MSP: Outcomes of the Delta Air Lines / Northwest Airlines Merger

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1.231 Airport Systems: Planning, Design and Management
December 2013
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Quick Facts

The MAC: The Metropolitan Airports Commission, a public corporation, operates the Minneapolis – St. Paul International Airport, along with six other general aviation airports.

The MAC has fifteen commissioners, appointed by Minnesota’s governor and the mayors of Minneapolis and Saint Paul.

The MAC is funded by rents and fees paid by airport users.

PAX Facilities:

Minneapolis-St. Paul International Airport has two main terminals:

Terminal 1 – Lindbergh
Terminal 2 – Humphrey

The Lindbergh Terminal has 114 gates, with about 2.8 million square feet.

The Humphrey Terminal has 10 gates, with 531,700 square feet.

The airport has 22,900 parking spaces.

Traffic:

54% of passengers originate at the airport; 46% of passengers are connecting.

MSP accommodated 425,332 aircraft operations in 2012.

Ranked 16th in North America for passengers served annually, MSP hosted more than 33,170,960 passengers in 2012.

*Delta Air Lines marketed 76% of departing seats in 2012.*

Revenue:

46% of MAC’s revenues are derived from concessions.

37% of revenues are derived from airline rates and charges. The airport charges signatory airlines a landing fee of $2.42 per 1,000 pounds landed weight.

17% of revenues are derived from other sources including but not limited to rental fees, utilities payments, general aviation, etc.

The MAC receives no funding from Minnesota’s state general operating budget.

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1 Minneapolis-St. Paul International Airport Statistics
2 Metropolitan Airports Commission
3 T100 accessed via Diio Mi
1. Introduction

Few industries claim the public attention of the airline industry. Commercial air service is novel, given high priority, and contentious. Seldom is it the case that the general public is widely aware of and interested in the merger of two corporations, yet that is typically the case for airlines. Very few events in the industry escape the attention of the media, and consolidation is by no means an exception. This is especially true as consolidations in the industry have steadily occurred since the deregulation of air service in the United States, to the extent that the remaining few airlines are often monolithic in size. Therefore a merger of these airlines affects nearly every community in the nation, as well as tens of thousands of employees and the dynamic of the industry as a whole.

An excellent case of this type of consolidation is the merger of Northwest Airlines and Delta Air Lines, two very large airlines which, combined, formed the largest airline in the world by several metrics. Clearly, such a merger has wide ranging effects and implications for the industry as a whole, but, as is often the case, interested parties are specifically interested in how they will be affected.

A prominent group of interested parties include the airports and communities which hosted, in this case, Northwest Airlines’ and Delta Air Lines’ hubs and focus cities. Acting as hubs for these airlines, many airports throughout the United States were to varying degrees dependent on air service from these airlines, as well as the significant beneficiaries of the connectivity that derives from being a hub. Examples include New York City, with JFK and LGA acting as important hub and focus airports, Atlanta, the primary hub of Delta Air Lines, Cincinnati, Memphis, Detroit, and Salt Lake City, important secondary or tertiary hubs, and, of most importance for this study, Minneapolis – St. Paul, formerly the primary hub of Northwest Airlines. Not only are these airports, and others, interested in how a merger will affect them, the straightforward question arises of who, in the event of a merger, “wins” and who “loses.”
Predicting the outcomes is of course difficult or impossible, as the future is uncertain. After the fact, it would be reasonable to expect that measuring who has “won” and who has “lost” would be easier.

In the cases of Memphis (MEM) and Cincinnati (CVG), it is empirically straightforward to assess the outcomes of the Delta / Northwest merger as significantly negative, as will be discussed further; other airports, such as Seattle (SEA), have seemingly done well post-merger, as has Detroit (DTW). Minneapolis – St. Paul (MSP), however, is far less clear-cut.

In this case, where Delta has by no means expanded service, nor has it substantially weakened its hub presence, the question arises of how one measures the outcome of a merger. For an airport, it is of course important to adequately serve the demand for air transportation as well as to cover costs with as little excess capacity as possible, while serving the interests of the community also entails maintaining and expanding the quality of service and the connectivity of the airport, as well as encouraging competition among airlines and realizing as competitive a level of airfares as possible. These goals must be prioritized and assessed individually and holistically in order to truly assess the outcomes of a merger. In the case of MSP, it is tempting to simply measure ASMs, departures, or seats, observe the measurements before and after the merger, and declare a verdict. It is evident that, for example, ASMs provided by Delta Air Lines have been declining at MSP after the merger and do not amount to what the ASMs of Northwest Airlines and Delta Air Lines added together in 2008 would equal. This does not bode well. Yet, by looking more closely at the developments at MSP, and more broadly, the outcomes of the Delta / Northwest merger are in fact not only more nuanced, but are also positive—the time from the merger until now has seen stability in the Delta Air Line’s hub as well a burgeoning of air services offered by other carriers at the airport.
2. Overview

2.1. History of MSP: Before proceeding to the expansion of this study’s thesis, it is important to provide context within which to work. Perhaps the best place to start is with a brief overview of the history of MSP, with a focus on the Northwest Airlines presence at the airport and in the region. This is especially important considering how important Northwest has been in the development of the airport, such that its disappearance has implications for MSP and the communities it serves beyond those of economic rationale.

