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RESEARCH ARTICLE

**MODELS AND MEASUREMENTS OF ORGANIZATIONAL PERFORMANCE WITH PARTICULAR
REFERENCE TO THE AVIATION INDUSTRY**

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ABSTRACT

In this present world monitoring Organizational Performance has become a mandatory prospect. If we are able to diagnose the weakness as well as the flaws in the organizational performance it will make our day to day activities even better in every aspect. There has been creation of different performance model by academic and industrial veterans. Thus the objective of this research paper is to find the flaws of the existing performance models and initialize the better ideas within them to finally construct the rewarding universal performance model for aviation organization.

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INTRODUCTION

The valued term ORGANISATION means an association formed to complete its own objectives and goals. There are different types of organization established in this world in which some define themselves as working unit for production where as some differentiate themselves by the service they provide. When we look deep into their day to day progress we can evaluate them by their progress or decline. Organizations sometimes can upsurge their success up to their maximum within a day where as some can have a severe downfall that they ultimately vanish. Therefore, to reduce the flaws in an organization from 1960 people started to evaluate the rise and fall of organizational performance which helped them to reduce their mistake within a required time frame intern helping them for the timely troubleshoot letting them progress towards positive development. In general performance measurement means total input and output ratio. Input refers to the total amount of resources used by an organization. Some organization tend to use maximum of their input but may result giving minimum output where as others they use minimum input to produce maximum output. The later has always been an example of positive development. In 1997 March and Sutan presented their views referring performance and effectiveness

as similar perspective for an organization. This means if an organization is performing well it is in turn the most effective one where as if its performance is not up to the maximum it refers as the decline of effectiveness. The have kept this valued view in four different international management journal. This means both effectiveness and performance is a synonym for and organization. Performance management is an important point in discussion for every organization. Thus it has been a real phenomenon which means any organization ignoring the measurement of performance is due for failure. Therefore in this seminar paper the main point of discussion has been the study of performance measurement of different organization. However studies showed that there is no effective model which can capitalize the performance of the aviation industries. So by Delphi research technique 12 different performance indicators has been established and tested in two different airlines running at their utmost level. This seminar paper has created a new model to illustrate the performance of aviation industries in various aspect, therefore has been named as Universal Model.

Literature review

Performance Measurement has been a topic of discussion in recent decades. When we go into the depth we find the development of performance measurement in four different stages. We can refer first stage as the period of 1980's where

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finance was the integral part of the topic. But in 1990's, productivity was the main indicator to measure performance of the organization (Ghalayini *et al.*, 1997). This decade was mainly focused on productivity and organization who were referring them to be finance oriented were criticized in different aspect (Hayes and Garvin, 1992). Performance Measurement was defined as the indicator which quantifies efficiency and effectiveness (Neely *et al.*, 2005). There was rapid development of industries and there was utmost influence of economy. Thus, economy was considered as important base for organizational performance. For instance, General Motors had rapid surge to its maximum owing economy as a strong base for their performance. But there was evident research stating organization must be performing with local optimization (Fry and Cox, 1989). It was also said that every organization to reach their rewarding phase must go through every step of slow and steady development (Lynch and Cross, 1991). However there has been no evidence of customer satisfaction and time value of performance in above phase of organizational development. Finally this shows even though there were some flaws there was introduction of new technology and philosophy stating performance management during this era. Ghalayini *et al* stated that there are limitations in an organizational performance and suggested that new performance measurement module is the utmost requirement for industrial development. However, during this first phase there is no any discussion about aviation industries and its performance indicators. In 1990's there is some evidence showing use of second stage of performance measurement of the industries. The significance of this generation is the introduction of non-financial indicators along with financial indicators. There was a debate regarding financial and non-financial indicators among management experts where as some even gave an opinion combining these two. Some examples of substantial indicators which were used within that decade are quality, customer satisfaction, finance, output, corporate culture/climate, Input Output ratio etc. To make it easier to understand it has been divided in four different parts and explained in following table.

