ROLE OF CULTURE ON AIRLINE SERVICES

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ABSTRACT

In an attempt to deliver consistent service quality, airlines standardize their processes. However, according to divergence theory, organizations and employees imbibe the culture of the society in which they grew up and unknowingly affect the way services are designed and delivered. In this paper, we study the role of societies’ cultures on one element of infrastructural service quality, in-flight content services, in airline operations. We use a non-perceptual global, airline dataset to measure the quality rankings of in-flight content services that include both in-flight entertainment and in-flight print media. Hofstede’s four dimensions, power distance, individualism, masculinity, and uncertainty avoidance are used to measure cultural differences. Our results show that individualistic cultures with limited teamwork and negatively impacts the quality of in-flight content services while highly masculine cultures with inert competitive spirit, aggressively work towards improving the quality of in-flight content services.

Keywords: National Culture, Service Quality, Airlines, Hofstede, In-flight Entertainment

INTRODUCTION

In order to maintain consistent service quality and to minimize variability in services provided to different customers, airlines standardize their service delivery process and work towards creating and delivering dependable services for their customers. However, service providers and employees raised in a certain culture may have absorbed norms and values specific to that culture and these norms then dictates their thinking and actions. Divergence theory says that “national culture, not industrialized practice, drives values, and that even if the country becomes industrialized, the value systems in the workforce remain largely unchanged” (Ralston, et al 1997, p. 183). Organizations imbibe the nations’ culture, norms and beliefs and unbeknownst influence the process of service design and delivery. Employees who grow up learning their own’ cultural norms, beliefs, and values, will bring those cultural biases which may have positive or negative influence on the design and delivery of systems, processes, procedures and even communication of the organization. Scholars have studied customers’ expectations and perceptions of service quality in the airline industry using ServQual measures (Sultan and Simpson, 2000; Gilbert and Wong 2003), and customer satisfaction (Chang and Yeh, 2002) surveys to improve the quality of outcomes of service delivery. However, to our knowledge, there is limited research on how quality of service can be improved by alleviating the influence of nations’ cultures on the design and delivery of services in airline industry.
Quality of airline services includes the ability to provide high quality infrastructural, personnel (communication), and structural services to passengers (Gnanlet and Yayla-Kullu, 2013). One of the infrastructural services that airlines use as a differentiating tool among competitors is ‘quality of in-flight content services’. Passengers constrained by the limited space are provided in-flight content services in order to increase the psychological and physiological well-being of the passengers (Couldry and McCarthy, 2003). In-flight content services which include in-flight audio/visual systems, and in-flight print media, are delivered at appropriate times to improve the customer’s service experience. As software engineers, media designers and technology consultants design and build in-flight content services, their processes may be affected by the culture in which they were raised. As airlines are serving customers with diverse needs and backgrounds, airline management including the support personnel should be aware of the cultural biases, either positive or negative, on the ‘quality of in-flight content services’ delivery. For example, some U.S. airlines provide access to real-time ATC (air traffic controller) conversations with the cockpit while airlines from conservative Middle Eastern countries only allow family friendly media. Thai Airways recently screened 15-minute instructional videos teaching tourists how to address monks, and what to wear in a Buddhist temple. Therefore, in this paper we study the role of nations’ cultures on the quality of in-flight content services designed and delivered to customers in the airline industry. Quality of other airline services such as website, communication, infrastructural, and behavioral dimensions which may be affected by nations’ cultures is presented in the full paper which is available from the authors.

LITERATURE REVIEW

In-flight Content Services

Leidner and Kayworth (2006) indicate that North American and Asian managers may have different philosophies in regard to the means by which they provide high quality service to their stakeholders. Airline industry uses in-flight content services as a channel to share and communicate, and provide high quality experience to customers. Aksoy, Atilgan and Akinci (2003) showed that in short-haul flights, in-flight entertainment activities emerged as a distinct service dimension for both foreign and domestic airline passengers, in particular, expectations of telephone call option, films and broadcasts, visual flight information and various music options. Alamdari (1999) concludes that in-flight entertainment (IFE) contributes greatly to passengers’ satisfaction within the airline services, and in-flight entertainment services have the potential to generate future revenue. Gilbert and Wong (2003) find that quality expectations for in-flight entertainment and programs are highest for holiday travelers followed by passengers visiting friends/family and finally business travelers. Chen and Chang (2005) found that in measuring service quality gap both managers perception and customers’ perception and expectation is significantly affected by in-flight entertainment materials and programs. Airlines are using in-flight content systems as a differentiating tool to provide better information-based services and we measure the construct ‘quality of in-flight content services’ using quality ratings of two items: in-flight print media (which includes newspapers and magazines) and in-flight entertainment programs. Some airlines use in-flight magazines to provide branding and marketing for their firm as well (Couldry and McCarthy, 2003).
Cultural Dimensions