From humble beginnings, MSP took shape from what was known as the Snelling Speedway in 1914, a failed racing venue, when the Minneapolis Aero Club purchased the property. The first hangar was built in 1920, and the property was named Speedway Field. In 1923, the field was named Wold–Chamberlain Field to honor two local pilots who lost their lives in WWI. Shortly thereafter, in 1926, Northwest Airways, later to become known as Northwest Airlines, purchased the only hangar on the property and began carrying mail on behalf of the U.S. government.4 From the beginning, Northwest Airlines and MSP have been closely entwined. The first passenger service at the facility, also operated by Northwest Airways, took place in 1929.5

In 1948, following WWII and the ensuing expansion of air travel domestically and internationally, the airport was designated as an international airport, international flights being operated by then Northwest Airlines, and took the new name of Minneapolis – St. Paul International Airport.6 Once again, Northwest Airlines was at the forefront of historical air service for MSP and for the region. As its primary hub, MSP saw very significant growth in the subsequent decades. The Lindbergh Terminal opened in 1962, designed to serve four million passengers annually by 1975. 4.1 million

4 MSP History
5 Ibid.
6 Ibid.
passengers were using the terminal annually by 1967. Continued passenger growth above expectations triggered the Dual Track Airport Planning Process, which studied either expanding MSP or building a new airport for the region. As history shows, the Minnesota State Legislature decided in 1996 to expand MSP rather than build a new airport, which sparked the creation of the 14-year capital improvement plan called *MSP 2010: Building a Better Airport*. This was a $3.2 billion program, which has won many awards, concluding with MSP being a significant and appreciated airport not only for the Twin Cities but also for the state of Minnesota and the Upper Midwest. A primary driver in this development is the presence of Northwest Airlines throughout.

2.2. Overview of MSP: Not only is the history of MSP important to contextualize the outcomes of the merger of Northwest Airlines and Delta Air Lines, but also the current state of the airport. As such, the infrastructure of the airport will be briefly discussed, as will the passenger service provided by the various airlines present at the airport.

2.2.1. Infrastructure: MSP has recently finished an ambitious and extensive capital improvements program and has plans for numerous more. Previously mentioned is the $3.2 billion *MSP 2010: Building a Better Airport* project. The primary components of this plan are expansions to the Lindbergh Terminal (T1), the construction of the Humphrey Terminal (T2), airfield improvements, roadway construction, and light rail passenger service.

Most notable from an aerial perspective, the plan added a fourth runway to the airport—Runway 17/35. The new Humphrey Terminal, with 10 gates, was completed and replaced the former charter terminal which bore the same name. Concourses A and B in the Lindbergh Terminal were also constructed, having among the first dedicated regional gates with holding areas and jet bridges in the

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7 MSP History
8 MSP Airport Improvements
9 ibid.
10 *MSP 2010: Building a Better Airport*
nation, 30 in all. In figure below, the new runway can be seen on the left, the Humphrey Terminal adjacent to it, and the new concourses for the Lindbergh Terminal on the right.

The figure also does a good job of illustrating the overall infrastructure at MSP. The new runway, 17/35, is only for use arriving from the south and departing to the south. Although only being used for about 25% of departures, this additional runway provides relief to 12/30 Right and Left during peak times and makes the current airside capacity of the airport suitable for demand of beyond 55 million passengers

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11 MSP 2010: Building a Better Airport
12 Images generated using Google Earth
13 Dr. J. Hamiel, personal communication, December 3rd, 2013
annually, given current estimates of fleet mixes.\textsuperscript{14} This is more than adequate for current forecasts beyond 2030.

A notable fact to recognize is that the Lindbergh Terminal, mostly utilized by Delta Air Lines, has at present 114 gates, while the Humphrey Terminal, utilized by most other carriers, and presently nearly all non-Network carriers, has only 10 gates.\textsuperscript{15} However, despite the Lindbergh Terminal being dominate in size, customers have reported preferring the experience of flying out of the Humphrey Terminal.\textsuperscript{16} The following can be seen in two further figures, displaying both terminals.\textsuperscript{17}

Three further features of MSP to note in this brief overview of the physical attributes of MSP include the present of the Minnesota Air National Guard in the northeast section of the airport, the presence of Delta Air Lines hangars south of the Humphrey Terminal along with the Delta North

\textsuperscript{14} Dr. J. Hamiel, personal communication, December 3rd, 2013
\textsuperscript{15} Metropolitan Airports Commission
\textsuperscript{16} Dr. J. Hamiel, personal communication, December 3rd, 2013
\textsuperscript{17} Images generated using Google Earth
corporate offices adjacent to the hangars, as well as the excellent accessibility enjoyed by the airport. Via both highway system and as an integrated part of the light rail system, MSP is very close to downtown Minneapolis and St. Paul. This is both convenient for the traveling public as well as a complication for noise abatement. As part of the *MSP 2010: Building a Better Airport* project, a new transit center was built, connecting the airport to the surrounding communities via mass transit buses and shuttles, as well as the two new light rail stations (one at each terminal) and 1.8 miles of tunnel. For accessibility within the Lindbergh Terminal, a connecting bridge was built between Concourses C and G (top and bottom in the figure on the previous page), as well as two automated, climate-controlled trams, one that connects the main terminal to parking and transit and another which runs along Concourse C, connecting D, C, and A/B.\(^{18}\)