Table 1. First Generation Performance Measurements Model of Organisations

Context	Researchers	Indicators
Economical	Lockamy (1991)	Lead time and cost
Input and Output Ratio	Kaplan and Norton (1992)	Financial Productivity
Customer Satisfaction	Lynch and Cross (1991)	Output result
Organizational Culture	European Foundation for Quality Management (1999)	customer Satisfaction
	Yeniyurt (2003)	Stake holder satisfaction
		Multinational organizational culture / climate

Even if there was significant use of the above mentioned indicator's, Bourne *et al* 2000 found it unsatisfactory and started a debate to discover a new and effective performance measurement model. As a research scholar I fully agree his statement even though some models can be used initially and feel that there are lots of gap to be filled to initialize these models in aviation industries. Tangen 2004 however strongly recommended that performance measurement which can firmly support the organizational strategic objective should be introduced. In addition he also stated these performance models should be easily available, affordable and easy to use. But we can imagine that these concepts have been used in the recent decades and was a valuable one. Folan and Browne 2005, introduced an academically developed performance measurement system which is considered as the third staged. They also indicated that the performance models should be

individual referring to their own set of organization and should not be copied from the various organizations. Instead of using balance scorecard which was invented by Kaplan and Nortan1992 most of them followed business process re-engineering (BPR) introduced by Bradley 1996 during this third stage of development of performance measurement system. Along with this we can also find that there has been use of the model which was introduced by Tony and Tonchia 2001. We can find 5 different sort of typology in this third stage of development.

- Even if we differentiate performance based on cost benefit (cost and non-cost) it's not defined until and unless it is economically convenient.
- There must be diverse perspective to visualize financial as well as customer satisfaction.
- There must be conversion of non-cost indicator to financial indicator to know the exact benefit.
- There must be system defining the internal as well as external performance of an industry.
- These indicators must define complete value chain in order to evaluate the organizational performance.

Thus, third stage of organizational performance measurement is valuable as it can dig the core of internal and external organizational performance which can in turn identify the flaws in performance as well as its improvement (Amaradutunga and Baldry, 2002). Folan and Browne 2005 stated that if there are positive changes in indicators such as culture, system and process in an organization then it will be sustainable process to fulfill organizational goals. Following statements must be included in order to make the suitable performance management model;

- There should be a proper structure methodology
- Information must be adequate.
- Data analysis should be based on electronic technique
- Data Review has an utmost importance and must follow present market situation

In this present situation where there is rapid increment in organizational development transparency and accountability is an integral part which cannot be neglected (Radnor and Bornes, 2007). However there is no any evidence which supports the performance measurement of aviation industry in this phase regardless of the overall development. Seth *et al* 2005, has studied 19 different models of performance measurement and stated that none of these models were found to be complete. Therefore he divided these models into two groups which are performance based and service quality based. They are shown as follows Table 2:

Among the models which are stated above, SERVQUAL (Parasuraman *et al* 1985) is considered to be the most effective and utilized model. In this research this model has been used to compare the performance measurement of the two different

Nepali airlines. There are several performance management tools and models which also can be grouped into decision making tool, data analysis tool and planning and problem solving tool. These are listed in the below mentioned table 3:

Unfortunately there is no evidence of involvement of aviation performance measurement model in above mentioned table. Since aviation industry has its unique feature I regard that there must be a different way to measure it's performance.

Table 2. Second Generation Performance Measurements Model of Organisations

Context	Researchers	Indicator
Performance Models	GAP (Parasuraman <i>et al</i> 1985), Synthesized model of Performance (Cronin and Taylor 1992), Evaluated performance model (Teas 1993), IT alignment model (Berkley and Gupta 1994), Attribute and overall affect model (Dabholkar 1996), Pivotal, Core and Peripheral (PCP) model (Philip and Hazlett 1997), Mediator model (Dabholkar <i>et al</i> 2000), Internet model (Broderick and Vachirapornpuk 2002), Information Technology based model (Zhu <i>et al</i> 2002)	Out put
Service Quality Models	Technical quality model (Gronroos 1984), Combined model of service quality (Brogowicz <i>et al</i> 1990), Value model of service quality (Mattsson 1992), Normed quality model (Teas 1993), Perceived service quality and satisfaction model (Spreng and Mackoy 1996), Retail service quality model (Sweeney <i>et al</i> 1997), Customer satisfaction model (Oh 1999), Internal service quality model (Frost and Kumar 2000), Internal service quality model (Soteriou and Stavrinides 2000), e-service quality model (Santos 2003).	Quality

