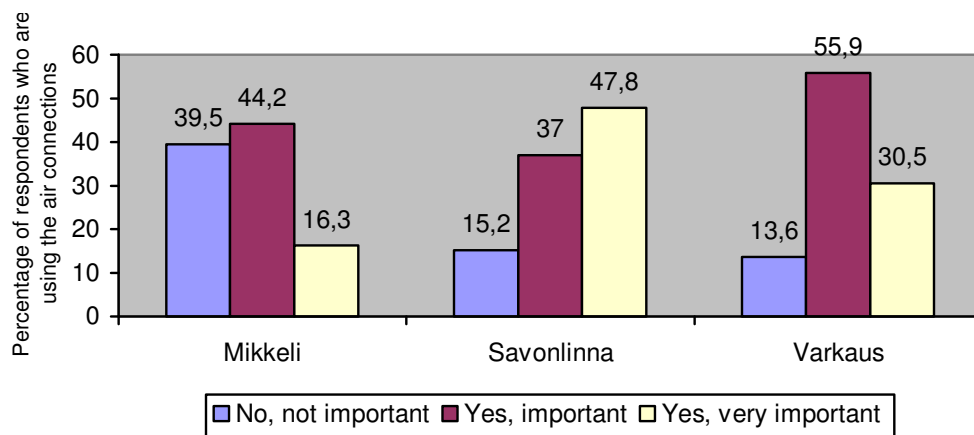


Figure 4.5. Do the current users of the air connections consider them important for their company's operations?

In Savonlinna almost 85% of the respondents that are using the air transportation indicate that they consider the air services to be important or even very important for their company. In Varkaus this percentage is even higher, with over 86%. However, in



Varkaus there are fewer companies that consider the connections to be very important, and more that consider them to be important. The situation in Mikkeli is very different from the other two areas. The amount of companies that consider the air connections offered from Mikkeli airport as being very important for their company is significantly lower than in the other two cities. However, still over 16% of the users of the air services consider them to be very important for the company, where as over 44% believe the connections are important.

The analysis of the returned questionnaires shows that the more employees a company has, the more often a company considers the air connections to be important or very important. This is especially the case in Savonlinna and Varkaus, where all companies with over 300 employees indicate that the air services offered from these two airports are very important to their company. In Mikkeli the answers were more diverse, some companies with many employees consider the air services from/to Mikkeli to be important or very important, where as others do not consider them to be important at all. This also goes for the link between the importance of the air connections for the companies and their area of operation. In Savonlinna almost 59% of the companies that operate nationally or internationally consider the air connections to be very important, where as 32% considers the air services important. Only 9% of the nationally or internationally oriented companies do not believe the air connections are important for their company. For locally and regionally operating companies the percentages are as follows: 17% considers the connections very important, 50% considers them important and 33% says the air services are not important for them. In Varkaus over 48% of the nationally and internationally operating companies consider the air connections to be important, and 32% say they are very important. For locally and regionally focused companies these numbers are 64% and 29% respectively. Again, Mikkeli shows a different picture. Almost 21% of the international and national companies find the air services from Mikkeli very important and 50% finds them important. However, over 29% does not believe Mikkeli's air connections are important for the company's operations. Of the locally and regionally operating companies almost 53% does not consider the air connections from Mikkeli to be important for their company and only 11% believes they are very important.

These figures suggest that a loss of air transportation to and from Mikkeli, Savonlinna and Varkaus would influence the operations of the companies in these areas. The respondents were asked to indicate if the business would be influenced by a loss of air traffic. Figure 4.6 shows the answers given to that question.

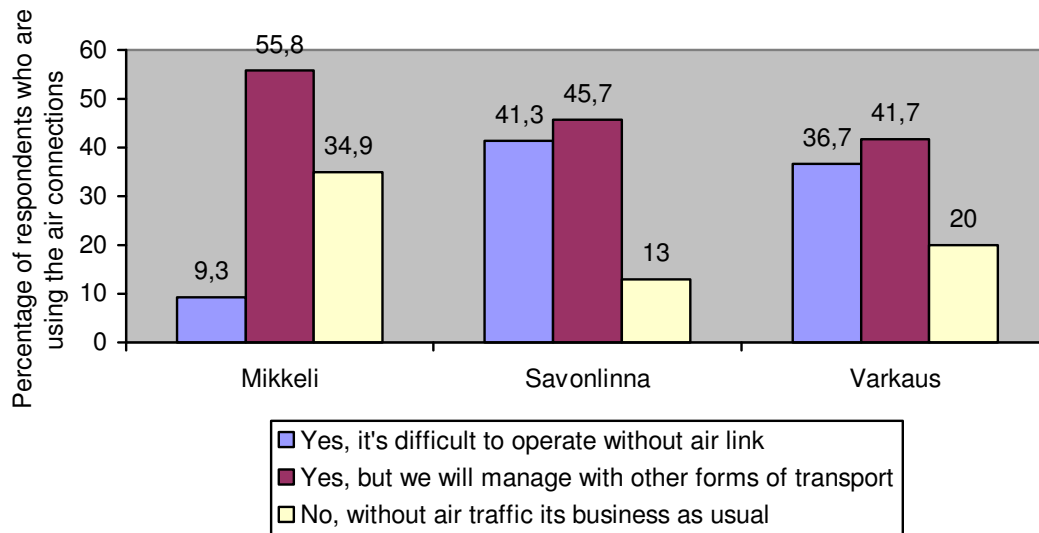


Figure 4.6. Does a loss of air transportation influence the company's operations?