**2.2.2. Airlines:** Of critical importance to the focus of this study, the outcomes of the Delta / Northwest merger, is the composition of airline service at the airport in terms of which airlines are present and their relative market shares. The industry is generally marked by continuing consolidation through mergers and acquisitions, so it is not surprising that MSP has experienced a decline in the number of carriers from 2004 to 2012, although this does not indicate a decline in competition at the airport. The following table includes a list of the various airlines that have marketed flights from MSP in the time period between January of 2004 and December of 2012:\(^{19}\)

<table>
<thead>
<tr>
<th>Endeavor Air (reg.)</th>
<th>Bemidji Airlines</th>
<th>Mesaba Airlines (reg.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aeroméxico</td>
<td>Continental Airlines</td>
<td>Midwest Airlines</td>
</tr>
<tr>
<td>Air Canada</td>
<td>Delta Air Lines</td>
<td>Northwest Airlines</td>
</tr>
<tr>
<td>AirTran Airways</td>
<td>Frontier Airlines</td>
<td>Southwest Airlines</td>
</tr>
<tr>
<td>Alaska Airlines</td>
<td>Great Lakes Airlines</td>
<td>Spirit Airlines</td>
</tr>
<tr>
<td>America West Airlines</td>
<td>Icelandair</td>
<td>Sun Country Airlines</td>
</tr>
<tr>
<td>American Airlines</td>
<td>Jazz (reg.)</td>
<td>United Airlines</td>
</tr>
<tr>
<td>Atlantic Southeast Airlines (reg.)</td>
<td>KLM</td>
<td>US Airways</td>
</tr>
</tbody>
</table>

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\(^{18}\) *MSP 2010: Building a Better Airport*

\(^{19}\) T100 accessed via Diio Mi
The above table of airlines present at the airport may at first glance suggest a substantial amount of competition in the market, but this is not the case. First, note that all airlines notated with a “(reg.)” are airlines affiliated with a network carrier as a regional airline. Second, many of these airlines represent very small percentages of the traffic at MSP, and several were only present in the market sporadically during the time period.

To gain a better picture of the airlines present at MSP, it is useful to consider to what extent each airline is supplying service to the market. The chart to the left displays for each of the major airlines what percentage of the departing seats in 2004 they provided.\(^\text{20}\) This view of the market segmentation better illustrates that Northwest Airlines was by far the dominate carrier at MSP, with all other airlines in the market providing fewer than 4% of the departing seats and Northwest Airlines providing approximately 80% of the departing seats. This not only reflects how important Northwest Airlines was to MSP, it also means that MSP is potentially very dependent on this single carrier for maintaining its connectivity, traffic volume, and financial solvency. This is an important factor when considering the Delta / Northwest merger and its importance to Minneapolis and St. Paul, as well as the region.

\(^\text{20}\) T100 accessed via Diio Mi
The shares of departing seats changed very little between 2004 and 2008, although Northwest Airlines entered Chapter 11 bankruptcy protection in 2005, which did set in motion changes in Northwest operations. 21 2008 is also the year that the merger was announced, so that looking at the market segmentation in that year provides a glimpse at the state of the “pre-merger” market. 22 Here we see the same pattern as in 2004. Northwest provides approximately 79% of the departing seats while the next largest carriers, in this case American Airlines, and Sun Country Airlines (a small low-cost carrier also based in Minneapolis), have less than 5% of the market, each. If you add Delta Air Line’s share of departing seats to Northwest Airlines in 2008, the total share becomes 81% of departing seats. Clearly, the market was highly concentrated, and at the announcement of the merger in 2008, whether or not the presence Northwest Airlines had built here would remain was at the forefront of speculation as to whether or not MSP would “win” or “lose” as the outcomes of the merger became clear.

An interesting aspect to the speculation of whether or not the substantial connecting hub at MSP would be maintained is a love/hate relationship with said connecting hub. On one hand, the hub

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21 Dr. J. Hamiel, personal communication, December 3rd, 2013
22 T100 accessed via Diio Mi
provides incredible connectivity both domestically and internationally relative to the size of the O-D
market. On the other hand, the hub comes with the displayed market concentration, which ultimately
lead to elevated air fares and a certain level of dependence on a single carrier, and thus increased
uncertainty. Should the hub remain, the higher fares will continue to be the object of complaints. Should
the hub depart, its absence would be the object of very serious complaints.

2.3. Overview of Delta / Northwest Merger: The final section of overview, these few paragraphs will
briefly discuss the merger itself, before the study proceeds to discussing the outcomes of said merger.