Table 3. Third Generation Performance Measurements Model of Organisations

Tools/Models	Researchers	Remarks
Decision making tools	Analytical Hierarchy Process (AHP) (Saaty,1980)	The usability of AHP in solving multiple criteria problems
Data Analysis Tools	Data Envelopment Analysis (DEA) (Charnes <i>et al</i> 1978)	For measuring the relative efficiency of Decision Making Units
Planning and problem solving tools	Fuzzy Failure Mode and Effect Analysis (FFMEA) (Stamatis 1995)	Used for defining, identifying and removing known and/or potential failures, problems
	Fuzzy Quality Function Deployment (FQFD) (Hauser and Clausing 1988)	Used for customer-oriented quality management and product development technique
	Extended Brown-Gibson (EBG) Model(Brown and Gibson 1972)	This model used in selecting the best location from a given set of alternatives

Table 4. Fourth Generation Performance Measurements Model of Organisations

Model Type	Researchers	Area of measurement
Output model	Goodman <i>et al.</i> 1977	Focus toward the achievement of goals
Input Model	Yuchtman and Seashore 1967	Focus on inputs, acquisition of resources and processes
Organizational Strategic Model	Connolly, Colon and Deutch 1980	Focus on owners, employees, customers, suppliers, local community and government representative that must be satisfied in order to ensure the survival of the organization
Values Model	Quinn and Rohrbaugh 1983	Focus on organizational values

Table 5. Aviation Maintenance Organisation performance Measurement Model

Types of Indicators	Researcher	Area of measurements
Leading Indicators	Richard, 1993	Customer Scheduling Effectiveness (CSE) Operations Scheduling Effectiveness (OSE) Pilot Readiness - Proficiency Pilot Readiness - Training Pilot Availability Rate
Trailing Indicators	Richard, 1993	Mission Capable Aircraft Rate (MCR) Non-Mission Capable Rate (NMCR) Departure (Dispatch) Reliability (DR) Pilot Utilization Effectiveness

Performance management has been effortless because of the above mentioned tools and models. However since these tools were designed erstwhile it is really difficult to implement them in rapidly outgrowing aviation industries. Although there has been significant development in performance management tools and models, there must be a limitation to these above mentioned aspects (Cameron, 1984). Going into further details about the performance models, referring to table 3 it has been simplified in 5 different models based on their dimensions as following table:

To simplify the performance measurement in Aviation Industries I believe there must be various indicators of different dimensions. For instance, Safety performance indicator, Aircraft maintenance performance indicator, Mission performance indicator. As a PhD scholar and Aviation expert I would like to share some views regarding aviation industries and its performance. For every different types of organization there must be involvement of different performance models in order to guarantee a positive development. Therefore hereby I make a strong point stating that in aviation Safety performance

indicator has its utmost value rather than financial performance indicator. SERVQUAL model which was introduced by Parasuraman *et al* 1985 for automobile industries was taken to measure it's proficiency in aviation industries. These models gave comparative study but had some drawbacks. They were unable to diagnose the core problem in aviation performance measurement. Theoretical framework of SERVQUAL model has been illustrated below:

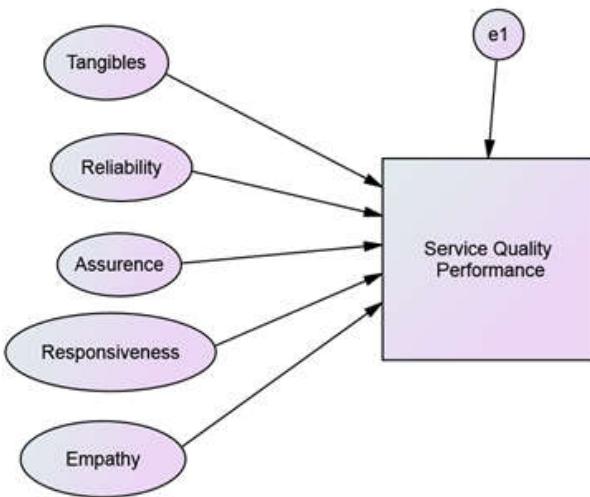


Fig. 1. Theoretical framework and Path diagram of SERQUAL Model Parasuraman *et al.* (1985)

In 1993 Richard was the first individual to take a step forward and did the analysis of aircraft maintenance performance measurement. He differentiated the indicator into two different types which were leading and trailing indicator. They are simplified in the below mentioned Table 5.