In all three regions most companies that use the air connections think the loss of those connections would influence their operations, but they would manage with other forms of transport. This group is especially high in Mikkeli, of course the geographical location of Mikkeli and its accessibility by other means of transport plays an important role in this. In Savonlinna and Varkaus the percentage of the respondents that think the loss of air connections would seriously influence the operations of their business and even make the operation very difficult, is significant.

Companies with a higher number of employees predict a stronger effect on their operations if the air connections are lost than companies with fewer employees. Again, this trend is more visible in Savonlinna and Varkaus. In Varkaus all the respondents with over 100 employees believe a loss of air traffic does influence their business. Those with more than 300 employees think it would be difficult to operate the company if there were no flight to and from Varkaus anymore. In Mikkeli, figures regarding the influence of a loss of air transportation are more diverse. The general trend in Mikkeli is that most respondents think their business would be influenced, but they would be able to manage with other forms of transportation. A similar picture is drawn for the company's area of

operation. The more international a company is, the higher the influence would be on their business. Again, nationally and internationally operating companies in Savonlinna and Varkaus are more likely to believe that operating their business without the air connections will be difficult, where as similar companies in Mikkeli are more positive about the possibilities to manage with other forms of transportation. In Savonlinna 52% of the nationally or internationally oriented companies answered that operating their business would be difficult without the air services. Another 38% would be influenced by a loss of air traffic, but will manage with other forms of transport. In Varkaus 35% of the nationally or internationally operating companies will be seriously affected by a loss of air traffic, and 42% will be influenced, but will manage with other forms of transport. In Mikkeli 67% of the nationally or internationally operating companies will be influenced by a loss of air traffic, however, they will manage with other forms of transportation. A significant 13% however foresees severe difficulties for the company's operations if the air connections from and to Mikkeli are lost.

As concluded above, many companies fear to be influenced by a loss of air traffic. An important question is if the companies think it will still be possible to operate their business from their current location. Figure 4.7 gives an overview of the answers given to the question if the company also would be located where it is located now in the future if the air connections are lost.

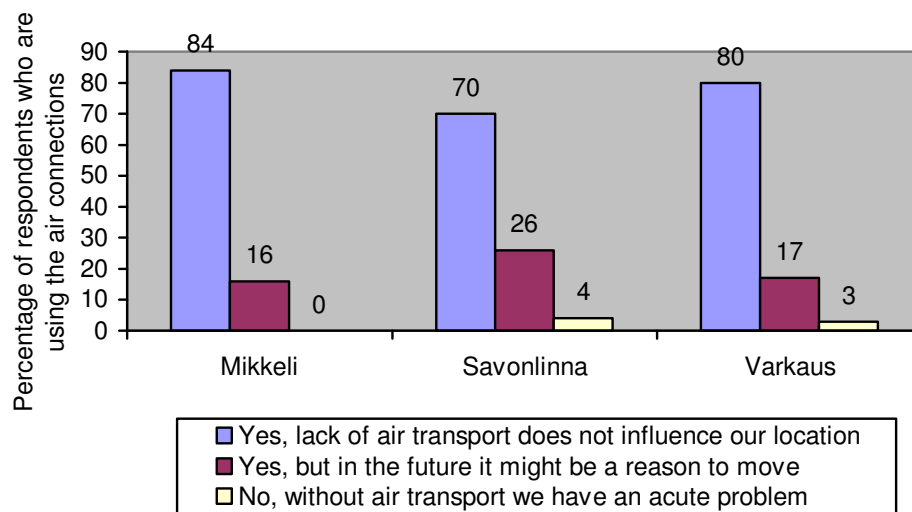


Figure 4.7. Does a loss of air transportation influence the companies' location?

As can be seen in figure 4.7 a large majority of the respondents that are using the air connections do not consider moving the company to another location if the air connections are lost. The number of companies that feel directly threatened by a loss of air connections is small and in Mikkeli even zero. The companies in Savonlinna and Varkaus that will not stay in the region if air connections are discontinued, are companies with a limited number of employees (less than 25). On the other hand, the percentage of companies that will consider moving in the future due to a loss of air traffic is much higher. In Mikkeli 16% of the companies that use the air connections believe a loss of those connections might be a reason to move the company to another location in the future. Similar figures are shown for Varkaus, and in Savonlinna this percentage is as much as 26%. Although these numbers are high, they have to be carefully interpreted. It is extremely difficult to think what will happen in the far future. This also goes for managers of companies and therefore, it has been difficult for them to answer this question instantly. Another important factor is that some companies might not move the whole company, but only parts of it. In addition to that, the fact that the questions were answered by local managers is important. Possibly they have company owners above them who hold the decision power in regard to the company's location. If the local managers indicate the company will not be moved, this does not mean that the company's owners share the same opinion. It has to be stressed that this question was only asked to get an indication of how the local economy would develop without the air connections. It cannot be considered to picture a clear view on the effects of discontinuing the air connections.