A major hint that a merger or acquisition between Delta Air Lines and Northwest Airlines was
imminent was the move of Richard Anderson, former CEO of Northwest, to become the CEO of Delta Air
Lines.23 True to the predictions of the MAC, in April of 2008, Delta Air Lines and Northwest Airlines
announced the merger. In October of 2008, Delta Air Lines acquired Northwest Airlines, and although
the event was an acquisition, it has been known by most parties since as a merger.24

A lot of emphasis was placed on efficiently and quickly integrating the two airlines, especially
after the numerous complications in the People Express and Continental Airlines merger and the
America West and US Airways merger. Even with the emphasis of integrating the airlines, the process
took 14 months, with the airlines combining their operating certificates in January of 2010. Yet, the
process did go much more smoothly than previous and more recent mergers.25

After the operations were combined, the new Delta Air Lines was very large; it also had many
hubs, some of which were obvious duplicates in the network. With hubs at Tokyo Narita, Paris Charles
de Gaulle and Amsterdam Schiphol, the distribution internationally seems reasonable. However, in the
United States the West Coast had essentially no hubs, with focus airports at Seattle, Portland, and LAX,

23 Dr. J. Hamiel, personal communication, December 3rd, 2013
24 Mouawad, J.
25 ibid.
although Delta had a substantial hub in Salt Lake City. In the eastern half of the country, the list of large hubs is much longer: Minneapolis, Detroit, Memphis, Cincinnati, Atlanta, and JFK (and LaGuardia). With a prime motivation for consolidation being the gaining of “synergies” and efficiencies by eliminating duplication in the network, the next obvious questions for how MSP fares after the merger include how Delta operates its hub at MSP and how MSP fits in the Delta network.

3. Delta Air Lines and MSP

3.1. Delta Air Service at MSP: Prior to the acquisition of Northwest Airlines, Delta Air Lines had very little presence at the airport. Northwest, on the other hand, had its primary hub at MSP, hence comparing before and after the merger should yield important insights. Before analyzing the quantity of service at MSP prior to and after the merger, it is important to note, however, that the merger is not the only event to have occurred between 2004 and 2013 in the airline industry, or specifically to Northwest Airlines.

In fact, Northwest Airlines had begun drawing back its services at MSP, despite it being its primary hub, prior to the merger. If one is determined to apply causation to the merger alone, it is possible that Northwest Airlines preemptively cut back service in anticipation of the merger after it was determined but before it was underway. However, this scenario is not likely. Rather, it cannot be dismissed that in 2005, Northwest Airlines underwent bankruptcy protection and the ensuing restructuring of its strategy, so that the quantity of air service it supplied at MSP peaked in 2007, the year prior to the announcement of the merger and a full three years prior to the completion of the merger. In 2007 and 2008, the world economy entered into the most serious recession since the 1930’s, oil prices climbed to record levels (as they have continued to do), and the industry in the United States has seen what is being called “capacity discipline.” Therefore, it will be important to consider changes

26 Dr. J. Hamiel, personal communication, December 3rd, 2013
in Delta Air Line’s operations at MSP in the context of how those operations have changed at other airports, and especially taking changes made prior to 2009 with a grain of salt.

For example, analyzing the number of seats offered by Delta Air Lines and Northwest Airlines in 2004, 2009, and 2012 illustrates when the bulk of changes took place in the amount of supply to the market, do the available seat miles: 27

<table>
<thead>
<tr>
<th>Annual Seats</th>
<th>2004</th>
<th>2009</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>NW</td>
<td>1990866</td>
<td>15196861</td>
<td>0</td>
</tr>
<tr>
<td>DL</td>
<td>689627</td>
<td>783984</td>
<td>14800227</td>
</tr>
<tr>
<td>SUM</td>
<td>20598293</td>
<td>15980845</td>
<td>14800227</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Annual ASMs</th>
<th>2004</th>
<th>2009</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>NW</td>
<td>1.87E+10</td>
<td>1.51E+10</td>
<td>0</td>
</tr>
<tr>
<td>DL</td>
<td>5.87E+08</td>
<td>6.95E+08</td>
<td>1.48E+10</td>
</tr>
<tr>
<td>SUM</td>
<td>1.93E+10</td>
<td>1.58E+10</td>
<td>1.48E+10</td>
</tr>
</tbody>
</table>

Reviewing the developments in annual seats and annual ASMS, the great bulk of decline in both areas occurred prior to 2009 when the merger was beginning to take effect. However, the number of seats, and especially ASMs, should not be considered the primary measures of the air service provided by Delta Air Lines, as load factors are not constant and changes in average ranges, frequencies, and aircraft sizes, all factors in determining ASMs, do not necessarily effect connectivity, perhaps the most important measure of the health of the hub.

Shifting from the above measures of capacity to connectivity, the following table details the number of airports (not destination markets) which are directly served from MSP by Delta Airlines / Northwest Airlines from 2004 until 2012: 28

<table>
<thead>
<tr>
<th>Number of Airports Connected by Non-Stop Flights</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>167</td>
<td>171</td>
<td>164</td>
<td>162</td>
<td>166</td>
<td>164</td>
<td>157</td>
<td>152</td>
<td>149</td>
</tr>
</tbody>
</table>

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27 T100 accessed via Diio Mi
28 Ibid.
A clear decline in the number of destinations served is evident, but once again the majority of the decline took place prior to 2009. After 2009, the decline in destinations is almost entirely due to the dropping of approximately 20 routes to small Midwest communities, many of which are part of the EAS program, due to the economic infeasibility of the routes, not due to Delta Air Lines considerations towards its hub at MSP.\textsuperscript{29} Therefore, since the merger, the connectivity of MSP has been quite stable. This can be reinforced by the following maps, showing the non-stop routes from MSP operated by Northwest in red and Delta in blue for the years 2004, 2009, and 2013, respectively.\textsuperscript{30}

There are very few notable differences between these three maps, despite being separated by nearly ten years, two bankruptcies, a global recession, and one merger. Perhaps the most notable changes include a thinning of short range domestic routes, explained above, the addition of non-stop service to Paris CDG, the addition seasonal routes to Costa Rica,