Hofstede (1980) contends that national culture is an important issue in management theory and indeed national culture has been identified as an important variable in many global studies across disciplines (e.g. Kogut and Singh, 1988; Nakata and Sivakumar, 1996; Steenkamp, 2001; Pagell et al, 2005). Taras et al. (2010) meta-analyze the relationship between Hofstede’s (1980) original four cultural dimensions and a variety of organizationally relevant outcomes and find that these dimensions strongly relate to emotions, attitudes and finally behaviors. Power distance (PDI), according to Hofstede, is the extent to which less powerful members of organizations accept that power is distributed unequally. Uncertainty avoidance (UAI) is the extent to which a society feels threatened by uncertain situations and avoids these situations by providing career stability, establishing formal rules, and not tolerating deviant ideas. Individualism-collectivism (IDV) suggests a loosely knit social fabric in which people take care of themselves contrasted with a social fabric in which groups take care of the individual in exchange for his or her loyalty. Masculinity-femininity (MAS) reflects whether the dominant values are associated with the collection of money and things (masculine) contrasted with values associated with the caring for other and the quality of life (feminine) (Hofstede, 1980, 2001, 2012). Shore and Venkatachalam (1996) indicate that among the four dimensions, power distance and uncertainty avoidance are emphasized by Hofstede (2001) in studying organizations within a culture.

THEORY BUILDING

Power Distance

“Power distance is a measure of the degree to which the less powerful members of a society accept and expect that power is distributed unequally (Hofstede, 2012).” In high power distance cultures, people accept a hierarchical order in which everybody has a place and which needs no further justification. In societies with low power distance, people strive to equalize the distribution of power and demand justification for inequalities of power (Hofstede, 2012). Individuals from high power distance cultures accept power hierarchy, tight control, and vertical top down communication (Donthu and Yoo, 1998). Service providers from high power distance culture assume high PDI characteristics and maintain strict control in a service delivery situation by considering customers as ‘weaker’ members of the society requesting service while considering themselves as ‘powerful’ members of the society because of possessing ‘ascribed knowledge’ (Lorezoni and Lewis, 2004). By considering customers as weaker members and service providers as powerful members in the hierarchy, service providers could disregard the customer’s needs and provide services that the service provider deems fit. For example, the screen majority of the in-flight content in ethnic language without any option for sub-title in other languages indicating the division due to a high power distance culture and what they view as fit for customers (Couldry and McCarthy, 2003).

Hypothesis 1: Service providers from a culture of high power distance provide lower quality of in-flight content services.
Individualism

“The high side of this dimension, called Individualism, can be defined as a preference for a loosely-knit social framework in which individuals are expected to take care of themselves and their immediate families only. Its opposite, Collectivism, represents a preference for a tightly-knit framework in society in which individuals can expect their relatives or members of a particular in-group to look after them in exchange for unquestioning loyalty (Hofstede, 2012).” As Furrer et al. (2000, p. 360) said “we do not expect that the employees, also individualists, have the customers’ best interests at heart.” Kettinger et al (1995) posit that behavior of individuals from an individualistic society is based on presumed needs of individuals who seek their self-interest. Kull and Wacker (2010) hypothesize that highly collectivist (low on individualism) cultures would have higher quality management effectiveness in manufacturing systems. Individuals from an individualistic society are appreciated when tasks they complete lead to higher self-performance even at the cost of societal welfare. Employees and service providers may base their decisions for in-flight content services based on efficiency and reaching their individualistic goals without much thought to teamwork and meeting the collective needs of customers.

Hypothesis 2: Service providers from a highly individualistic culture provide lower quality of in-flight content services.

Masculinity

“Masculinity and femininity represents "the dominant sex role pattern in the vast majority of both traditional and modern societies" (Hofstede 1980, p. 277).” Khanin, Gnanlet, and Leibsohn (2012) say that masculinity is typically related to the cultural appreciation for self-assertiveness, self-efficacy, and acquisitiveness- an orientation toward securing hard assets and tangible benefits. Because of the emphasis for need for achievement and masculine oriented cultures emphasizing performance, ambition, and independence, service providers of masculine cultures are competitive, motivated, and looking for ways to provide high quality service to customers. Employees and service providers are motivated with jobs that are challenging but enriching. Tsikriktsis (2003) found that a masculine society emphasizes interactivity, design and emotional appeal as a characteristic for website quality which is a part of infrastructural service for airlines. Using similar arguments, we hypothesize that service providers from a masculine culture would value performance, better support systems, high quality in-flight technology for customers.

