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# Twenty five years of measuring airline service quality or why is airline service quality only good when times are bad?



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#### ARTICLE INFO

#### ABSTRACT

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*Keywords:* Service quality Service Disquality Index Airline service quality to many U.S. passengers may be the ultimate oxymoron based on stories, statistics and the perception that airlines help to foster. In reviewing data from the last 25 years from the Service Disquality Index (SDI) it appears that service quality in the U.S. is only met in times of economic distress or the after effects of terrorism. Due to recent actions mandated by the U.S. Department of Transportation, the chase for ancillary revenues and airlines perhaps finally practicing some constraint, major U.S. airlines are finally meeting minimum standards for service quality as reflected in recent SDI scores.

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#### 1. Introduction

The headline for a National Public Radio article (Memmott, 2013) about the 2013 Airline Quality Rating (AQR at http://www. airlinequalityrating.com) report notes a fundamental contradiction in U.S. airline service quality, namely, the fact that the AQR results remain near all-time high levels for service quality delivered while customer complaints are "soaring." Customer complaints to the U.S. Department of Transportation (DOT) are one of the four areas that comprise the AQR system with the other airline service quality measurements being on-time performance, denied boardings, and baggage problems. The difficulty with this type of reporting is that so few consumers actually complain to the DOT where the complaint numbers are generated. An examination of the Air Travel Consumer Report (ATCR at http://www. dot.gov/airconsumer/air-travel-consumer-reports), the source of the data for the AQR, would reveal the fact that the complaint rate for all of 2012 was 15,335 complaints out of 51,618,136 passenger enplanements or a 00.0297 percentage. In 2011 there were 11,546 complaints out of 45,686,141 passenger enplanements or a 00.0252 percentage. While the story correctly notes "complaints last year rose 22 percent in 2012," the actual percentage difference in the number of complaints between the years, there is a miniscule percentage difference when one uses enplaned passengers as the denominator for the actual percentage rate. This example demonstrates a problem with examining only one of the service factors reported by the ATCR. The

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rates reported by the National Public Radio story and the AQR do not reflect the relatively small absolute magnitude of the change in complaint behavior.

Another annual report, the J.D. Power Airline Satisfaction Study (2013), found one of the highest levels of satisfaction with airline service since 2006, although passengers who reported paying baggage fees reported overall lower levels of satisfaction. Past research has shown little relationship between the AQR report and the J.D. Power Satisfaction Study (Waguespack & Rhoades, 2009). The difficulty in understanding and comparing airline service quality reports arises from the varying systems of measuring service quality available. The AQR uses secondary airline operational data reported to the DOT, while J.D. Power relies on a national sampling process that considers a variety of additional service quality indicators. Both measures provide only a snapshot of U.S. airline service quality without placing the airlines into a broader service context. Thus, it appears within the U.S. an industry that normally ranks near the bottom of the annual American Customer Satisfaction Index (ACSI at http://www.theacsi.org) when compared to other industrial segments and once ranked below the U.S. Internal Revenue Service in customer satisfaction in the ASCI can remain at near all-time highs in 'quality' depending on what you measure and who you ask (ACSI, 2013; J.D. Power, 2013; Yu, 2007). If U.S. customers are more satisfied with their experience at the taxman's office than their airline counter, then where is the quality? What do these measures of 'quality' represent? What does it say about U.S. consumers and airlines?

Conventional marketing theory would suggest that service quality leads to customer satisfaction which leads to customer loyalty and increased corporate profits (Szwarc, 2005). Under this conceptualization why service quality matters is clear—a satisfied customer leads to

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loyalty, repurchase behavior and a recommendation to other customers (Harris & Uncles, 2007; Ringle, Sarstedt, & Zimmermann, 2011; Saha & Theingi, 2009). The Net Promoter Score (NPS) system is perhaps the most extreme conceptualization of this process. The NPS argues that while service quality and customer satisfaction are important, in reality satisfaction surveys and tracking studies do not predict loyalty or the customer repurchase behavior that firms seek to foster. Instead one question, "how likely is it that you would recommend [company x] to a friend or colleague?" (Reichheld, 2003; page 49) drives growth. Airlines such as Southwest and JetBlue use the question in their post flight customer surveys to find the 'promoters' who support airline growth (Bain & Company, 2013; Reichheld, 2003).

So, does it matter that airline passenger complaints (and presumably dissatisfaction) are rising? Is it time for airlines to rethink their customer service as part of a broader marketing campaign? Has poor service and low customer satisfaction endangered corporate profits? In the case of airlines, the answer to these questions, again, is unclear. A case in point is the recent news that airlines posted new record revenue for ancillary fees such as checked luggage and changed reservations that helped raise the profit margin for the top 10 carriers to 3.7% (Jones, 2013). Contrast this report to a list of the Top 6 air passenger complaints which places additional fees in the number one spot ahead of seat comfort, flight delays and cancellations, lost or misplaced baggage, length of time at security, and unfriendly security employees (Foster, 2012). In short, the increasing fees that appear to be helping airlines achieve profits are the number one complaint of airline customers.