However all these above mentioned performance indicator and models are not effective to it's maximum limit in aviation organization. Therefore in this seminar by using Delphi technique the matter was discussed with various governing bodies of aviation including CEO of airlines organization , DG of regulating body, Pilots, Engineers, ATC officers and Management experts in two different phases and identified 12 different aviation organization performance indicators which are illustrated below :

- Tangibles(Physical facilities, equipment, and appearance of personnel)
- Financial (Operating Margin)
- Punctuality (Ready to go)
- Colleague involvement
- Safety records
- Productivity
- Reliability
- Responsiveness
- Regulatory Compliance
- End user friendly
- Utilization / Engagement
- Customer recommendation

Based on above literature review by the above mentioned indicators theoretical framework and path diagram of

Universal Aviation Organizational Performance Management Model (UAOPMM) has been designed as below:

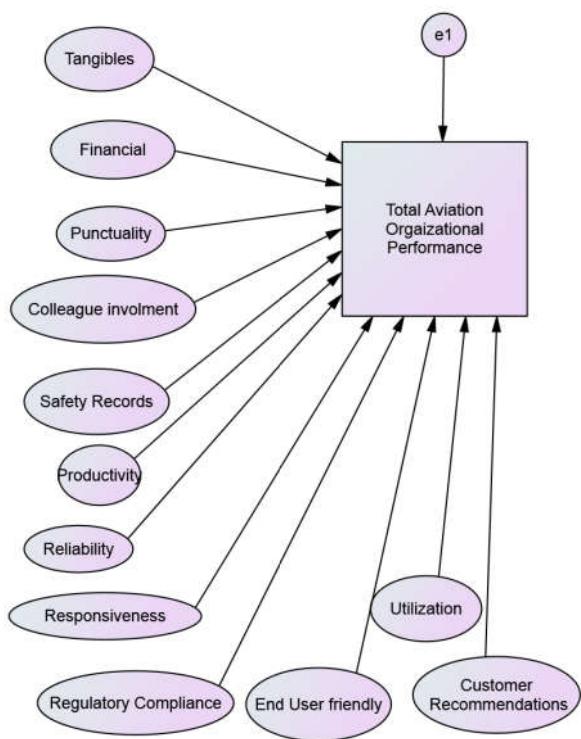


Fig. 2. Theoretical framework and Path diagram of (UAOPMM) Universal Aviation Organizational Performance Measurement Model

This above path diagram is design by using structural equation modeling technique. Based on above theoretical framework and path diagram, therefore, we can use this frame work in two Nepali airlines industries, airlines 1 and airlines 2 to find out whether the performance of these airlines are similar or not .

METHODS

Study of the new model has been done on two different domestic airlines and mentioned as Airline 1 and Airline 2. Dimensions to be measured are listed in appendix-A. Questioners of UAOPMM performance measurement model is listed in appendix- B. 100 respondents at Tribhuvan International airport were selected conveniently and data were collected for each airline. Total 200 respondents were selected on 23rd July 2017 and 24th July 2017 at Kathmandu, Tribhuvan International Airport, Nepal. Authors also like to do additional structural equations modeling to show the dependence of dependent as well as independent variable. Correlation analysis, were taken care in the result section of the article.

RESULTS

The analysis of the data collected from Google Form and passengers' survey at TIA, Kathmandu, Nepal are tabulated in appendix- C and D. New model was used to measure the performance of two different airlines of Nepal and their result are tabulated in Table 2 and Table 3 in appendix- C and appendix-D respectively. The result shows that this new model is user friendly and easiest model for measurement of performance for the aviation organization. Performance of

Airlines 1 is better than airlines 2. Overall performance of airlines 1 is better. Performances of both of these airlines are not good enough and there is a marginal difference between the performances of these two airlines. Performance mean of 1st airlines is 137.57 and 2nd airlines is only 102.33. Refer in statistical data in Table 2 and 3 in the appendix C and D.

