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# **Multi-Skilling in the Hotel Industry in Taiwan**

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## **ABSTRACT**

*This study presents the results of research into the prevalence and type of multi-skilling in five star hotels in Taiwan. The literature suggests that multi-skilling is an effective strategy to resolve issues such as insufficiently qualified workers and the high turnover rates that confront the Taiwanese hotel industry. However, there is little evidence that this issue has been researched in the Taiwanese context. Responses from front-line managers indicate that training for multi-skilling has been adopted by the majority of the participating hotels and finds that six organizational and individual factors are positively correlated with multi-skilling with service quality as the most important. One factor, remuneration, is found to not correlate with multi-skilling. The authors discuss these results and make recommendations for a set of guidelines regarding multi-skilling for the Taiwanese hotel industry.*

**Keywords:** Front-Line Managers, Hotel, Labor Flexibility, Multi-Skilling, Taiwan.

## **LITERATURE REVIEW**

The purpose of multi-skilling is to extend the range of skills of individual workers to improve labor flexibility in responding to workplace change (Clark, 1989). Labor flexibility has been identified as significantly contributing to the development of human resources in response to competitive, technological and labor supply pressures (Kalleberg, 2001; Knox & Walsh, 2005) and is viewed as the most cost-effective way to enable hotels to cope with cyclical variations in the demand for seasonal labor (Baum, 2006a). Numerically flexible workers perform a narrow range of tasks and are less skilled so can be trained and replaced quickly thus reducing costs by limiting an employee's involvement in the organization (Kalleberg, 2001). Functionally flexible workers are able to move effortlessly from one task to another as they are multi-skilled to perform a variety of jobs and participate in decision-making and thus adding value to the organization (Kalleberg, 2001). Job vacancies can be swiftly filled by flexible workers for facilitating both the sideways and upward movement of workers from one post to another (Matias-Reche & Fuentes-Fuentes, 2006). However, the literature suggests that it is those who are functionally flexible through, multi-skilling, who are less likely to be implicated in a high turnover rate of staff (Hoque, 2000; Kelliher & Riley, 2003; Seiffert, 1997). Therefore, the literature appears to suggest that multi-skilling training can lead to greater functional flexibility and thus help hotels in Taiwan handle the difficult labor market situation identified above (Wu & Chen, 2002; Yang, 2007).

A simultaneous combination of the two forms of labor flexibility suits most luxury hotels (5-star hotels) (Kelliher & Riley (2002). This is because luxury hoteliers are always seeking to strengthen

their internal labor market through improvements in skills training provisions and career development programs (Knox & Walsh, 2005). At the same time, they attempt to secure numerous temporary workers to effectively deal with the fluctuations in business demand (Knox & Walsh, 2005). This shows that multi-skilling training is quite commonly used in the hotel industry, especially in luxury hotels, as a labor utilization strategy that leads to increased productivity.

There is also virtually no information on whether multi-skilling occurs in the hotel industry in Taiwan and, if it does, its perceived benefits and drawbacks. Therefore, this study explores whether the hotel industry in Taiwan has developed multi-skilled workers, specifically front-line managers such as supervisors and assistant managers. This is because they are at important layer of supervision in execution of strategic business plans (Shiao, 2004), as the success of organizations relies heavily on the effective execution of daily operations (Hrebiniak, 2005). This study also examines seven affective factors, including organizational productivity, service quality, retention, job satisfaction, remuneration, promotion, and organizational efficiency. Organizational efficiency is an aggregator of the six affective factors.

### **Background of the Taiwanese Hotel Industry**

In the Taiwanese hotel industry, there were about 686,000 workers required in 2004 and the industry is expected to require about 817,000 workers by 2011 (Wu & Chen, 2002). However, the hospitality vocational schools only supply about 28,000 trained workers each year (Wu & Chen, 2002). This is a significant problem from the labor market perspective. In addition, the high turnover rate resulting from the nature of the hotel working environment is another major issue confronting Taiwanese hotels. It has been identified that the voluntary turnover rate reaches 95.5% in the hotel industry overall, hitting the second highest turnover record among Taiwan's industries (DGBAS, 2007).

Both factors have created ongoing concerns and challenges for hoteliers, especially regarding the shortage of front-line managers (Yang, 2007). Therefore, it is suggested that training such employees in a wider range of skills (multi-skilling) can make them more flexible and efficient to cope with the multiple functions involved in hotel operations. In addition, multi-skilling training can help retain employees longer in the hotel industry because of increased meaning to their work and challenges that motivate them to innovate. They will then find satisfaction in the recognition they receive and self-achievement, even though they may be less satisfied with salary and working conditions (Hoque, 2000; Kelliher & Riley, 2003; Seiffert, 1997).

