



A META-ANALYSIS STUDY OF THE EFFECTS OF ORGANIZATIONAL CULTURES OF INTERNATIONAL TOURIST HOTELS IN TAIWAN ON ORGANIZATIONAL PERFORMANCE

Gao-Liang Wang

Department of Marketing Management, Takming University of Science and Technology

Taipei City, Taiwan

Email : wanggl@takming.edu.tw

Abstract

The primary focus of this study is to understand the effects of organizational cultures of international tourist hotels in Taiwan on organizational performance. This study is conducted on the basis of existing data collected by domestic and overseas scholars, and the Meta Analysis method is applied for the analysis. The results show that the organizational cultures of international hotels in Taiwan have significantly positive effect on organizational performance.

Keywords: Organizational Cultures, Organizational Performance, Meta Analysis

INTRODUCTION

According to the "Top 1000 Businesses of Service Industry" survey of the Business Weekly in 2005, the output of the service industry is double that of the manufacturing industry, which is to say that the service industry is starting to play an important role in the economic development of Taiwan 【1】. Also, in 2004 the Executive Yuan passed a draft bill, "Guiding Principles and Action Plans for Service Industry Development", where 12 primary measures for the service industry's flagship programs were formulated, thus industrializing the service industry which demonstrates development

advantages in Taiwan, and where the tourism and sports/leisure service industry is also listed 【2】. However, with a surge of competitors joining the business, the competition from the international tourist hotels is increasingly intense. As such, whether they are international hotels that are already in the business or are about to launch a business, they are urgently in need of grasping the competitive advantage, maintaining organizational competitiveness, and improving organizational performance.

As global tourism is being developed vigorously, the Taiwan government is increasingly instigating an open door policy for



tourism, which provides a driving force for tourism development and construction in Taiwan. The international tourist hotels in Taiwan play the important role of providing travelers with lodging and leisure entertainment services. In reviewing existing research conducted by domestic and overseas scholars, the findings show that the organizational cultures of international tourist hotels in Taiwan affect employees' service quality; and good service quality affects customers' satisfaction, and subsequently, affects organizational performance [3].

Therefore, this study applies Meta-Analysis as the research tool, and aims to understand the effects of organizational cultures of international tourist hotels in Taiwan on organizational performance, which is also the main purpose of this study.

LITERATURE REVIEW

To understand an overview of research literature relevant to the topic of this study, a summary of the research literature relevant to each aspect of this research topic is described as follows:

Organizational Culture

Deal, McKinsey and Kennedy conducted a research on 18 leading corporations in the U. S. (such as NCR, GE, IBM and others), and found that organizational culture is displayed through corporate environment, corporate values, heroic figures, rituals and ceremonies, and communication networks [4].

Quinn & McGrath [5] categorized "organizational culture" dimension into four sub-dimensions in accordance with the cognitive and data processing processes of the organization members. They are described as follows:

1. Rational Culture: the hypothesis bases of rational culture are "pursuit of efficiency", "pursuit of objectivity" and "work-oriented"; while efficiency, productivity, and profitability are the core values. Organizations that embody such a culture strive for scientific efficiency, and believe that the only way to actively improve the external environment is through man-made rational choices, thus the organizations are committed to cost-effectiveness analyses. Clear objectives, personal decisions and determination are means to maximize organizational performance. The key attribute of a rational organizational culture is being goal-oriented. Such a culture usually appears in commercial organizations and profit-oriented groups. The operational definition of this sub-dimension of this study is "organizations that have centralized power, can integrate activities with efficiency, efficacy and have goal-oriented core values, and emphasize on developing competencies.
2. Developmental Culture: the hypothesis bases of rational culture are "creating future", "conquering environment" and "idealism" with the purposes of pursuing innovation, adventure and growth. Organizations with such a culture are usually formed by a group of ideal-fighting



members. Organizational performance depends on the external supports and attained resources, while innovation and reforms are important means to expand organizational resources and to obtain external supports. Hence, the attributes of a developmental culture appear to be innovation oriented, and progress driven. Such a culture usually appears in emerging organizations, or organizations on the verge of upgrading or expansion. The operational definition of this sub-dimension of this study is "the culture that facilitates division of power, emphasizes external competition and growth, and values the charisma of the leader and innovative development."