\textsuperscript{29} Dr. J. Hamiel, personal communication, December 3rd, 2013
\textsuperscript{30} T100 accessed via Diio Mi, images generated using Great Circle Mapper
and the dropping of a couple of routes to Mexican destinations and, very noticeable, the dropping of non-stop service to Honolulu. According to the CEO of the Metropolitan Airports Commission, Dr. Jeff Hamiel, the most frequent complaint of the residents of the MSP catchment area is the missing link to Honolulu, dropped because, according to Delta Air Lines, the flight, requiring all of the available utilization of an A330 (which could be used on lucrative international routes), was almost always booked by vacationing frequent fliers using miles, thus proving very expensive for the airline.\textsuperscript{31} The route changes in Mexico are largely due to variations in services back and forth between Aeroméxico and Delta Air Lines, both SkyTeam members.\textsuperscript{32}

The addition of non-stop service to Paris CDG is a direct consequence of Delta Air Lines having a hub at that airport. The addition of routes to Costa Rica reflect growing interest in Latin America on the part of Delta and other airlines as Latin American countries continue to experience high levels of economic growth. In fact, the state of Minnesota is considering strengthening economic relations in Latin America, especially Brazil, so that the likelihood of non-stop services being added to cities in Brazil and elsewhere is increasingly likely.\textsuperscript{33} Smaller Midwest communities are losing service to MSP as oil prices rise and the smallest regional flights become economically infeasible. Meanwhile, the focus on international flights by network carriers means there is potential for growth in international connectivity. Although the lost connections to smaller Midwest communities is very difficult for said communities (The MAC advocates on behalf of these smaller communities.\textsuperscript{34}), these lost connections have little effect to the residents of the Minneapolis and St. Paul area while the non-stop connections to international markets is very important. Thus, from the perspective of the utility to the MSP region,

\textsuperscript{31} Dr. J. Hamiel, personal communication, December 3rd, 2013
\textsuperscript{32} ibid.
\textsuperscript{33} ibid.
\textsuperscript{34} ibid.
connectivity has remained stable and/or increased post-merger, with the potential to increase further in the future.

Finally, in discussing the air services provided by Delta Air Lines at MSP, it is important to look at trends in the numbers of passengers travelling, not simply the number of seats available. The following table includes the number of onboard departing passengers from 2004 until 2013.\textsuperscript{35}

<table>
<thead>
<tr>
<th>Onboard Departing Passengers, Annually</th>
</tr>
</thead>
<tbody>
<tr>
<td>NW</td>
</tr>
<tr>
<td>DL</td>
</tr>
<tr>
<td>SUM</td>
</tr>
</tbody>
</table>

Again, the majority of reductions in the number of departing seats took place before 2009. In fact, from 2009 on the number of passengers has remained almost constant. This reinforces that post-merger the air service at MSP from Delta Air Lines is marked by stability. The following graphic shows the same information spatially:

With slight decreases capacity while the number of departing passengers has remained almost constant, it is evident that Delta Air Lines has improved the efficiency of its operations with higher load factors.

\textsuperscript{35} T100 accessed via Diio Mi
This is consistent with the aims of Delta Air Lines, as reported by the MAC, to run a leaner and more efficient hub at MSP, compared to the operations of Northwest in the early 2000’s. This behavior on the part of the airline is also entirely consistent with the trends of capacity discipline by network carriers, especially considering which seats were removed from the market as enplanements remained steady.

Specifically, Delta Air Lines retired two aircraft types from the Northwest Airlines’ fleet that had been widely used at MSP. Engaged in capacity discipline, these seats were not entirely replaced. The figure above shows the number of departing seats separated by type of aircraft. The decline in seats represents the retirement of two old aircraft types, some of which were replaced with newer models.

3.2. MSP in the Delta Network: The image of stability for the Delta Air Lines hub at MSP strengthens when MSP is considered in the context of other hubs. Namely, by considering MSP alongside other hubs in the Delta Air Lines network, MSP seems poised to maintain its status at, effectively, a secondary hub for the airline only behind ATL. The following figures display percent changes in ASMS, seats, and finally the number of airports connected via non-stop flights.

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36 Dr. J. Hamiel, personal communication, December 3rd, 2013
37 T100 accessed via Diio Mi
38 ibid.
In all three metrics, MSP lost a small percentage of its capacity (although recall that this capacity has experienced greater utilization), but it remains in the center of the distribution for all metrics when compared to the other hubs and focus cities in the Delta Air Lines’ network. Looking at percentage changes in the number of non-stop connections, MSP actually ranks higher than ATL, which is of course the primary hub.

Upon reviewing the exact position of MSP in this distribution, one might conclude that MSP, although not suffering the losses of MEM or CVG, does seem precariously on the right.
side of center, even if it is close to ATL in all cases. However, assessing MSP’s position merely by percent changes allows for false comparisons. In terms of the sheer magnitudes of the hub, MSP is not in the same class as MEM, CVG, or SLC.\textsuperscript{39} Having been Northwest Airlines’ former headquarters and primary hub, it has a substantially larger volume of traffic. MSP also is more connected within the Delta Air Lines’ network, both domestically and internationally. It is important to consider that MSP is a secondary hub, perhaps the second hub, within the network, while the hubs that have been experiencing dramatic cuts are without exception tertiary or lower in the hierarchy of hubs. This is true of MEM and CVG, which by seats could be placed in the fourth level of hubs, as well as SLC, a tertiary hub by seats, if that airport continues to see cuts in capacity.