Hypothesis 3: Service providers from a highly masculine culture provide high quality of in-flight content services.

Uncertainty Avoidance

“The uncertainty avoidance dimension expresses the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity. Countries exhibiting strong UAI maintain rigid codes of belief and behavior and are intolerant of unorthodox behavior and ideas. Weak UAI societies maintain a more relaxed attitude in which practice counts more than principles (Hofstede, 2012).” Both service providers and employees from a culture of high uncertainty
avoidance actively avoid uncertainty though detailed planning and risk aversion. They believe that high customer service is obtained through higher levels of standardization (going by rules and procedures) rather than customizing service delivery by providing room for judgment to meet individual customers’ needs. Newman and Nollen (1996) find that firms providing clear policies and direction for employees in a culture of high uncertainty avoidance perform better than employees from low uncertainty avoidance cultures. Therefore, service providers from high uncertainty avoidance culture are risk averse when designing and delivering content-based services and avoid any risk involved by deviating from rules even at the cost of poor service quality.

Hypothesis 4: Service providers from a high uncertainty avoidance culture provide lower quality of in-flight content services.

METHODOLOGY

Skytrax is a globally recognized, independent professional audit organization that provides detailed quality analysis for over 800 different areas of product and service delivery in the airline industry (Skytrax, 2012: http://www.skytraxresearch.com/). Each airline’s ranking is reviewed in-depth by professional auditors without any cultural bias. Annual rankings ranging from 1 star to 5 stars is assigned. It is very important to note that these ranking are not based on customer feedback or reviews. Hence, culture of the customers has no impact/bias on the evaluation of service providers’ assessment. Both overall star rankings and detailed quality assessment results are publicly available on the Skytrax website. These rankings have been studied in prior research (e.g., Tsantoulis and Palmer, 2008; Han et al., 2012). Since the content services vary in terms of variety and quality between business and economy classes, long-haul and short-haul, we focus on economy class, short-haul flights for the year 2011 in this paper. Our sample includes data from 87 airlines based in 54 countries, and represents about 40% of the entire global population (221 registered airlines) of the firms in this industry.

Quality of in-flight content services is defined “as the extent to which informational based services are met through design and delivery of audio systems (music channel), video systems (video-on-demand, computer games, destination information, financial services, shopping catalogues, exterior-view cameras), communications systems (telephones, power supplies), and availability of print media such as magazines, newspapers”. To measure quality of in-flight content services, we use two variables: quality of in-flight entertainment and quality of in-flight print media.

The larger airlines, which also operated longer, have greater resources to design and develop better service delivery systems. We used three control variables to control for size and age of the airline viz., fleet size, number of years in operation, and number of employees (log transformed).

RESULTS AND DISCUSSION

Table 1 provides the descriptive statistics and correlations between the dependent, independent, and control variables. We tested our hypothesis using regression analysis and later using a structural model. We checked the assumptions related to the regression analysis prior to
conducting the analyses. We found that the residuals satisfy the distributional assumptions and variation inflation factors were low indicating no multi-collinearity problem.

Table 1: Descriptive Statistics and Correlations

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>S.D</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
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<tbody>
<tr>
<td>Quality of in-flight content services</td>
<td>5.69</td>
<td>1.49</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>PDI</td>
<td>59.64</td>
<td>21.28</td>
<td>0.06</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>IDV</td>
<td>50.32</td>
<td>26.13</td>
<td>-0.18</td>
<td>-0.76**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>MAS</td>
<td>53.21</td>
<td>15.71</td>
<td>0.16</td>
<td>-0.08</td>
<td>0.14</td>
<td>1.00</td>
<td></td>
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<tr>
<td>UAI</td>
<td>58.65</td>
<td>24.22</td>
<td>-0.15</td>
<td>0.14</td>
<td>-0.12</td>
<td>-0.23*</td>
<td>1.00</td>
<td></td>
<td></td>
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<tr>
<td>Fleet size</td>
<td>107.54</td>
<td>140.98</td>
<td>0.10</td>
<td>-0.19*</td>
<td>0.29**</td>
<td>0.20*</td>
<td>-0.11</td>
<td>1.00</td>
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<tr>
<td>Firm experience</td>
<td>44.61</td>
<td>27.26</td>
<td>-0.01</td>
<td>-0.13</td>
<td>0.11</td>
<td>0.00</td>
<td>0.18*</td>
<td>0.23*</td>
<td>1.00</td>
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<tr>
<td>Employee size</td>
<td>8.77</td>
<td>1.38</td>
<td>0.40**</td>
<td>-0.14</td>
<td>0.16</td>
<td>0.25**</td>
<td>-0.06</td>
<td>0.57**</td>
<td>0.39**</td>
<td>1.00</td>
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</table>