3. Consensual Culture: consensual culture refers to the organizational culture that is built on the hypotheses of "human relations", "care and support", and "harmonious co-existence", with the purpose of pursuing collective wisdom and diverse participation. Organizations with such a culture value internal harmony with the foundation of power distributed between members of the entire organization. Its organizational performance depends on the morale, cohesion and team spirit of the organization. Members of the organization complete their information exchange through discussions, participation and consensus building in a friendly and cooperative process that boosts morale and trust for the tasks of the organization. The key attribute of a consensual culture is member-support orientation. Such a culture usually appears in small family enterprises. The operational

definition of this sub-dimension of this study is "a culture that is characterized by complete authorization and member participation with emphasis on team work and collective counseling."

4. Hierarchical Culture: hierarchical culture refers to the organizational culture that is built on the hypotheses of "compliance with laws", hierarchical control", and "seeking stability" with emphasis on centralizing power. Organizations with such a culture value the maintenance of internal systems; while official regulations and administrative procedures contribute to the behaviors of their members. The attributes of this culture are stability, controllability, predictability, coordination, and responsibility, thus this culture is rule-oriented. Such a culture usually appears in organizations with hierarchical structures. The operational definition of this sub-dimension of this study is "a culture that has centralized power with emphasis on the internal integration process, and that its organizational behavior is regulated by hierarchy, stability, and laws/regulations. It is the cultural background of a typical organization with a hierarchical structure."

In terms of current trends of organizational design, corporate and non-profit organizations, in general, tend to have a developmental culture or consensual culture; while governmental organizations primarily have rational and hierarchical cultures ([6] ; [7]).

Li [8] suggested that organizational culture is a product of interaction results between a



long-term internal system operation and external environment, and it is a fusion of value, belief, consciousness, thought and action of an organization. Its presence is invisible, yet facilitates the action and performance of organization members with tangible regulations, formulating the phenomenon of the organization's daily appearance.

In his research, Zeng [6] suggested that organizational culture is a pattern of shared beliefs and expectations as demonstrated by the organization. Daft [9] believed that organizational culture is the important values, beliefs, thought patterns, and behavior guidelines shared by all members of the organization.

Many domestic and overseas scholars hold various definitions and opinions regarding organizational cultures. While the research paper review conducted by this study found that many researches related to the topic of organizational culture mention the four concepts of "consensual culture", "developmental culture", "rational culture", and "hierarchical culture, which is identical to the dimensions of organizational cultures proposed by Quinn & McGrath [5] that are still widely adopted today. Therefore, this study decided to apply Quinn & McGrath's taxonomy as partial dimensions for confirmatory analysis.

Organizational Performance

There are a great number of existing studies that explore the topic of measurement dimensions of organizational performance. Since the ultimate benefits of organizational

performance are eventually fed back to the financial dimension, a majority of the scholars adopted financial performance as one of the measurement indicators. However, in the modern-day environment of convenient information delivery and rapid market changes, enterprises cannot rely on financial performance as the only element for survival and competition. In other words, using financial performance as the single indicator does not provide sufficient measurement of organizational performance [10].

In addition, Ling and Hung [10] believed that organizational performance refers to the results completed within a targeted period by every related business and department of the organization for the purpose of achieving the goal of a specific phase or overall objectives.

To ensure that the financial performance measurement involves both financial and non-financial dimensions, and to more accurately measure the influence of job satisfaction and internal service quality on organizational performance, this study referenced the research papers contributed by [11]; [12]; [13]; [14]; [10]. Wherein, financial performance is defined as the output in terms of financial accounting that can be measured by indices regarding growth and profitability. For example, a company with satisfying financial performance is expected to exceed the average Earnings per Share (EPS) of the same industry, and Return on Sales (ROS). While the non-financial performance aspect of organizational performance is measured by



innovation performance, which is in turn measured by multiple perspectives of organizational innovation that include technological innovation and managerial innovation. The technological innovation refers to the technologies required by the organization to manufacture products or provide services; while managerial innovation occurs in the organization's social system and in functions that relate to hiring, management procedures, and organizational structures ([11] ; [15] ; [13] ; [16] ; [10]).