The following figure displays the number of departing seats available on Delta Air Lines (and Northwest Airlines) in the in the years 2009-2021:\textsuperscript{40}

\begin{figure}
\centering
\includegraphics[width=\textwidth]{changes_in_departing_seats.png}
\caption{Changes in Departing Seats (2009-2012)}
\end{figure}

\textsuperscript{39} T100 accessed via Diio Mi
\textsuperscript{40} ibid.
ATL has seen increases in the number of departing seats supplied, as has LGA. From the perspective of changes relative to magnitude, DTW and MSP, secondary hubs by seats, have remained more or less stable, as the slight decreases in number of seats have been offset by increased in load factor at those airports. Meanwhile, MEM and CVG, the hubs that have seen the largest cuts in service, by departing seats were not even half of the size of the hub at MSP. To suggest that the fate of these hubs has direct implications for MSP negates the fact that comparing MEM and CVG to MSP is not a comparison of apples-to-apples.

The same patterns hold if one considers the number of connections rather than the number of departing seats, perhaps a better way to judge the characteristics of a hub in the context of a network. The following figure displays the number of non-stop services operated from Delta Air Lines’ principle hubs and focus cities:

Changes in Number of Non-Stop Connections (2009-2012)

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41 T100 accessed via Diio Mi
42 ibid.
Multiple points can be taken from this figure. First, MSP ranks once again in the secondary level of hubs, while hubs being cut are in the tertiary or lower levels. Also, while MEM and CVG had, in 2009, two thirds of the number of destinations as MSP, they only had about one third the number of departing seats, meaning that these two hubs must have had a much less dense system, signifying either or both fewer frequencies on routes and/or smaller aircraft. This reaffirms that MSP is not comparable to MEM or CVG. Also notice that ATL lost many non-stop connections from 2009 to 2012, so that at least by this metric ALT did not “win” while all others “lost.” Rather than a clear cut shift from most hubs to a few, it would appear as if Delta Air Lines is making very strategic decisions, shifting fleets and frequencies between hubs to maximize its efficiency, and that MSP holds a prominent position in this new network.

Geographically, MSP also has several advantages. Reviewing a map of Delta Air Lines’ hubs and focus cities in the Eastern United States, MSP is not immediately adjacent to another major hub: 43

Both MEM and CVG are immediately adjacent to not only another hub, but a hub of a superior position in the hierarchy of the network. CVG is especially ill-placed, being squarely between DTW and ATL. MEM is almost directly west of ATL, so that east-west traffic through the hub is very much a duplicate of the traffic in ATL. MSP, on the other hand, is remote from ATL, and also not too close to DTW, of which it is in the same hierarchy in the system. MSP is also centrally located in the United States, and advantageously north for both trans-Atlantic and trans-Pacific flights.

43 Image generated using Great Circle Mapper
3.3. Delta’s Long Term Plans at MSP: Given all of the information presented above, the answer to the question of whether or not Delta Air Lines has kept its hub at MSP is very clear: it has. The developments at MSP before 2009 included some significant declines in air service by Northwest Airlines, but post-merger, air service can only be described as stable from the perspective of the airport and customers and more efficient from the perspective of the combined airline. The next question is if the Delta Air Lines’ hub will remain well into the future. From accounts of Delta Air Lines, the MAC, and evidence from the market place, it will.

According to representatives of the MAC, who met with Delta Air Lines representatives for several days on the topic, MSP is considered the second best hub in the network, only behind ATL. On a per passenger basis, MSP is the most lucrative hub in the network, given the large market share held by Delta Air Lines and the relatively higher fares at MSP compared to other airports. MSP is also a very stable market, not only in how Delta serves MSP but also in how MSP passengers demand travel.\(^4\) This is supported by the data presented earlier: the number of passengers transported has been stable, the size of the MSP hub ranks in the top three for all of the most common metrics, and Delta Air Lines enjoys over three fourths of the market share. In order to display both trends in average airfares at MSP and compare and contrast them to the same metric at other Delta Air

\(^4\) Dr. J. Hamiel, personal communication, December 3rd, 2013
Lines’ hubs, consider the figure above. The average airfares in the Minneapolis/St. Paul area are significantly higher than airfares out of other hub markets for all airlines, and have been for many years. Considering that the operating costs at MSP are very comparable to, for example, DTW, and MSP offers more revenue per passenger, why would Delta Air Lines not be keen to maintain, and even grow, this lucrative market in the future?

In addition, MSP is well-placed in the network to transfer passengers towards Seattle (SEA), which is Delta Air Lines’ primary gateway to Asia, which is obviously of great interest to the airline. One only has to glance at the recent headlines to notice that Delta Air Lines is very set on expanding its presence on the West Coast, especially SEA, and hence in the trans-Pacific market via SEA. This bodes well for Minneapolis – St. Paul, as its airfares are lucrative, its international flights are a priority for Delta Air Lines, and its domestic flights are set to see some growth if MSP is to help move passengers to SEA.