**<0.01 significance level; *<0.05 significance level

Table 2: Regression Model and Results

<table>
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<tr>
<th>Variables</th>
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</thead>
<tbody>
<tr>
<td>PDI</td>
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</tr>
<tr>
<td>(0.010)</td>
<td>(0.009)</td>
</tr>
<tr>
<td>IDV</td>
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<tr>
<td>(0.009)</td>
<td>(0.008)</td>
</tr>
<tr>
<td>MAS</td>
<td>0.017*</td>
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<tr>
<td>(0.010)</td>
<td>(0.010)</td>
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<tr>
<td>UAI</td>
<td>-0.008</td>
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<tr>
<td>(0.006)</td>
<td>(0.006)</td>
</tr>
<tr>
<td>Fleet Size</td>
<td>-0.002</td>
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<tr>
<td>(0.006)</td>
<td></td>
</tr>
<tr>
<td>Firm experience</td>
<td>-0.002</td>
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<tr>
<td>(0.001)</td>
<td></td>
</tr>
<tr>
<td>Employee size</td>
<td>0.565***</td>
</tr>
<tr>
<td>(0.149)</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>6.829***</td>
</tr>
<tr>
<td>(1.178)</td>
<td>(1.563)</td>
</tr>
<tr>
<td>R²</td>
<td>0.098</td>
</tr>
<tr>
<td>Adj. R²</td>
<td>0.058</td>
</tr>
<tr>
<td>F</td>
<td>2.436</td>
</tr>
<tr>
<td>N</td>
<td>95</td>
</tr>
</tbody>
</table>

* p < 0.10, ** p < 0.05, *** p < 0.01
The result for the regression analysis is presented in Table 2. The first model of the regression only considers the Hofstede’s cultural dimensions to understand its influence on the quality of in-flight content services. The second model validates the significance using both Hofstede’s cultural dimensions and control variables that controls for size and age of the firm. Both models provide support for two of the four hypotheses. Even after adding control variables for size and age, the statistical significance still holds for individualism and masculinity in addition to workforce size.

We find that organizations from individualistic culture have a significant negative impact on quality of in-flight content services. Service provider which includes the organization and the employees contribute to the process of designing and delivering services through in-flight content services. The results confirm the theory that organizations from an individualistic culture may have over-emphasized the need for self-growth and promotion. The findings indicate that firms keen on reaching their goals without collectivistic ideals may struggle to achieve high quality when the employees behavior influence the process of producing and delivering products such as the in-flight content system and their related services. Firms from highly individualistic society such as Australia, Great Britain, and United States, should create formal interventions that help to minimize the attitude of self-interest and increase the effort that acknowledges team goals, relationships, and positive impact on collaboration while designing and delivering in-flight content systems and services.

Our results show that organizations from masculine culture have significant positive effect on the quality of in-flight content services. Because of the emphasis for need for achievement and the inert competitive spirit, masculine oriented cultures are inherently looking for ways to provide high quality service to customers. Having highly competitive and achievement-oriented employees is good for the performance of the firm. Hofstede (1980) lists achievement as a defining characteristic of masculine cultures: “Performance is what counts; you live in order to work; one admires a successful achiever” (p. 49). Societies with highly masculine culture such as Japan, Australia, Italy, and Switzerland provide high quality product and services in designing and delivering in-flight content systems. Swissair designs its in-flight magazine so attractive and useful for the passengers that they are able to charge $24,000 for a one page advertisement (Couldry and McCarthy 2003).

We find that power distance and uncertainty avoidance do not have significant effect on quality of in-flight content services. We also find that employee size, the control variable for firm size is statistically significant indicating that bigger the firm, larger the resource pool to offer high quality service. Gooding and Wagner (1985) show that workforce size has a positive impact on performance. The objective of this paper is to tease out the effect of culture on airline services and so we find that individualistic and masculine culture has significant influence on the airline services over and above the effect of larger workforce.

CONCLUSION

Society’s culture greatly influences the norms, beliefs, and attitudes of people and consequently the behavior of both employees and service providers which in turn affects the process of designing and delivering service quality. In this paper, we study the influence of culture on one
specific infrastructural service element, in-flight content services. Other structural and behavioral aspect of service quality which may be affected by nations’ culture is dealt in the full paper.

Cultures with high individualism hinder team-work and collaboration when creating systems associated with in-flight content and thereby, reduce the quality of services offered to customers. However, masculine cultures by virtue of competitiveness in the culture strive hard to deliver high quality processes and thereby, end up delivering high quality content services to customers.

REFERENCES