In summary, concerning the measurement tools for organizational performance, this study adopted EPS and ROS as the measurement criteria for the financial aspect of organizational performance, and adopted technological innovation and managerial innovation for the non-financial aspect. Wherein, the technological innovation (the former) refers to the technologies required by the organization to manufacture products or provide services; while managerial innovation (the latter) occurs in the organization's social system and in functions that relate to hiring, management procedures, and organizational structures.

Relevant Literature for Organizational

Culture and Organizational Performance

Mitchell and Yate [17] pointed out that organizational culture is the totality of values, beliefs, and understandings shared by members of the organization. Organizational culture is an important factor of assessing enterprise competitiveness. It reflects the distinctive quality of an enterprise and is closely related to the core competitiveness of a corporation [18] . Organizational culture is a term often mentioned during the discussion of organizational behavior, the formation of which requires molding and evolving over a long period of time.

Liu [19] mentioned in his research that a quality organizational culture may improve organizational effectiveness, and promote productivity.

The research findings of Wang [3] showed that organizational culture has a significant positive effect on organizational performance.

RESEARCH METHOD

Based on the above research motives, purpose and literature review, this study deducted research hypotheses, and constructed a conceptual research framework, as shown in Figure1.

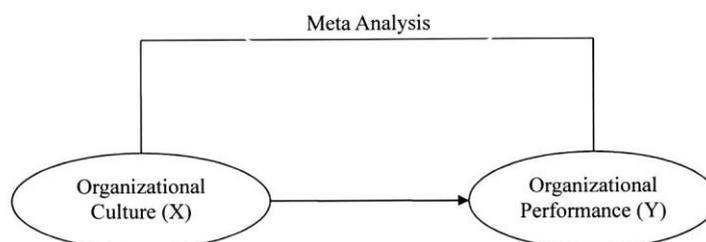


Figure 1. The Conceptual Framework of this Study

Data Collections and Methods

The research data for this study came from the database of the Taiwan Economic Journal (TEJ) and questionnaires. Meta-Analysis was chosen as the research tool for this study, thus the software used was Stata.

This study hypothesized that the estimated parameter is consistent with the Normal Distribution (N.D.), and that when the heterogeneity is greater, adopting Random Effects would be a better choice than Fixed Effects. Thus, this study applied Random Effects for comparing a variety of effects [20].

The Theoretic Basis for Meta-Analysis [21]

1. The Highlight of Der Simonian & Laird Method (Random effect method)

- (1) For binary or continuous outcomes
- (2) Effect size q_i for study i could be In (OR), In (RR), RD, difference in means or standardized mean difference.
- (3) Note that the effect sizes for OR and RR are logged.
- (4) Assumption that there is a single true answer that all studies are trying to estimate is relaxed.

- (5) Now assume that each study has a different true answer that they are trying to estimate.
- (6) Assume true effect sizes θ_i have normal distribution with mean θ and variance τ^2 .
- (7) τ^2 is the between-study variance.
- (8) Between study variance:

$$\tau^2 = \frac{Q - (k - 1)}{\sum_i w_i - \frac{\left[\sum_i w_i^2 \right]}{\sum_i w_i}}$$

Where:

w_i are weights from the fixed effect inverse-variance method

Q is the heterogeneity test statistic form before (either form inverse-variance method or Mantel-Haenszel method)

K is the number of studies, and

τ^2 is set to zero if $Q < k - 1$

- (9) Random effect pooled estimate is weighted average:

$$\theta_{DL} = \frac{\sum_i w'_i \theta_i}{\sum_i w'_i}$$

- (10) Weights used for the pooled estimate are similar to the inverse-variance,



but now incorporate a component for between-study variation:

$$W'_i = \frac{1}{SE(\theta_i)^2 + \tau^2}$$

- (11) When there is little heterogeneity, so that Q is smaller than $k-1$, $\tau^2=0$ and the weights are the same as the inverse-variance method.
- (12) When $\tau^2 > 0$ the weights are smaller and more similar to each other than in a fixed effect model.
- (13) Because the weights are smaller, the sum of weights will be smaller, and the so the SE will be bigger, CIs wider, and p-values less significant.
- (14) Small studies will have relatively greater influence.
- (15) Advantages:
 - a. As widely applicable as the inverse-variance fixed effect model
 - b. Incorporates heterogeneity into the model

2. Confidence interval for pooled estimate

A 95% CI for the pooled estimate θ is:

$$\theta - (1.96 * SE(\theta)) \text{ to } \theta + (1.96 * SE(\theta))$$

For ratios, θ is the log-transformed estimate.