Finally, perhaps Delta Air Lines’ pattern of employment can speak to its relationship with MSP. Required to maintain at least 10,000 jobs due to an existing bond deal between Northwest Airlines and the MAC, Delta Air Lines is currently employing 13,000 people in Minnesota, with a major corporate presence on airport property. Delta Air Lines has a reservations center and IT center on site, as well as headquarters for Delta Connection, Endeavor Air, Compass Airlines, Mesaba Airlines, and formerly Regional Elite Airlines Services.

4. Competition at MSP

4.1. Observed Changes: The market at MSP has not changed drastically since the merger, but several important changes have taken place. Consolidations in other airlines have decreased the number of

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45 DB1B databank
46 Dr. J. Hamiel, personal communication, December 3rd, 2013
47 Mutzabaugh, B.
48 Dr. J. Hamiel, personal communication, December 3rd, 2013
49 Minneapolis-St. Paul International Airport, Delta Air Lines
carriers present at the airport but have also given the new merged airlines a more substantial presence and new “low cost” or “hybrid” airlines have entered the market. Most notably, Southwest Airlines and very recently Spirit Airlines have begun services at MSP. As of yet, Spirit Airlines has a very small presence, but Southwest Airlines over the course of only a few years has grown to nearly 6% of the departing seats at MSP, making it the second largest carrier at the airport, third after the American Airlines and US Airways merger. Alaska Airlines has also entered the market at MSP, although it has not captured a very substantial proportion of the market despite, or perhaps because, they entered at the same time as Southwest Airlines. The figure here displays the most recent data, 2012, for the percentage share of departing seats by airline.\(^50\)

As can be seen, the share of Delta Air Lines is still very high, although slightly lower than previously at 76% rather than 80%. This reflects how the Delta Air Lines’ operation has been trimmed and held back from growing, characteristic of capacity discipline, while competitor airlines have made use of the lull in Delta growth to expand their own operations. As these airlines expand their operations, competition helps to lower airfares. For example, on domestic routes Southwest Airlines has traditionally offered lower fares and Delta Air Lines matches them.\(^51\) However, if competition continues to expand, which would constitute a healthier market, it also takes some away of the attractiveness of

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\(^{50}\) T100 accessed via Diio Mi

\(^{51}\) Dr. J. Hamiel, personal communication, December 3rd, 2013
Delta Air Lines’ hub. This interesting dynamic with competition represents the underlying relationship between the hub and the residents of the region. It is evident that the hub means higher airfares. It is also evident that the hub means substantially more international and domestic connectivity than would ever be present if MSP was merely an origin destination (O-D) market. The result is that origin passengers at MSP have a love-hate relationship with the hub that defines their airport.\textsuperscript{52} In some sense, the higher airfares could be seen as the price to be paid for far above average non-stop connections.

Finally, on a simple measure of departing onboard passengers, the growth in non-Delta airlines at MSP has an important yet straightforward result: the stable number of passengers boarding Delta Air Lines’ flights coupled with increasing traffic on other carriers means that, post-merger, the number of passengers flying out of MSP has been growing:\textsuperscript{53}

\begin{figure}
\centering
\includegraphics[width=\textwidth]{chart.png}
\caption{Passenger Departures at MSP (2004-2012)}
\end{figure}

Although it may be tempting to consider the retractions that are regularly observed after consolidations and declare that all airports besides ATL ought to beware, by no means is the sky falling at MSP. In fact,

\textsuperscript{52} Dr. J. Hamiel, personal communication, December 3rd, 2013
\textsuperscript{53} T100 accessed via Diio Mi
considering that the substantial hub at MSP has been maintained while a healthier choice of competing carriers have been building service at the airport, the post-merger MSP is doing well.

**4.2 Future Key Players:** Looking more closely at developments in the operations of other airlines at MSP, the key players in competing with Delta Air Lines at MSP number four, and perhaps between five and eight in the future. The figure below displays the number of departing seats by airline:\(^5^4\)

American Airlines, combined statistically with US Airways given the impending merger has grown slightly in the market, although it will likely level off or retract slightly when redundant services are ended after the merger. United and Continental services have remained very constant between 2004 and 2013. Sun Country, which is a low cost carrier based out of MSP, has also been rather stable in its air service. Southwest Airlines grew their operation substantially since 2008, and also acquired AirTran which was an experienced member of the MSP market. However, since about 2011, the airline has not grown. Still,

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\(^5^4\) T100 accessed via Diio Mi
its presence at the airport has had an impact, although more as a “new” carrier than as a “low cost” carrier, as its costs structure has been converging with the network carriers.  

For future possibilities, several airlines may have potential for expanding or entering the market. Alaska Airlines entered the MSP market at the same time as Southwest Airlines, as mentioned, but has remained a small factor in the market. However, considering the contest for market shares that have recently been occurring between Alaska and Delta, it could be that Alaska may add frequencies to MSP from its hubs on the West Coast, especially if Delta does so. The airline with the highest probability of entering the market is JetBlue. It was considering beginning a service at MSP but notified the MAC that it started serving DTW instead. However, MSP came in second. With regular meetings with the MAC, it seems likely that JetBlue will begin services at MSP perhaps in 2015, especially with services to Boston and/or New York. Virgin America has also shown interest in MSP, although not so keenly as JetBlue. Finally, Frontier might pose the possibility of expanding its services, or retracting them. As that airline restructures itself, it will be interesting to see what it will do at MSP, given that it has had a presence there for many years.