### **Perspectives on Multi-Skilling**

Multi-skilling is an acquisition of additional task-related skills and knowledge, which enables an individual to perform a wider range of tasks and function within organizations. Davids and Fredericks (2004, p.6) have clearly defined that multi-skilling is the acquisition of skills, knowledge, competency,

and experiences, which enables the individual to perform tasks outside their immediate job requirements. Multi-skilling provides the organization with a flexible and adaptable employee, and creates a more skilled pool of human resources.

Multi-skilling has been recognized as an important tool to cope with environmental changes, economic success, improved productivity and profit margins, and lower levels of turnover (Marchante, Ortega, & Pagan, 2006; Wilson, Murray, Black, & McDowell, 1998). This is because functional flexibility plays a key role in responding to the continuing changes with full-time employees, while numerical flexibility provides the ability to cater to increased needs at peak or seasonal high-demand times with part-time or casual employees (Atkinson, 1984; Baum, 2006a; Lai & Baum, 2005). More importantly, a simultaneous combination of the two forms of labor flexibility is believed to provide better competitiveness of labor utilization strategies for the 5-star hotels (Kelliher & Rilley, 2002).

Multi-skilled workers are capable of working across traditionally distinct occupational boundaries by having an increasing pool of skills and concomitant loss of emphasis on job demarcation (Cordery, Sevastos, Mueller, & Parker, 1993; Matias-Reche & Fuentes-Fuentes, 2006). In addition, multi-skilling involves the creation and promotion of dynamic capabilities. These capabilities allow rapid response to a variety of unpredictable contingencies and demand changes (Ittner & Kogut, 1995). Therefore, training for multi-skilling is believed to benefit hotels, as workers are capable of mobilizing under fluctuating business situations (Huang & Cullen, 2001).

By adopting multi-skilling, it is believed that organizations can benefit from increased productivity, service quality, and retention, while individuals can benefit from job satisfaction, remuneration, and promotion. However, there is little or no research evidence regarding multi-skilling in the Taiwanese hotel industry. Therefore, a conceptual model for this study was formulated into eight propositions. The first hypothesis was identifying whether or not training for multi-skilling occurred in the hotel industry in Taiwan. The other seven hypotheses were affective factors. These include: organizational productivity (Brusco & Johns, 1998; Kelliher, Riley, & Jones, 2000); service quality (Baum, 2006b; Eaglen, Lashley, & Thomas, 2000); retention (Huang, 1999); job satisfaction (Papis, 2006); remuneration (Cordery, 1987; Dewhurst, Dewhurst, & Liveesey, 2007); promotion (Saibang & Schwindt, 1998); and organizational efficiency. Organizational efficiency is an aggregated factor of the other six affective factors. Figure 1 below provides a conceptual mode of multi-skilling for this study. Table 1 below provides a summary of these eight hypotheses.

*Insert Figure 1 here*

*Insert Table 1 here*

## METHODOLOGY

This research is based on measurement rather than building a theory, so quantitative methods have been utilized (Neuman, 2006). As not much is known about multi-skilling in the Taiwanese hotel industry, a broad exploratory survey was appropriate to gain information (Frazer & Lawley, 2000). Thus, identifying whether or not training for multi-skilling occurred in the hotel industry was the first research question in the exploratory survey. In addition, the survey was designed to address the subsequent research questions that examined the relationship between the training for multi-skilling and the organizational efficiencies.

The sample population was front-line managers in Taiwan's hotel industry. This group of workers range from supervisors and assistant managers who work in or across the departments of front office, restaurant, and housekeeping. The sampling scale focused on Taiwan's 5-star hotels because it was considered that these hotels would invest more in training as a quality measure. Thirty 5-star hotels were selected for this study. This narrowed down the scale of sampling as Taiwan has 60 international tourist hotels (4 or 5-star hotels), 30 standard tourist hotels, 3,253 general hotels, 2,399 home stays, and 15 youth hotels (Tourism-Bureau, 2007).