Although many companies seem to be using the air connections and many of those users consider the connections to be important, the presence of air services is not a very important location factor for the companies in the region. In Mikkeli only 12% of the companies that use the air services saw the presence of those services as an important location factor when starting the business in the Mikkeli area. Other location factors were more important. For over 88% the presence of air services was not in any way important in the decision to locate the company in Mikkeli or its surroundings. In the Savonlinna area the airport was an important location factor for only one respondent. Over 71% of the of the air service users in the Savonlinna region say the presence of the airport did not influence the decision to start the company in the Savonlinna area. On the other hand, for 26% it was a location factor, although other factors were more important.

Similar figures are shown for the Varkaus region. In general, the presence of the airports does not seem to be an important location factor for companies. Here it is important to realize the characteristics of the respondents. The members of the chamber of commerce are often companies that established long ago, even before the age of air transportation. It is not possible to see if older companies have a different opinion about this than the newly established companies.

#### **4.5 Conclusions**

The conclusion can be drawn that the figures show a great importance of the air connections for companies in all the three airport regions. Especially in Savonlinna and Varkaus the use of the air connections by companies is high and also in Mikkeli around 40% of the respondents are using the available service. Especially companies that are operating nationally or internationally are using the air services; this is the case in all the three airport regions. In respect to the number of employees of the companies it can be concluded that the general trend is that companies with many employees use the air services more often and consider them to be more important for the company's operations. The majority of the companies who are currently using the air services provided from the airports of Mikkeli, Savonlinna and Varkaus are afraid their operations will be influenced by a loss of the air connections, although many of them (especially in Mikkeli) will manage with other forms of transportation. The conclusion can be drawn that a loss of air connections will not immediately have considerable effects on the location of companies, but in the future a significant number of companies might see the loss of air connections as a reason to leave the region. Of the companies currently located in these three regions, only a few counted the presence of air services as an important location factor in the decision to establish the company in its current location. The main question of this research, if the air connections to and from Mikkeli, Savonlinna and Varkaus are important for the local economy can be answered positively. High percentages of the respondents are actively using the air services and of those users many consider the services important for their operations. The evidence presented in this report allows the conclusion that air connections to Mikkeli, Savonlinna and Varkaus are indeed important for the local and regional economy.

## *Chapter 5*

### *The Future of Air Transportation in the Etelä-Savo Region*

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The low numbers of passengers on flights to/from Savonlinna and Mikkeli form a direct threat for the air services to these two airports. The financial support provided by the cities of Mikkeli and Savonlinna is in breach with the European Union regulations on fair competition. Subsidies to support the airline operator can only be provided if they are arranged via a Public Service Obligation contract. As said in chapter 2 of this report, a PSO contract can be drawn up if the air connections are considered to be vital for the local economy of a remote or developing region. The questionnaire among companies in this region shows that the air services to and from Savonlinna, Mikkeli and Varkaus are considered vital for the local economy and therefore these routes will qualify for a Public Service Obligation status. City officials in both Savonlinna and Mikkeli have expressed the view that without public subsidies the air connections cannot be continued. Consequently, a PSO status will be the most appropriate solution in these cases.

The procedure for applying a PSO status to an air route starts with drawing up a number of minimum operation requirements. These requirements can be used to provide a minimum level of service. A careful analysis of the needs of local air connection users has to be carried out. This is important because a high level of services can possibly increase the use of the air connections and consequently lower the costs of a PSO contract. This research has tried to indicate some problems with the current level of services from the three airports. First of all, companies who indicated that they are not using the air services were asked to give the reason for not using the airplane. The results of that question are presented in figure 5.1 as follows.

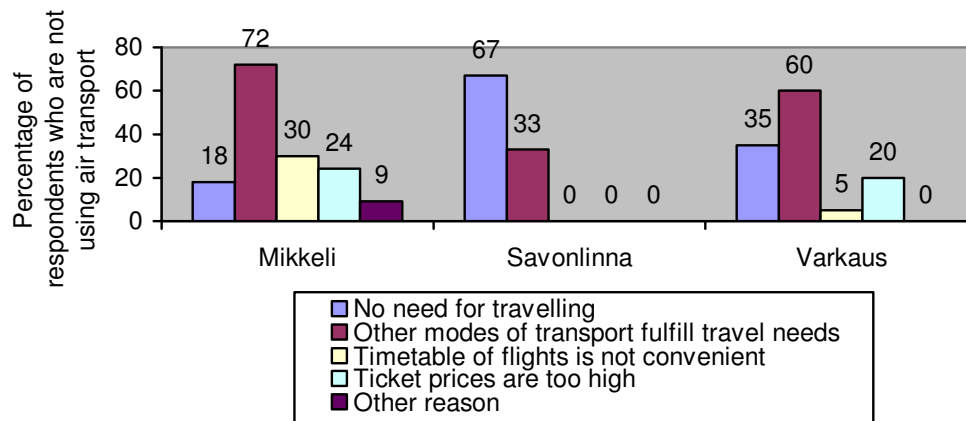


Figure 5.1. What are the reasons for not using the air connections?