5. Metropolitan Airports Commission Response

It is critical for the welfare of the community that the air service at MSP be maintained into the future, and expansion would be very beneficial. InterVISTAS Consulting LLC developed a study analyzing the economic impacts of MSP on the Twin Cities in 2012. The general results of the study concluded that MSP contributes an additional $10.1 billion to the local economy. This impact is divided into three groups: $5.7 billion in direct operations, $2.16 billion in indirect impacts, and $2.26 billion in induced

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55 Dr. J. Hamiel, personal communication, December 3rd, 2013
56 ibid.
57 ibid.
58 Minneapolis-St. Paul International Airport Economic Impact Study
impacts. MSP supports approximately 76,340 jobs. 19,800 are directly created by MSP operations, 13,400 indirectly, 17,100 induced, and 1,540 from capital improvements at the airport. 24,500 jobs are from the expenditures of visitors via the airport. Beyond the successful operating of the airport, the MAC, as a public corporation, manages an extremely vital facility for the entire region.

In order to address the uncertainties of the future, the MAC has not only created a series of comprehensive forecasts that are updated as needed, they have also devoted a large section of their Long Term Comprehensive Plan to a plethora of alternative scenarios. Hence, when the future holds surprises the MAC is prepared with a flexible master plan capable of responding to new circumstances as they arise.

For airline operations, the primary concern is landside capacity. In large part due to the MSP 2010 plan, airside capacity is adequate for many years into the future. On the other hand, landside capacity is already approaching saturation, specifically in the Humphrey Terminal (T2). The picture on the right displays a very general illustration of one alternative for alleviating this constraint. It is only one of many, but all involve adding very significant capacity to the terminal, which is used for all non-network carriers (excluding Great Lakes) and in the future may be used for all non-Delta carriers. At the present moment, making more capacity for carriers is a top priority for the MAC, as it is always recruiting new carriers, and

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59 Minneapolis-St. Paul International Airport Economic Impact Study
60 ibid.
61 Dr. J. Hamiel, personal communication, December 3rd, 2013
62 Long Term Comprehensive Plan
63 Dr. J. Hamiel, personal communication, December 3rd, 2013
encouraging existing carriers to expand their operations. One such plan, which holds promise as a quick fix, is to move Great Lakes airlines, which operates 1900D’s into MSP from small communities, from Concourse E to Concourse A (one of the regional concourses) in T1, thus freeing larger gates at Concourse E for an airline currently in the Humphrey Terminal (T2) to transfer to the Lindbergh Terminal (T1). Gates are available in Concourses A and B because Delta Air Lines has retired its Saab 340 fleet and is planning to retire most of its CRJ200’s. In order to utilize the small gates in these concourses after the small aircraft have been retired, the inside gates of Concourse B are to be closed, so that all of the space in the terminal can be used for gates on the outside of the concourse and the space between A and B can be devoted to aircraft parked at A.

Expanding the Lindbergh Terminal is also on the horizon, as illustrated in the following figure.

![Lindbergh Terminal Improvements](image)

This plan highlights the flexibility built into the master plan. The expansion for Concourse G has multiple sizes and internal configurations ready, depending on if and when traffic develops to require

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64 Dr. J. Hamiel, personal communication, December 3rd, 2013
65 Long Term Comprehensive Plan
the expansion, and what type of traffic that will be.\textsuperscript{66} Both plans for domestic and international travel expansion have been developed, as well as plans that involve Delta Air Lines being the sole occupant of T1 if more carriers use the airport. Ultimately, the most powerful flexibility is the ability to go ahead with the plans or not depending on what developments occur in the future, rather than presupposing the forecasts are correct and becoming set on one strategy. The MAC has done a remarkable job in not only dealing with developments post-merger, balancing its goals with that of the airlines, but also of preparing itself for future challenges. If the \textit{MSP 2010} program’s success, which has won several awards and much recognition, is a sign of the quality of foresight deployed in meeting future challenges, MSP is well positioned.

\textbf{6. Conclusion}

After reviewing the operations of airlines before, during, and after the merger of Delta Air Lines and Northwest Airlines, the outcomes of the merger have been positive for the airport and, with the ever present need to acknowledge uncertainty, likely to remain positive into the future. It is true that a major global airline is no longer headquartered at MSP, but Delta Air Lines has shown loyalty to its hub there and has many good reasons to continue doing so. Meanwhile, its regional affiliates, who are responsible for a growing share of its domestic services, are now headquartered there. Even as MSP is still dependent on a single carrier for a majority of its air service, that carrier, via the merger, has been transformed from one in Chapter 11 bankruptcy protection to one of the most profitable airlines in the world, one with improving customer service ratings as well. Meanwhile, other carriers at the airport including Southwest Airlines, Alaska Airlines, and Spirit Airlines have entered the market and may possibly be followed by JetBlue and Virgin America. The outcome of these occurrences is a dependable air service for MSP with incredible connectivity per capita and a steady yet manageable growth rate, one that the MAC has a flexible plan to accommodate. The sky is not falling at MSP. Rather, the future

\textsuperscript{66} \textit{Long Term Comprehensive Plan}
appears to be in its favor, and the merger of Delta Air Lines and Northwest Airlines was not an insignificant part in setting the stage for this future.
7. References