A mail questionnaire survey was used for this research, as it is the most common method to survey members of an organization (Zikmund, 2003). Sample size is always a concern for the researchers in quantitative research because of the cost and efficiency involved in the research (Ruane, 2005). However, Sekaran (2003) has stressed that a sample size of thirty to 500 is suitable for most social research. More importantly, a minimum of thirty samples is required for each category (Sekaran, 2003). Thus, the sample size of this research was 100 samples, which were collected through the participation of the twelve 5-star hotels that were willing to participate for this research. However, there were only 68 valid respondents (36 multi-skilled employees and 32 non-multi-skilled employees) for subsequent analysis.

### Measurement

The questionnaire was divided into three sections based on the literature review and the research model. Section One contained general questions in regard to personal details, using nominal and ordinal scales. The survey covered questions about gender and age information (Brace, 2004). Section Two contained exploratory survey questions about the development of an individual's skills training activities in their organization, using a nominal scale. Section Three contained questions in regard to the employee's attitudes, beliefs, or opinion about work, using 5-point Likert-type scale ranging from "strongly disagree" to "strongly agree". The survey covered questions about organizational performance standards; service response time; pride in being part of the hotel; job satisfaction; fairness of the salary; and promotion opportunities. All of items in this section of the questionnaire were established based on previous instruments, which ensures the valid and reliable information.

Table 2 below provides a summary of sources of variables.

*Insert Table 2 here*

The quality of research is determined by the valid and reliable information, so the questionnaire was reviewed by some experts before conducting the survey. Firstly, the questionnaire was reviewed by the researcher's previous colleagues who currently work in the 5-star hotels in Taiwan, as the choice of words should approximately match the level of understanding of respondents (Sekaran, 2003). Secondly, the questionnaire was also reviewed by an expert panel of university professors in its English version as to appropriateness, to avoid jargon, and to maintain simplicity (Ticehurst & Veal, 2000). Thirdly, as the respondents are Taiwanese, English language was translated into Mandarin by the researcher and was reviewed by a language expert who is a teacher at a senior high school in Taiwan. This was helpful because some translated words were precisely corrected. Fourthly, a pilot study was conducted to ensure the questionnaire that was appropriate for the main study. Finally, SPSS was used to examine the accuracy of the data and conducted for the statistical tests.

## **FINDINGS**

### **Conclusions about the research hypotheses**

Eight hypotheses were examined for this study, and the results of identifying training for multi-skilling and t-tests are shown as follows;

### **Training for Multi-Skilling occurred in the Taiwanese Hotel Industry**

This hypothesis was supported, as the result of the exploratory survey indicates that 40 respondents (58.82%) of the total 68 valid respondents had skills training activities for within their functional area (department) and across other functional areas (departments). The response of over 50 percent of these is the standard that determines training for multi-skilling is adopted by the Taiwanese hotel industry, which is based on the advice of the expert panel. The adoption of multi-skills training was examined based on the questions of skills training activities asked in the questionnaire (Section Two, Question 1 and 2). The Question 1 asked "Did you have skills training activities that enable you to work at different functional areas (departments)?" The Question 2 asked "Did you have skills training activities that enable you to work with diverse tasks inside your functional area (department)?" Table 3 below provides a summary for the adoption of multi-skilling.

*Insert Table 3 here*

### **Multi-Skilled Front-Line Managers Increased Organizational Productivity**

This hypothesis was supported, as the result for multi-skilled employees in comparison to non-multi-skilled employees was significantly different,  $t(66)=2.516$ , with  $p<0.05$ . In addition, when

comparing mean scores of these two groups, the multi-skilled employees (4.00) had higher mean scores for organizational productivity than the non-multi-skilled employees (3.69). This indicated that the multi-skilled employees performed much better in organizational productivity than the non-multi-skilled employees.

In the correlation analysis, the question, “This hotel implements change quickly enough” received the highest score from the total instruments of the organizational productivity variable. This indicates that the ability to adjust labor utilization in response to fluctuating and uncertain circumstance in the hotel operation is highly associated with organizational productivity. Prior studies have shown that a multi-skilled workforce can benefit hotel operations from labor flexibility, cost-effectiveness, and recruitment problem solving (Lai & Baum, 2005; Nankervis, 1995). Haas, Rodriguez, Glover, & Goodrum (2001) also stress that organizations can increase productivity with a potential 5% or more total labor cost savings, and a potential 35% reduction in required total hires through multi-skilling. Therefore, it is believed that labor flexibility can increase organizational productivity in response to an uncertain service environment.