During the twenty-five years the DOT has published the *Air Travel Consumer Report*, the U.S. airline industry has witnessed the recession of the early 1990s (1990–1991), the bursting of the dot.com bubble (1999–2000), the terrorist attacks of 9-11 and the resulting impact on flight levels, and the Global Financial Crisis of 2008 with the associated "Great Recession" that followed. While the trend in fuel prices has been upward, there have also been periods of fuel price spikes, particularly in 2000, 2008, and 2011 (Avro, 2012). Since the airline industry is highly cyclical and sensitive to the economic cycle and especially fuel sensitive, these events have had a significant impact on the industry (Jang, Choi, & Lee, 2011; Rhoades & Waguespack, 2008a, 2008b; Taneja, 2003). This impact has been reflected in the financial, operational, and, as we will see, quality performance of the industry.

The Service Disquality Index (SDI) utilizes the ATCR data for on-time flights, baggage reports, oversales, passenger complaints to the DOT and cancelations standardized by departures to track the rise and fall of airline service factors since the inception of the ATCR (Rhoades & Waguespack, 1999, 2000, 2001, 2004, 2005, 2008a, 2008b; Rhoades, Waguespack, & Truedt, 1998). Not all U.S. air carriers are presented in the ATCR as only air carriers earning at least 1% of domestic scheduled passenger revenues must report the operational data in the ATCR. Unlike the AQR, the SDI has never weighted its various measures and is expressed as the total number of 'quality' problems per departures. This review updates the SDI twenty year report on U.S. airlines service quality including the number of cancellations which was added to the ATCR in April of 2000 (Rhoades & Waguespack, 2008a, 2008b). The methodology provides two benefits over the AQR. The SDI derived scores represent the likelihood of a service problem per departure for the airline. This method allows a historical view of the service disquality delivered by the airline as well as a meaningful measure for consumers. Additionally, as the AQR reports a negative weighted score, since no airline has ever received a positive score, there is little value to consumers of the negative score. In fact the AQR is usually reported as a simple ranking of U.S. airlines without much discussion of the meaning of the scores computed. The twenty five year review of SDI scores in this research leads into a discussion of what service quality means in the airline industry, how airlines respond to service quality concerns, and why passengers have made airlines the industry everyone loves to hate.

#### 2. Defining and measuring quality

One of the results of the Airline Deregulation Act of 1978 was to change the way airlines approached service quality. Prior to 1978, the Civil Aviation Board (CAB) established minimum service standards as well as fares. With deregulation, markets would now signal airlines on price, routes, and service levels. There are two general methods for measuring airline quality. The first is based on customer survey research. Academic research journal articles have appeared utilizing some conceptualization such as SERVQUAL (Babbar & Koufteros, 2008; Chau & Kao, 2009; Saha & Theingi, 2009; Wu & Wang, 2012) or Total Quality Management (Namukasa, 2013; Singh & Sushil, 2013) and organizations such as Frequent Flyer, Conde Nast, and Consumer Reports periodically release the results of their latest surveys. While these organization surveys are often widely cited in the press and provide an excellent snapshot into airline quality, there are a number of weaknesses. First, both the academic research and the organizational surveys are cross-sectional and the factors included within and across surveys have tended to vary making comparisons difficult. Second, these surveys have often failed to provide overall quality ranks in favor of category-by-category rankings (best food, best entertainment system, etc.). The second method of examining airline service quality in the U.S. relies on secondary data, primarily from the ATCR. The Aviation Institute at the University of Nebraska published the first Airline Quality Rating report in 1991. The original report included service, safety, and financial indicators that were weighted by industry experts. The AQR was changed to disaggregate, then eliminate some factors to reflect a 'purer' service quality measure. The second group of researchers began reporting on airline service in 1998 with the Service Disquality Index (SDI), although the index went back to the first publication of the ATCR in 1987 to begin analysis of service disquality (Rhoades et al., 1998). Service and safety quality were separated from inception to construct two different rankings of airline performance (Rhoades & Waguespack, 1999, 2004). Rhoades and Waguespack (2000) examined the service and safety quality of US national and regional carriers while Rhoades and Waguespack (2005) compared traditional legacy (major carriers) with low-cost carriers (LCC). Over the years, the SDI has found little relationship between service and safety quality for major US carriers, but there is a very high relationship between the rankings for national and regional carriers (Rhoades & Waguespack, 2000).

Rather than simply ranking carriers, the SDI calculated a mean and confidence interval for each year to determine if there were true statistical differences between the reporting carriers. In most cases, the top two and bottom two carriers in a given year are statistically different from others in the ranked lists. Results from the twenty year report found three distinct periods in service quality—1987 to 1994, 1995 to 2000, and 2001 to 2006 (Rhoades & Waguespack, 2008a). Rising service problems, reflected in higher SDI scores, corresponded to times of economic and airline recovery. During periods of financial and social crisis, airlines and customers retrench. Fewer flights and passengers reduced airport congestion, improved on-time performance and corresponded to less checked baggage to lose and flights to cancel.

#### 3. SDI calculation: methods and findings

The U.S. Department of Transportation *Air Travel Consumer Report* is the source for the data analyzed. The ATCR reports on a variety of airline operating statistics for airlines earning at least 1% of domestic scheduled passenger revenues. Data collected includes departure and on-time performance across U.S. airlines and major U.S. airports along with airlines' cancellation totals and categorized causes of delays. Additional metrics on service quality include involuntary denied boardings, mishandled baggage, and customer complaints to the U.S. DOT on flight problems, ticketing, refunds, fares, customer service, advertising, and other sales (reservations) and service categories. To complete the cancellation data for the SDI rates in Table 1, a review of past airline operating Download English Version:

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