The figure shows possibilities for increasing the use of the air connections especially in Mikkeli. Most of the companies that are not using the air connections say they are not doing so because they do not have a need for traveling or because other modes of transport fulfill their needs. However, 30% of the non-flying companies say a reason for taking other forms of transport is the inconvenience of the timetables. Later in this chapter more attention will be given to this problem regarding the timetables. Another important reason for taking other forms of transport is that ticket prices are considered too high. Especially smaller companies tend to mention this as an important reason for not taking the airplane. This is also the case in Varkaus. The data presented for the Savonlinna region is not reliable due to the very low number of companies that are not flying. If the needs of the local companies in regard to the timetables and ticket pricing are addressed properly in the PSO contract's minimum operating requirements, this might encourage companies that are currently not using the air connections to start using them in the future.

Not only the companies that are not flying are important when drawing up the minimum operation requirements, but a lot can also be learnt from experiences of current users of the air services. When asked if the timetables of flights from the airport they are using are convenient for them, especially companies from Mikkeli expressed dissatisfaction. The timetables from Mikkeli are adjusted to connect to the Finnair timetables for international destinations. However, the users of air traffic from Mikkeli have indicated that they are also using the air services for meetings, seminars, etc., in Helsinki, where Helsinki is the final destination of the flight. In fact, 65% of the users of the air connections consider the timetables to be insufficient for their travel needs (Figure 5.2).

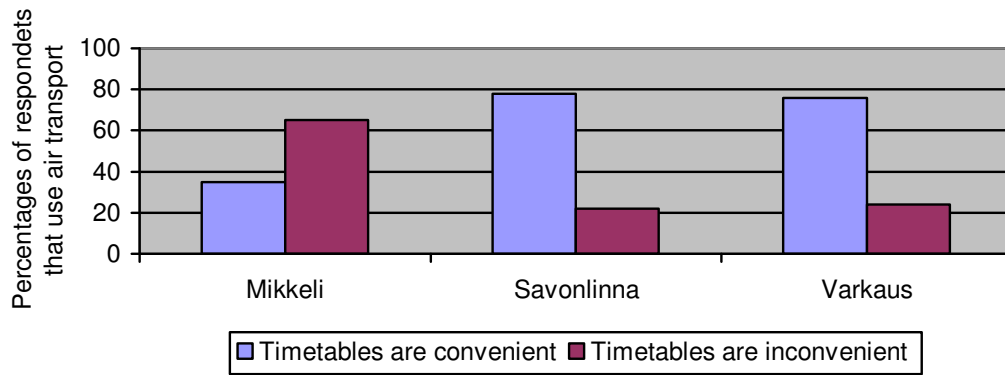


Figure 5.2. Do current users of the air connections consider the timetables to be convenient?

Most common were the complaints about the early departure time of the flights from Mikkeli to Helsinki and the very late arrival time of the return flight (Figure 5.3). For daytrips to Helsinki the current timetables are not suitable. Related to the complaints about the late return flights are the complaints concerning the lack of flights in the daytime, especially in the afternoon, around 17.00 or 18.00. Although the timetables for connections to/from Mikkeli are designed to connect to international departures and arrivals from Helsinki-Vantaa, another complaint was the fact that it is not possible to catch the flight to Mikkeli and Savonlinna leaving from Helsinki at 23.05 if the passenger is arriving on Finnair's late flights from Brussels or Frankfurt. Another complaint about the timetables in Mikkeli is that Mikkeli cannot be reached in the morning from Helsinki-Vantaa airport, which makes it difficult to use the air services for inviting visitors to a company's location in Mikkeli. The following table shows the current timetables (Figure 5.3)



Mikkeli – Helsinki (from 30.03.-28.06. & 03.08.- 25.10.2003)								
Flight	Departure							Arrival
	Mon	Tue	Wed	Thu	Fri	Sat	Sun	
DC341	6.15	6.15	6.15	6.15	6.15			7.00
DC343	-	-	-	-	-	8.05	-	8.45
Helsinki – Mikkeli (from 30.03.-28.06. & 03.08.- 25.10.2003)								
DC348	23.05	23.05	23.05	23.05	23.05	-	23.05	23.45
Savonlinna – Helsinki (from 30.03.-18.06. & 17.08.- 25.10.2003)								
DC341	5.35	5.35	5.35	5.35	5.35	-	-	7.00*
DC343	-	-	-	-	-	7.25	-	8.45*
DC331	8.30	8.30	8.30	8.30	8.30	-	-	9.25
DC332	13.55	13.55	13.55	13.55	13.55	-	-	15.30**
DC339	18.35	18.35	18.35	-	-	-	18.35	19.30
DC339	-	-	-	18.55	18.55	-	-	19.50
Helsinki – Savonlinna (from 30.03.-18.06. & 17.08.- 25.10.2003)								
DC330	7.25	7.25	7.25	7.25	7.25	-	-	8.15
DC332	12.45	12.45	12.45	12.45	12.45	-	-	13.40
DC338	17.25	17.25	17.25	-	-	-	17.25	18.20
DC338	-	-	-	17.45	17.45	-	-	18.40
DC348	23.05	23.05	23.05	23.05	23.05	-	23.05	0.20*
Varkaus – Helsinki (from 30.03.-18.06. & 17.08.- 25.10.2003)								
DC151	6.00	6.00	6.00	6.00	6.00	-	-	6.55
DC153	-	-	-	-	-	7.30	-	8.25
DC153	8.35	8.35	8.35	8.35	8.35	-	-	9.30
DC332	14.35	14.35	14.35	14.35	14.35	-	-	15.30
DC157	18.40	18.40	18.40	18.40	18.40	-	-	19.35
DC157	-	-	-	-	-	-	18.50	19.45
Helsinki – Varkaus (from 30.03.-18.06. & 17.08.- 25.10.2003)								
DC152	7.25	7.25	7.25	7.25	7.25	-	-	8.20
DC332	12.45	12.45	12.45	12.45	12.45	-	-	14.20***
DC156	17.30	17.30	17.30	17.30	17.30	-	-	18.25
DC156	-	-	-	-	-	-	17.40	18.35
DC150	23.35	23.35	23.35	23.35	23.35	-	23.35	0.25

