Construct the PZB service quality performance model measured — an example of tourism industry in Taiwan

Y. H. Chen *
Department of Optometry
Jen-The Junior College of Medicine, Nursing and Management
No. 79-9, Xizhou, Houlong Township
Miaoli County 356
Taiwan, R.O.C.

L. Chang
T. H. Huang
S. C. Chen
Department of Industrial Engineering & Management
National Chin-Yi University of Technology
No. 35, Lane 215 Sec. 1 Chung Shan Rd.
Taiping City, Taichung
Taiwan, R.O.C.

Abstract
At present, there are a lot of manufacturing industries in Taiwan have outside moved to those countries with cheaper cost of labor. Therefore, the focus of manufacturing industry is transferred to service sector gradually. For the tourism industry has grown very fast and its productivity has been so high among service sector that being the ‘high added value industry without chimney’ which can consider economy and environment at present. Because the tourism industry is classified to service sector with such features as invisible, can not be stored and service quality determined during trading process (i.e. production and consumption are inalienable), it is necessary to measure service quality. In the past, relevant papers mostly measured and analyzed cognitive satisfaction after consuming for the customer. However, the satisfaction of service quality should be set up the gap between expectation degree before consuming and cognition degree after consuming. Therefore, this paper would consider expectation degree before consuming and cognition degree after consuming by the methodology applying 6-Sigma with DMAIC (Define, Measure, Analyze, Improve and Control) and performance evaluation matrix to construct the index for whole satisfaction with tourism industry and then integrate with the importance of each service quality in order to develop the control chart for whole satisfaction. For the items of service

*E-mail: cyhtimchen@hotmail.com

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quality outside 2-Sigma, we would construct the strategy to improve by cause and effect
diagram. Finally, we would make questionnaire investigation and construct the control chart
for whole satisfaction once again in order to confirm the performance for improvement as
well as keep the improving performance. Through the analysis and measurement model
proposed by this paper, the services can make integrated measurement and analysis for
importance of service quality, expectation degree before consuming and cognition degree
after consuming in order to find out key unusual quality needed to improve and control
while improve the whole satisfaction fast and effectively.

**Keywords and phrases:** 6-Sigma, DMAIC, PZB service quality model, performance evaluation
matrix, the control chart for whole satisfaction.

1. **Introduction**

Now, the focus of industries in Taiwan has been gradually transferred
to the tourism and recreation industries such as transportation industry,
accommodation industry, catering trader, the resource of scenic spot and
tourism agency. So far, it is fastest for the market has grew up to go abroad
visiting in 2004 all around the world since 1984. The data announced
by World Tourism Organization (WTO) pointed out that there are about
760 million persons and numbers for going abroad tour globally and it
is higher than 69 million persons and numbers in 2003 while has
grown 10%. The regional growing rate of Southeast Asian and Northeast
Asian areas has reached 33% and 30% respectively while which of other
areas is all lower than 20%. On a basis of 1995, The World Tourism
Organization predicted that it will be up to 1,561,100,000 persons within
three major markets in 2020 all around the world and occupation rates
will be 717 million persons in Europe (45.9%), 397,200,000 persons in
Asian-Pacific area (25.4%) and 282,300,000 persons in American area
(18.1%) respectively. According the prediction made by Pacific Asia Travel
Association (PATA), the growing rate is 5.83% in Taiwan while those
are higher in other countries in the neighborhood such as Hong Kong
and Macro (15.26%), S. Korea (9.94%) and Japan (9.32%). According
to the prediction made by World Travel and Tourism Council (WTTC), the
aggregate demand of global travel will be valued about 6,200 billion U.S.
dollars in 2005, and it can create the output valued 1,700 billion U.S. dollars
which totally accounts for 3.8% of global GDP. In addition, the investment
amount of going sightseeing all around the world can be up to 918 billion