DISCUSSION

This new model can give accurate results of total performance of the aviation organizations. Result states that there is inadequate performance of these two airlines and also notifies that there can be improvement in their standards to meet the utmost performance utilizing the indicators (variable construct v1 to v12) as below:

- v1- Tangibles (Physical facilities, equipment, and appearance of personnel): Physical infrastructure should be best in aviation industries.
- v2- Financial (Operating Margin): This will help to get comfortable salary and other benefits for motivation for HR and new technology can be used for service.
- v3- Punctuality (Ready to go): Aviation itself means time. This business is much more time sensitive than others.
- v4- Colleague involvement: Team work is everything in aviation industries.
- v5- Safety records: Safety plays prime role in the industries survival.
- v6- Productivity: If there is no balance between productivity and safety no aviation industries can survive.
- v7- Reliability: All equipment used in this business should be highly reliability.
- v8- Responsiveness: Organization should be fast responsive than other types of industries.
- v9- Regulatory Compliance: Need of high level of regulation should be needed due to its nature of jobs.
- v10- End user friendly: People who use this industries expect high level of service hence need to be user friendly.
- v11- Utilization / Engagement: It is very costly business therefore need to be utilized fully.
- v12- Customer recommendation: Customer is every thighs for survival of this types of industries, customer recommendation is important for survival of this type of industries.

These above indictors' value in both Nepali airlines were poor as per tabulated result appendix -B and C. There is a huge room for improvement for each 12 dimensions of these organizations.

Implications

Finally this study has created a new model which can be implemented in various different aviation organizations. This research paper has designed a model which in turn measures the organizational flaws, give them a general idea about pros and cons of organizational performance, direct them towards sustainable development and finally provide quality service and financial uplift in an organization.

Limitation and Future Research Direction

Since this research is done within a short period of time, only among group of 200 people in Kathmandu and also only using two round of Delphi technique it has some limitation.

Conclusion

I consider this research paper as a milestone in development of aviation organizational performance measurement and will provide the gateway for every upcoming generation to do focus performance development in aviation. This paper has also created a New Model UAOPMM, which will definitely prove to be the simplified utility to measure the aviation organizational performance and provide sustainable financial, economic and qualitative development.

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Appendix- A

Universal Aviation Organizational Performance Measurement Model (UAOPMM) Indicators for Measurement

1. Tangibles(Physical facilities, equipment, and appearance of personnel)
2. Financial (Operating Margin)
3. Punctuality (Ready to go)
4. Colleague involvement
5. Safety records
6. Productivity
7. Reliability
8. Responsiveness
9. Regulatory Compliance
10. End user friendly
11. Utilization / Engagement
12. Customer recommendation

Appendix- B. Universal Aviation Organizational Performance Measurement Model (UAOPMM)Questioners

Name of the Aviation Organization:.....

Tangibles (Physical facilities, equipment, and appearance of personnel)

Q1. How you can grade the facilities of this company?

- a)0 (Poor)
- b)1 (Fair)
- c)2 (Average)
- d)3 (Good)
- e)4 (Excellent)

Q2. How you can grade the equipment and services of this company?

- a)0 (Poor)
- b)1 (Fair)
- c)2 (Average)
- d)3 (Good)
- e)4 (Excellent)

Q3. How you can grade the appearance of the employee in this company?

- a)0 (Poor)
- b)1 (Fair)
- c)2 (Average)
- d)3 (Good)
- e)4 (Excellent)

Q 4. How you can grade the comfort in this company?

- a)0 (Poor)
- b)1 (Fair)
- c)2 (Average)
- d)3 (Good)
- e)4 (Excellent)

Financial (Operating Margin)

Q 5. This company has sound financial record.

- a.0 (Poor)
- b.1 (Fair)
- c.2 (Average)
- d.3 (Good)
- e.4 (Excellent)

Q 6. This company employee's salary is higher than other similar type of organizations.

- a.0 (Poor)
- b.1 (Fair)
- c.2 (Average)
- d.3 (Good)
- e.4 (Excellent)

Q 7. People prefer to join this company than other.

- a.0 (Poor)
- b.1 (Fair)
- c.2 (Average)
- d.3 (Good)
- e.4 (Excellent)

Q 8. Number of products and services of this organization/company with comparisons to similar type of company

- a)0 (Poor)
- b)1 (Fair)
- c)2 (Average)
- d)3 (Good)
- e)4 (Excellent)

Punctuality (Ready to go)

Q 9. This company is time sensitive, and all missions are completed as per schedule time.

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q 10. If there is some delay due to any problem they convince customer.

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q 11. Company culture is based on punctuality

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q 12. Employees of this company are careful and always consider time as their one of the indicator of the company performance

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)

e) 4 (Excellent)

d) 3 (Good)
e) 4 (Excellent)

Colleague involvement

Q 13. Employees of this company are always work as a team

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q 14. Teamwork of this company can be noticed in each and every moment

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q 15. Employees are preparing their successor them self.