\* = via Mikkeli \*\* = via Varkaus \*\*\* = via Savonlinna

Figure 5.3. Flight timetables. Source: Golden Air ([www.lento.net](http://www.lento.net)). 2003.

Although almost 80% of the users of the air connections from Savonlinna are satisfied with the timetables, there are still some complaints about it. The most common complaint is the time interval between the first flight in the morning and the second one. The first flight leaves from Savonlinna at 5.35 in the morning (flight operated via Mikkeli) and arrives in Helsinki at 7.00. This is perfect for connecting to international departures from Helsinki-Vantaa airport, but it is too early if Helsinki is the final destination. The second flight leaving from Savonlinna however, leaves at 8.30 and arrives in Helsinki at 9.25. For having meetings, seminars, etc. in the city of Helsinki, this

arrival time is too late, since the Helsinki city center cannot be reached before 10.30 or even 11.00. There is a strong demand for a flight that arrives in Helsinki around 8.00 or 8.30 in the morning. Many respondents also indicate that the departure time of the 17.25 flights on Monday, Tuesday and Wednesday, and the 17.45 flights on Thursday and Friday, are leaving too early. The working day usually ends around 17.00, which makes it impossible to reach the airport in time for the 17.25/45 departures to Savonlinna. Another often heard complaint is the lack of flights during the weekend. Savonlinna can only be reached on Sunday evenings and not on Saturdays. Very similar opinions are heard from the companies in Varkaus. Especially the early departure of the first flight to Helsinki and the too late departure of the second one are recommended to be changed.

As can be seen from this analysis of the timetables, adjusting the timetables to the user's needs is certainly an issue that deserves a proper investigation. When drawing up the operational standards for a future PSO contract, further research has to be done on the optimal timetables to increase the use of air transport and to further satisfy the current users. A balance has to be found between the costs of the services and the user's demands. Special emphasis should be placed on the possibility to divert more flights between Helsinki and Savonlinna via Mikkeli to increase the service level of Mikkeli airport. Over 85% of the respondents in Mikkeli who are currently using the air services indicate that they will use the air connections more often if the timetables are better adjusted to their travel needs. In Savonlinna around 32% says they will use the air services more often if better timetables are introduced, whereas in Varkaus this percentage is little over 31%. This certainly shows that there is more potential for flights from these three airports and it is worth trying to establish a better service level if a PSO status was applied in the future.

Another important issue regarding the use of air transportation, which should be carefully analyzed if a PSO status was applied, is the ticket price. As can be seen from figure 5.1 around 25% of the companies in the Mikkeli area that are not flying indicate they do not fly do so because of the high ticket prices. Also in Varkaus around 20% mentions this as an important reason not to travel by plane. There is no data available for Savonlinna, but it is expected that also there the ticket price is an important reason not to fly. Figure 5.4 indicates the price development of the tickets for a one-way trip from Savonlinna to Helsinki.

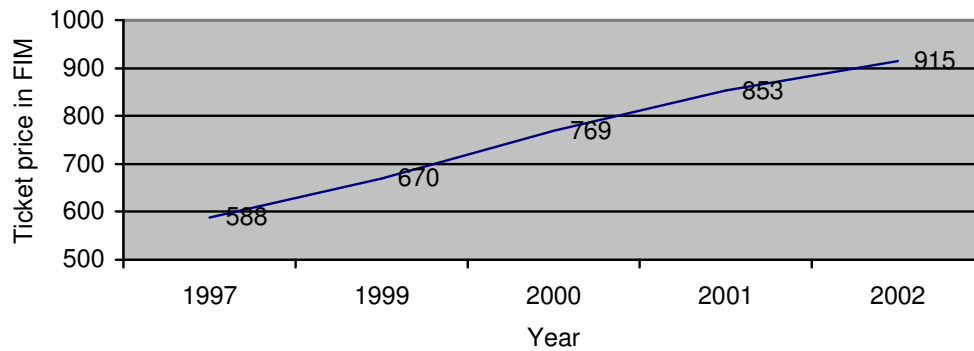


Figure 5.4. Development of ticket prices of one way flights from Savonlinna to Helsinki. Source: FCAA Savonlinna Airport Management (2003).