3. Test for overall effect

Overall significance test for whether the pooled estimate is significantly different

from zero (no effect): $z = \frac{\theta}{SE(\theta)}$

Look up z in tables of the normal distribution to get the p-value.

For ratios, θ is the log-transformed estimate.

4. Test for heterogeneity

- (1) Look up Q in tables of the chi-squared distribution on $k-1$ degrees of freedom. The null hypothesis is that the true effect size is the same for all studies.
- (2) A statistically significant result means that there is strong evidence against there being one common effect size, so we take it that there is heterogeneity.

5. Getting Data into Stata

- (1) Easier to enter into Excel then cut & paste into Stata's data editor
- (2) Ensure each numeric column contains only numbers
- (3) Leave cells empty if data missing
- (4) One row per study

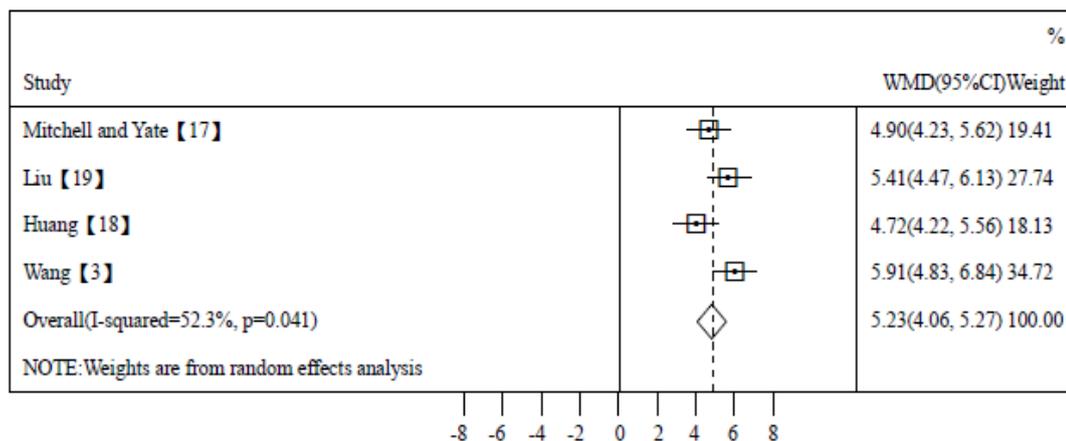


RESEARCH RESULTS AND ANALYSIS

The results of using Meta-Analysis to

perform Random Effects analysis are shown in Table 1 below:

Table1: Random Effects



As indicated in the report above, where "Overall" showed I-squared = 52.3 and p-value = 0.041, we learned that the independent variables of this research model have significant positive effects on dependent variables.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The conclusion obtained from above calculations is that the organizational cultures of International Tourist Hotels in Taiwan affect organizational performance, which is consistent with the research findings of Mitchell and Yate [17], Liu [19], Huang [18], and Wang [3], with the exception of the weight differences.

Research Contribution of this Study

In reviewing relevant existing literature, the study found that a majority of the papers applied regression analysis for exploratory research, and rarely applied Meta-Analysis to conduct the

research. Therefore, choosing Meta-Analysis as the research method for this study is innovative.

Additionally, the research results of this study can be offered as a reference for managers of Taiwan-listed international hotels to use in establishing sustainable management. Therefore, the research results of this study have a very practical reference value.

Research Limitation and Recommendations

As mentioned above, the primary research targets of this study are the Taiwan-listed international tourist hotels. This study applied Meta-Analysis on relevant literature, domestic and overseas, to understand how the accumulation of intellectual capital affects financial performance. This study recommends that subsequent researchers may consider studying other businesses, or the same business of a different scale, or applying other research



methodologies, such as using Confirmatory Factor Analysis (CFA) on different businesses, or comparing the goodness-of-fit differences of the same model on various industries.

Acknowledgements

I highly appreciate the support kindly granted by my university regarding this study as well as the valuable advice of Prof. Su-Man Wang and Dr. Yu-Je Lee, my dear colleagues, on research and analysis. I would like to take the opportunity to express my utmost appreciation for his assistance, without which I could not be able to finish this study as expected.