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q 16. Leadership and Followership is practicing better than any other similar type of company.

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Safety records

Q 17. This company has better safety record than similar type of other organizations.

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q 18. As per accident and incident this company can be rated as

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q 19. Enough training and briefing on safety is routine culture of this organization.

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q 20. Senior management is fully supportive towards safety awareness program of the company and noticeable in organizational performance of this company.

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)

Productivity

Q 21. Productivity of this company is higher than similar type of companies.

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q 22. Utilization of all available resources is better than other in this company

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q 23. All modern organizational management practices are incorporated in this company

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q 24. Task completion in this company is better than other similar company due to its better productivity.

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Reliability

Q 25. Products and services of this company is reliable.

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q 26. Reliability of services are better than other similar type of organization available in the market.

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q 27. This company always prefer new branded product that is the reason its reliability is higher than other.

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q 28. I never heard any reliability issues of this company.

- a) 0 (Poor)
- b) 1 (Fair)

- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Responsiveness

Q 29. This company is much more responsive than other similar type of company.

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q 30. Management is much more responsive than other.

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q31. Employees are more trained than other company

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q 32. Any complain you made to this company , you will get faster response than other company.

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Regulatory Compliance

Q 33. This company is very much keen to compliance any regulatory advice and rule.

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q 34. Company policy is regulatory friendly

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q35. Regulatory body has very good relationship with this organization.

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q 36. Regulation is taken as top priority of this organization.

- a) 0 (Poor)
- b) 1 (Fair)

End user friendly

Q 37. Product and service of the organization which you are rating is user friendly.

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q 38. Products and service are as per your choice .

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q39. How you can grade the customer support in this company ?

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q 40. Suitability of the products and services are within your means.

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Utilization / Engagement

Q 41. Performance of the organization in term of utilization of products and services is above 80%.

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q 42. Utilization of human resources and products of the company is better than any similar type of organization?

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q 43. How you can grade the appearance of the employee in this company?

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q 44. How you can grade the service comfort in this company?

- a) 0 (Poor)

- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

- d) 3 (Good)
- e) 4 (Excellent)

Customer recommendation

Q 45. This company is always preferred to use service as per customer's choice.

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q 46. Customer feed back is taken care by the management of the company positively.

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)

*. Correlation is significant at the 0.05 level (2-tailed).

Appendix- C: First Airlines Performance

Descriptive Statistics

		Mean	Std. Deviation	N
Performance		137.5700	5.10942	100
V1		12.2500	2.93146	100
V2		11.7800	.94900	100
V3		11.1000	.62765	100
V4		11.4900	.91558	100
V5		11.6100	1.03372	100
V6		11.6800	.97318	100
V7		11.0600	1.17911	100
V8		11.2700	.72272	100
V9		10.8200	1.00885	100
V10		11.0000	1.09175	100
V11		12.0000	.89893	100
V12		11.5100	.85865	100