Also for current users of the air connections the ticket price is important in their decision to take the airplane or not. This is especially the case for smaller companies. The bigger companies indicate that ticket price is not an important factor them. However, for the profitability of the air services also the smaller companies should be tempted to take the airplane. Figure 5.5 shows the percentage of current users of the air connections who would most probably fly more often if the ticket price was lower. These results have to be treated cautiously. The question in the questionnaire was if the company would fly more if the ticket price was lower. No indication was given on how low the ticket price would be. Therefore, these results are only indicative of the importance of the influence of ticket pricing on the use of the air services.

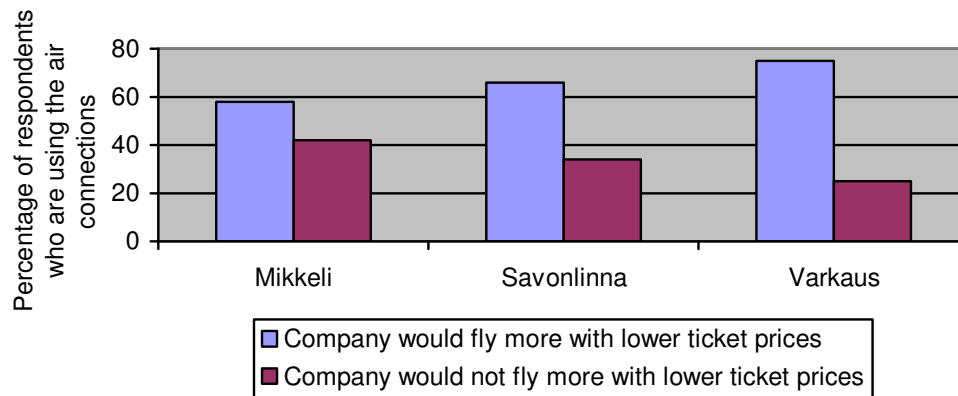


Figure 5.5. Would the respondents who are currently using the air connections fly more if the ticket price was lower?

Coming back to the future of the air traffic to and from the airports in Etelä-Savo, the conclusion can be drawn that air services can be subsidized by public money if a Public Service Obligation status is applied. The only demand the European Union places on the

application of a PSO status to a certain route is that the route has been considered vital for the local economy of a remote or developing region. This research has shown that the local business communities of Mikkeli, Savonlinna and Varkaus certainly see the air connections as vital for the regional business environment. Therefore the future of the air services should be secured by starting a PSO application procedure for at least the air routes to and from Mikkeli and Savonlinna. A PSO status for these routes will most probably be the only option for securing air traffic to these towns in the future. The case of Varkaus is slightly different. Although profit margins on the routes to and from Varkaus are extremely low, the future looks a little brighter for these routes. Although a PSO would be possible also for the routes to and from Varkaus, a further investigation of other possibilities of indirectly supporting the air services has to be done.

## *Chapter 6*

### *Conclusions*

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The main question of this research was to find out if the air services provided from the airports of Mikkeli, Savonlinna and Varkaus, are important for the local economy. The high response rate to the questionnaire shows local companies' large interest for the issue of air transportation. Analysis of the returned questionnaires showed that many companies are using the air connections, more specifically, companies that employ over 100 people are more likely to use the air services than smaller companies. Also companies that are nationally or internationally oriented make use of the air services more often than the locally or regionally oriented companies. The most important results of this research show that most of the companies that are using the air services consider those services to be important for their company. Many their company's operations will be influenced if air connections are lost in the future. Therefore, the conclusion can be drawn that public money should be invested to continue the flights in the future and secure a basic service level for the region's businesses. The only way to directly support an airline operating on these air routes is by applying a Public Service Obligation to the air routes, which gives the authorities the possibility to secure a minimum level of air services and to reimburse the airline for the losses it makes on flying these routes. Before a PSO status can be applied to a route, it is necessary to clearly define what the operational standards should be. These standards can include requirements on the number of flights, timetables, ticket prices, etc. Further research has to be done to define these operational standards from the demands for air transportation to and from the airports in Etelä-Savo, where special emphasis should be put on adjusting the timetables to the local transportation needs and finding the optimal ticket price for flights to and from Helsinki.

This research shows that there is a lot of potential for the air routes to and from Mikkeli, Savonlinna and Varkaus and they are certainly suitable for public investment by a PSO application. However, the PSO contracts can only be signed for up to 3 years. During those three years, local, regional and national authorities should try to develop a successful policy to increase the use of the air connections or to further develop other

forms of transportation to become competitive to the air services in regard to travel time and accessibility. If such a policy is developed successfully, the involvement of public money in the provision of air services can be gradually reduced.