References

- 【1】 Hu, C.W., Xian L.C. (2005). In 2005 one thousand large service industry rankings: IT transparent, make intelligence fortune. *Business Week*, 964, 94-100.
- 【2】 Council for Economic Planning And Development of the Executive Yuan, (2015). <http://www.ndc.gov.tw/default.aspx>
- 【3】 Wang, G. L. (2012). A Study of How the Organizational Culture of International Tourist Hotels Affects Organizational Performance: Using Intellectual Capital as the Mediating Variable. *The Journal of Global Business Management*, 8(1) 189-201.
- 【4】 Deal. T. E., & Kennedy, A. A. (1984). *Corporate cultures: The rites and rattails of corporate life*. New York: Addison-Wesley Publishing Company.
- 【5】 Quinn, R. E., and McGrath, R.M. (1985). The transformation of organizational cultures: A competing values perspective. In P.J. Frost, L. F. Moore, M. R. Louis, C.C. Lundberg, and J. Martin (Eds.), *Organizational culture* (pp. 315-334), Sage, Newbury Park, CA.
- 【6】 Zeng, H. Z. (2006). A study of the relationships among organizational culture, organizational change and organizational performance: Taking the example of CHT's Southern Taiwan Office. Taiwan: Master's degree thesis, Engineering Management, National Cheng Kung University.
- 【7】 Xu, N. X. (2007). *Organization Theory and Management*, Taichung, Taiwan: Tsang Hai Publishing.
- 【8】 Li, Y. Z. (2002). A study of organizational culture and knowledge sharing: Using the example of elementary schools in Taipei County. Master's degree thesis, Graduate Institute of Compulsory Education, National Taipei Teachers College, Taiwan.
- 【9】 Daft, R. L. (2006). *Organization Theory and Design*. Translated by Li Z. C., Taipei: Hua Tai Publishing Co.
- 【10】 Ling, Y. H. and Hung, L. (2010). The Influence of Intellectual Capital on Organizational Performance: The Mediation Effect of Intellectual Capital Management Strategy. *Journal of Human Resource*, 10 (1) 1-27.
- 【11】 Daft (1978). *Enpocket Mobile Media Monitor US reveals young adults value mobile more than traditional media*, By Enpocket Retrieved July 21, 2005.
- 【12】 Delaney & Huselid, (1996). *The Impact of*



- Human Resource Management Practices on Perceptions of organization Performance. *Academy of Management Journal*.
- 【13】 Johnes, G. & J. Johns. (1993). Measuring the Research Performance of U.K. Economics Departments: An Application of Data Envelopment Analysis, Oxford Economic Paper, 45, 332-347.
- 【14】 Wu, S. H. (1998). Knowledge Flow and Industrial Innovations. Taiwan: the 7th Symposium on Industrial Management.
- 【15】 Damanpour, F., and Evan, W. M. (1984). Organizational innovation and performance: The problem of organizational lag. *Administrative Science Quarterly*, 29, 392-409.
- 【16】 Kimberly, J. R. and Evanisko, M. J. (1981). Organizational innovation: The influence of individual, organizational, and contextual factors on hospital adoption of technological and administrative innovations. *Academy of Management Journal*, 24: 689-713.
- 【17】 Mitchell, M. A. & Yate, D. (2002). How to use your organizational culture as a competitive tool. *Nonprofit World Madison*, 20(2), 33-34.
- 【18】 Huang, L. H. (2009). The Relationship between the Organizational Chang, Leadership Style, Organizational Culture and Job Performance- Evidence from Three Universities in Southern Taiwan. Taiwan: Master's degree thesis, Institute of Business Administration, Cheng Kung University, Taiwan.
- 【19】 Liu, Y. F. (2004). A study of the organizational culture and performance of land offices in Kaohsiung City and County. Taiwan: Master's degree thesis, Graduate School of Management, I-Shou University, Taiwan.
- 【20】 Du Y. K. (2013). Meta-analysis with Stata. Taiwan: Course materials of training course organized by TRISTAR Co., Ltd., and Department of International Business, National Commercial Technical College.
- 【21】 Michael Borenstein, Larry V. Hedges, Julian P. T. Higgins, Hannah R. Rothstein (March 2009). Introduction to Meta-Analysis.