Correlations

	Perforamnce	v1	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	
Perforamnce	Pearson Correlation	1	.620**	.176	.190	.382**	.293**	.399**	.390**	.119	.038	.398**	.449**	.631**
	Sig. (2-tailed)		.000	.080	.058	.000	.003	.000	.000	.237	.709	.000	.000	.000
v1	N	100	100	100	100	100	100	100	100	100	100	100	100	100
	Pearson Correlation	.620**	1	.125	-.003	.056	.016	.032	-.016	-.166	-.080	.000	.111	.166
v2	Sig. (2-tailed)		.000	.214	.978	.583	.876	.753	.874	.099	.427	1.000	.271	.100
	N	100	100	100	100	100	100	100	100	100	100	100	100	100
v3	Pearson Correlation	.176	.125	1	-.047	.079	-.016	-.033	.048	-.060	-.010	-.175	-.178	-.072
	Sig. (2-tailed)		.080	.214	.639	.436	.872	.743	.635	.555	.920	.081	.077	.479
v4	N	100	100	100	100	100	100	100	100	100	100	100	100	100
	Pearson Correlation	.190	-.003	-.047	1	-.086	-.033	.318**	-.131	.118	.077	.147	.018	.017
v5	Sig. (2-tailed)		.058	.978	.639	.394	.747	.001	.194	.242	.449	.143	.860	.868
	N	100	100	100	100	100	100	100	100	100	100	100	100	100
v6	Pearson Correlation	.382**	.056	.079	-.086	1	.140	.144	.141	.058	-.243*	.141	.160	.360**
	Sig. (2-tailed)		.000	.583	.436	.394	.165	.154	.162	.570	.015	.160	.113	.000
v7	N	100	100	100	100	100	100	100	100	100	100	100	100	100
	Pearson Correlation	.293**	.016	-.016	-.033	.140	1	-.025	-.005	-.087	-.136	.242*	.076	.260**
v8	Sig. (2-tailed)		.003	.876	.872	.747	.165	.806	.957	.387	.178	.015	.452	.009
	N	100	100	100	100	100	100	100	100	100	100	100	100	100
v9	Pearson Correlation	.399**	.032	-.033	.318**	.144	-.025	1	.079	.067	.064	.162	.173	.185
	Sig. (2-tailed)		.000	.753	.743	.001	.154	.806	.437	.510	.526	.108	.085	.065
v10	N	100	100	100	100	100	100	100	100	100	100	100	100	100
	Pearson Correlation	.390**	-.016	.048	-.131	.141	-.005	.079	1	.040	-.093	.196	.219*	.408**
v11	Sig. (2-tailed)		.000	.874	.635	.194	.162	.957	.437	.692	.359	.050	.028	.000
	N	100	100	100	100	100	100	100	100	100	100	100	100	100
v12	Pearson Correlation	.119	-.166	-.060	.118	.058	-.087	.067	.040	1	.109	.064	.031	.085
	Sig. (2-tailed)		.237	.099	.555	.242	.570	.387	.510	.692	.281	.527	.759	.400
v10	N	100	100	100	100	100	100	100	100	100	100	100	100	100
	Pearson Correlation	.038	-.080	-.010	.077	-.243*	-.136	.064	-.093	.109	1	-.138	-.022	-.138
v9	Sig. (2-tailed)		.709	.427	.920	.449	.015	.178	.526	.359	.281	.172	.826	.171
	N	100	100	100	100	100	100	100	100	100	100	100	100	100
v10	Pearson Correlation	.398**	.000	-.175	.147	.141	.242*	.162	.196	.064	-.138	1	.124	.269**
	Sig. (2-tailed)		.000	1.000	.081	.143	.160	.015	.108	.050	.527	.172	.221	.007
v11	N	100	100	100	100	100	100	100	100	100	100	100	100	100
	Pearson Correlation	.449**	.111	-.178	.018	.160	.076	.173	.219*	.031	-.022	.124	1	.510**
v12	Sig. (2-tailed)		.000	.271	.077	.860	.113	.452	.085	.028	.759	.826	.221	.000
	N	100	100	100	100	100	100	100	100	100	100	100	100	100

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Q 47. Customer feedback can be given via email or phone and Customer Service Representative is always available for the response.

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Q 48. Customer advices are the source of the innovation for the future product or services in this company.

- a) 0 (Poor)
- b) 1 (Fair)
- c) 2 (Average)
- d) 3 (Good)
- e) 4 (Excellent)

Appendix-D: Second Airlines Performance

Correlations and Descriptive Statistics

Descriptive Statistics

	Mean	Std. Deviation	N
Performance	102.3300	4.85560	100
v1	9.7200	1.11988	100
v2	8.3900	.72328	100
v3	9.0700	.75552	100
v4	8.5000	.98985	100
v5	8.3200	1.21339	100
v6	8.1200	.67090	100
v7	7.7100	1.17461	100
v8	7.5500	.78335	100
v9	7.3200	.66485	100
v10	9.2200	1.11537	100
v11	9.7900	.93523	100
v12	8.6200	.85019	100