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# *Appendix 1*

## *Questionnaire in English*

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### **The importance of air traffic for local businesses**

**University of Joensuu, Savonlinna Institute for Regional Development and Research**

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You filling in this questionnaire is very important for getting relevant research results. Answering the questions will take approximately 10 minutes. After filling out this questionnaire, ***please return it BEFORE MAY 19<sup>th</sup>*** to us in the stamped envelope that accompanies this questionnaire.

Thank you very much in advance for filling in this questionnaire.

#### **Instructions**

Please mark the box before the most appropriate answer. Please note that you can give only one answer per question, unless otherwise stated. If you want to give an answer that is not in the choices, choose the answer 'Other, namely:' and fill out your answer behind it.

---

#### **Section A                      Your business**

It's important for us to know what kind of business you are working in. That's why we first ask some questions related to your company.

##### **Question 1**

*In what sector of the economy is your company active?*

- a. Manufacturing
- b. Technology
- c. Forestry
- d. Tourism
- e. Commercial services
- f. Other, namely: .....

##### **Question 2**

*How many employees work in your company (if the company consists of more branches, only count the one located in this region)?*

- a. 1-5
- b. 6-25
- c. 26-100
- d. 101-300
- e. 301-1000
- f. 1000+

##### **Question 3**

*What is the area in which your company operates?*

- a. Locally serving local population
  - b. Regionally in Savo
  - c. Nationally having the main market in Finland
  - d. Internationally having business worldwide
-

**Section B**                      **Your travel behaviour**

In this section we will ask you some questions about your demand for air travel and the reasons why you are, or why you are not, travelling by airplane.

**Question 4**

*Does your company use the air connection with Helsinki for business purposes?*

- a. Yes, sometimes
- b. Yes, regularly
- c. No → Please continue with question 13

**Question 5**

*What does your company use the air connection for?*

*More answers possible.*

- a. For travelling to Helsinki for meetings etc.
- b. For travelling to Helsinki, where to change planes to fly to another destination
- c. For getting business relations (customers, supervisors, etc.) to our company
- d. Other, namely:.....

**Question 6**

*Is the timetable of the flights to/from Helsinki convenient for you?*

- a. Yes
- b. No, because:.....

**Question 7**

*Would you make more use of the air connection with Helsinki if the timetable was better adjusted to your travel behaviour?*

- a. Yes
- b. No

**Question 8**

*Would you make more business trips to Helsinki by airplane if the ticket price would be lower?*

- a. Yes, the ticket price is an important factor in my decision to fly
- b. No, ticket price doesn't influence my business travel behaviour

---

**Section C**                      **The importance of the air connection for your business**

With the questions in this section we try to find out if the availability of the air connections is important for the operations of your company.

**Question 9**

*Do you consider the air connection with Helsinki important for the operations of your company?*

- a. Yes, very important
- b. Yes, important
- c. No, not important

**Question 10**

*Would it seriously effect your operations if there was no air connection with Helsinki*

- available?*
- a. Yes, it will be very difficult to operate our business without the air link
  - b. Yes, but we will manage with other forms of transportation to fulfil our travel needs
  - c. No, even without the air connection it's business as usual

**Question 11**

*Will your business be located in this region (in the future) if there is no air connection with Helsinki anymore?*

- a. Yes, the lack of air transport will not influence our location decisions
- b. Yes, but in the far future the lack of air transport might be a reason to relocate
- c. No, the lack of air transport forms a acute threat to our business operations

**Question 12**

*Did the availability of air connections play any role in the decision to locate the company in this region?*

- a. Yes, it was a very important factor
- b. Yes, it was considered an advantage, but other factors were more important
- c. No, it wasn't in any way important for that decision

Please continue to Question 14.

**Question 13**

*If you are not using the air services, can you indicate why you are not using the air connection? More answers possible*

- a. We have no need for business travels to Helsinki or further
- b. Other modes of transport fulfil all our travel needs
- c. Flights are not leaving at times that are convenient for our travel needs
- d. The ticket prices are too high
- e. Other, namely:.....

**Question 14**

*Please feel free to give any comments or feedback on this questionnaire or air transportation in the region.*

**Thank you very much for answering these questions. Please return this form in the stamped envelope before the 19<sup>th</sup> of May.**

## *Appendix 2*

### *Questionnaire in Finnish*

---

#### **Lentoliikenteen merkitys Etelä-Savon liiketoiminnalle** Joensuun yliopisto, Savonlinnan koulutus- ja kehittämiskeskus

---

Vastaamiseen tähän kyselyyn on tärkeää, jotta tutkimus onnistuisi. Kyselyn täyttäminen vie aikaasi vain noin 10 minuuttia. Palautathan kyselyn mukana tullessa vastauskuoressa viimeistään 19.5.2003.

Kiitos vaivannäöstäsi!

#### **Ohjeet**

Rastita valitsemasi vastausvaihtoehto. Huomaa, että voit valita vain **yhden** vastauksen, ellei toisin ole mainittu.

---

#### **Osa A Yrityksesi**

Tutkimuksen kannalta on tärkeää tietää millainen yrityksenne on. Tämän vuoksi kysymme aluksi joitain perustietoja.

##### **Kysymys 1**

*Mikä on ala, jolla yrityksenne pääasiassa toimii?*

- a. Teollisuus
- b. Teknologia
- c. Metsäteollisuus
- d. Matkailu
- e. Palveluala
- f. Jokin muu, mikä? .....

##### **Kysymys 2**

*Montako työntekijää yrityksessänne on (jos yrityksellä on useita toimipaikkoja, mainitse vain sen toimipaikan työntekijöiden lukumäärä, jonne saitte kyselyn)?*

- a. 1-5
- b. 6-25
- c. 26-100
- d. 101-300
- e. 301-1000
- f. 1000+

##### **Kysymys 3**

*Millä alueella yrityksenne toimii?*

- a. Paikallisesti palvelen alueen väestöä
- b. Alueellisesti, pääasiassa Savon alueella
- c. Kansallisesti, tärkein markkina-alue Suomi
- d. Kansainvälisesti - maailmanlaajuisesti

---

**Osa B Matkustustottumukset**

Tässä osiossa kysymme tavoistanne käyttää lentoliikennettä matkustamiseen sekä syitä sen käyttöön tai käyttämättömyyteen.

**Kysymys 4**

*Lentääkö yrityksenne henkilökunta Helsinkiin työasioissa?*

- a. Kyllä, joskus
- b. Kyllä, säännöllisesti
- c. Ei → jatka kysymykseen 13

**Kysymys 5**

*Miksi yrityksenne käyttää lentoyhteyttä Helsinkiin/Helsingistä? Voit valita useamman kuin yhden vastausvaihtoehdon.*

- a. Matkustamiseen Helsinkiin kokouksiin, tapaamisiin jne.
- b. Matkustamiseen Helsinkiin jatkolentoa varten jonnekin muualle
- c. Yrityksenne asiakkaiden tai kumppanien kuljetukseen Helsingistä
- d. Muu syy, mikä?.....

**Kysymys 6**

*Ovatko Helsingin lentojen aikataulut yrityksellenne sopivat?*

- a. Kyllä
- b. Ei, koska:.....

**Kysymys 7**

*Käyttäisittekö useammin lentomahdollisuutta Helsinkiin, jos aikataulut olisivat sopivammat?*

- a. Kyllä
- b. Ei

**Kysymys 8**

*Tekisittekö useammin työmatkoja lentäen Helsinkiin, jos lipunhinta olisi alhaisempi?*

- a. Kyllä, lipun hinta on tärkeä tekijä lentopäätöstä tehtäessä
- b. Ei, lipun hinta ei vaikuta asiaan työmatkoja tehtäessä

---

**Osa C Lentoyhteyden merkitys yrityksellenne**

Seuraavilla kysymyksillä pyrimme saamaan selville lentoyhteyden tärkeyden yrityksellenne.

**Kysymys 9**

*Pidättekö lentoyhteyttä tärkeänä yrityksenne toimintojen kannalta?*

- a. Kyllä, hyvin tärkeänä
- b. Kyllä, tärkeänä
- c. Ei ole merkitystä

**Kysymys 10**

*Hankaloittaisiko lentoyhteyden puuttuminen yrityksenne toimintaa?*

- a. Kyllä, toimintamme olisi erittäin hankalaa ilman lentoyhteyttä
- b. Kyllä, mutta voisimme käyttää lentoyhteyden sijasta muita matkustusmuotoja
- c. Ei, toimisimme samoin myös ilman lentoyhteyttä

**Kysymys 11**

*Tuleeko yrityksenne olemaan myös tulevaisuudessa sijoittunut tälle alueelle, vaikka lentoyhteyttä Helsinkiin ei enää olisikaan?*

- a. Kyllä, lentoliikenteen puuttuminen ei vaikuttaisi sijaintiimme
- b. Kyllä, mutta lentoliikenteen puuttuminen saattaisi olla yksi syy muuttoon muualle
- c. Ei, lentoliikenteen puuttuminen vaikeuttaisi toimintaamme huomattavasti

**Kysymys 12**

*Oliko lentoyhteydellä mitään syytä yrityksenne sijoittumiseen alunperin tälle alueelle?*

- a. Kyllä, se oli yksi suuri syy
- b. Kyllä, se nähtiin hyötynä, mutta muut syyt olivat tärkeämpiä
- c. Ei, sillä ei ollut mitään vaikutusta päätökseen

Jatka kysymykseen 14.

**Kysymys 13**

*Mikä on ollut syynä, jos ette käytä lentoyhteyttä Helsinkiin?  
Voit valita useamman kuin yhden vastausvaihtoehdon.*

- a. Meillä ei ole tarvetta tehdä työmatkoja Helsinkiin tai kauemmas
- b. Muut matkustustavat sopivat tarpeisiimme paremmin
- c. Lennot eivät lähde meille sopiviin aikoihin
- d. Lentoliput ovat liian kalliita
- e. Muu syy,  
mikä?.....

**Kysymys 14**

*Voit antaa vielä kommenttisi ja palautteesi tästä kyselystä tai yleensä alueen lentoyhteyksistä.*

Kiitos vastaamisesta! Pyydämme palauttamaan kyselyn palautuskuoressa viimeistään  
**19.5.2003.**