Correlations

	performance	v1	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	
Performance	Pearson Correlation	1	.526**	.187	.206*	.455**	.616**	.496**	.649**	-.131	.142	.578**	.503**	.677**
	Sig. (2-tailed)		.000	.062	.040	.000	.000	.000	.000	.196	.158	.000	.000	.000
v1	N	100	100	100	100	100	100	100	100	100	100	100	100	100
	Pearson Correlation	.526**	1	-.038	.191	.009	.215*	.153	.283**	-.352**	-.068	.301**	.242*	.439**
v2	Sig. (2-tailed)	.000		.704	.058	.928	.031	.129	.004	.000	.499	.002	.015	.000
	N	100	100	100	100	100	100	100	100	100	100	100	100	100
v3	Pearson Correlation	.187	-.038	1	.060	.049	.041	.069	.051	.188	.200*	-.045	-.176	-.102
	Sig. (2-tailed)	.062	.704		.550	.626	.689	.494	.613	.061	.046	.658	.079	.315
v4	N	100	100	100	100	100	100	100	100	100	100	100	100	100
	Pearson Correlation	.206*	.191	.060	1	-.277**	.141	.063	-.045	-.288**	-.085	.197*	.121	.058
v5	Sig. (2-tailed)	.040	.058	.550		.005	.163	.534	.655	.004	.399	.049	.230	.570
	N	100	100	100	100	100	100	100	100	100	100	100	100	100
v6	Pearson Correlation	.455**	.009	.049	-.277**	1	.303**	.183	.265**	-.046	.123	.156	.158	.252*
	Sig. (2-tailed)	.000	.928	.626	.005		.002	.069	.008	.652	.224	.122	.116	.011
v7	N	100	100	100	100	100	100	100	100	100	100	100	100	100
	Pearson Correlation	.616**	.215*	.041	.141	.303**	1	.176	.314**	-.240*	-.016	.156	.318**	.403**
v8	Sig. (2-tailed)	.000	.031	.689	.163	.002		.080	.001	.016	.878	.120	.001	.000
	N	100	100	100	100	100	100	100	100	100	100	100	100	100
v9	Pearson Correlation	.496**	.153	.069	.063	.183	.176	1	.250*	.008	.026	.234*	.169	.400**
	Sig. (2-tailed)	.000	.129	.494	.534	.069	.080		.012	.939	.795	.019	.092	.000
v10	N	100	100	100	100	100	100	100	100	100	100	100	100	100
	Pearson Correlation	.649**	.283**	.051	-.045	.265**	.314**	.250*	1	-.012	.081	.219*	.201*	.435**
v11	Sig. (2-tailed)	.000	.004	.613	.655	.008	.001	.012		.909	.422	.029	.044	.000
	N	100	100	100	100	100	100	100	100	100	100	100	100	100
v12	Pearson Correlation	-.131	-.352**	.188	-.288**	-.046	-.240*	.008	-.012	1	.221*	-.024	-.378**	-.426**
	Sig. (2-tailed)	.196	.000	.061	.004	.652	.016	.939	.909		.027	.811	.000	.000
v1	N	100	100	100	100	100	100	100	100	100	100	100	100	100
	Pearson Correlation	.649**	.283**	.051	-.045	.265**	.314**	.250*	1	-.012	.081	.219*	.201*	.435**
v2	Sig. (2-tailed)	.000	.004	.613	.655	.008	.001	.012		.909	.422	.029	.044	.000
	N	100	100	100	100	100	100	100	100	100	100	100	100	100
v3	Pearson Correlation	.142	-.068	.200*	-.085	.123	-.016	.026	.081	.221*	1	-.164	-.037	-.176
	Sig. (2-tailed)	.158	.499	.046	.399	.224	.878	.795	.422	.027		.103	.714	.080
v4	N	100	100	100	100	100	100	100	100	100	100	100	100	100
	Pearson Correlation	.578**	.301**	-.045	.197*	.156	.156	.234*	.219*	-.024	-.164	1	.267**	.419**
v5	Sig. (2-tailed)	.000	.002	.658	.049	.122	.120	.019	.029	.811	.103		.007	.000
	N	100	100	100	100	100	100	100	100	100	100	100	100	100
v6	Pearson Correlation	.503**	.242*	-.176	.121	.158	.318**	.169	.201*	-.378**	-.037	.267**	1	.470**
	Sig. (2-tailed)	.000	.015	.079	.230	.116	.001	.092	.044	.000	.714	.007		.000
v7	N	100	100	100	100	100	100	100	100	100	100	100	100	100
	Pearson Correlation	.677**	.439**	-.102	.058	.252*	.403**	.400**	.435**	-.426**	-.176	.419**	.470**	1
v8	Sig. (2-tailed)	.000	.000	.315	.570	.011	.000	.000	.000	.000	.080	.000		.000
	N	100	100	100	100	100	100	100	100	100	100	100	100	100

**. Correlation is significant at the 0.01 level (2-tailed).