### **Multi-Skilled Front-Line Managers Provided a Higher Level of Service Quality**

This hypothesis was supported, as the result for multi-skilled employees in comparison to non-multi-skilled employees was significantly different,  $t(66)=5.727$ , with  $p<0.05$ . In addition, when comparing mean scores of these two groups, the multi-skilled employees (4.27) had higher mean scores for service quality than the non-multi-skilled employees (3.76). This indicated that the multi-skilled employees were able to produce higher service quality than the non-multi-skilled employees.

In the correlation analysis, the question, “I am effective in producing high-quality work” received the highest score from the total instruments of the service quality variable. This indicates that multi-skilling training can result in a higher level of service delivery in the hotel industry. Prior studies have shown that multi-skilling training can facilitate a greater understanding of different departments’ process, priority, and problems, as a result of improving service quality (Kelliher, et al., 2000). It is believed that multi-skilled employees are able to respond promptly to the individual needs of the increasingly demanding customer under unpredictable service situations (Klidas, Van Den Berg, & Wilderom, 2007). However, it has also been argued that although multi-skilling can improve service quality, it could lower productivity by reducing “point of service” staff (Ingram & Fraenkel, 2006; Kilic & Okumus, 2005). Therefore, it is suggested that the measurement of training need, in terms of functions and level, for substitution is necessary when planning labor utilization strategies (Riley & Lockwood, 1997).

### **Multi-Skilled Front-Line Managers were more likely to Stay Longer (Retention)**

This hypothesis was supported, as the result for multi-skilled employees in comparison to non-multi-skilled employees was significantly different,  $t(66)=3.752$ , with  $p<0.05$ . In addition, when comparing mean scores of these two groups, the multi-skilled employees (3.68) had higher mean scores for retention than the non-multi-skilled employees (2.99). This indicated that the multi-skilled employees stayed in the hotel longer than the non-multi-skilled employees.

In the correlation analysis, the question, “I am committed to staying with this hotel” received the highest score from the total instruments of the retention variable. This indicates that multi-skilling training can retain employees staying longer in the hotel. Prior studies have shown that job enrichment and rotation programs can retain employees and thereby reducing turnover (Knox & Nickson, 2007; Mortita, 2005). This is because multi-skilling gives employees opportunities to learn new skills and gain wider experiences, which excite them as well as to preempt their decisions to leave for development reasons (Kelliher & Riley, 2003). More importantly, the result of multi-skilling can lead to the prospect of career development, which attracts employees to stay longer (Fari & Liz, 1997). It is noted that multi-skilled workforce can improve labor retention with a 45% increase in average employment duration (Carley, Goodrum, Haas, & Borcharding, 2003).

#### **Multi-Skilled Front-Line Managers were more likely to Satisfy in Jobs**

This hypothesis was supported, as the result for multi-skilled employees in comparison to non-multi-skilled employees was significantly different,  $t(56.212)=2.727$ , with  $p<0.05$ . In addition, when comparing mean scores of these two groups, the multi-skilled employees (4.06) had higher mean scores for job satisfaction than the non-multi-skilled employees (3.70). This indicated that the multi-skilled employees had more satisfactory in jobs than the non-multi-skilled employees.

In the correlation analysis, the question, “My job makes good use of my skills and abilities” received the highest score from the total instruments of the job satisfaction variable. This indicates that multi-skilling training can increase job satisfaction by providing meaningful and interesting tasks that challenge employees. Prior studies have shown that job enrichment and job rotation can satisfy employees by increasing the ability of them through the use of skill variety, task identity, task significance, autonomy, and feedback (Garg & Rastogi, 2006; Spillane, 2001). The increase of job satisfaction is because a variety of work tasks is involved, which improves the quality of working life by reducing monotonous and repetitive work (Kelliher & Riley, 2003). The quality of working life reflects the needs of employees with its meaning (Spillane, 2001). Therefore, it is believed that job satisfaction can be increased through the use of multi-skilling training that strengthens employees’ need for growth that has important moderating effect.

#### **Multi-Skilled Front-Line Managers were more likely to Gain Promotion**

This hypothesis was supported, as the result for multi-skilled employees in comparison to



non-multi-skilled employees was significantly different,  $t(66)=3.491$ , with  $p<0.05$ . In addition, when comparing mean scores of these two groups, the multi-skilled employees (3.69) had higher mean scores for promotion than the non-multi-skilled employees (3.10). This indicated that the multi-skilled employees had more chance to be promoted than the non-multi-skilled employees.

In the correlation analysis, the question, "I am aware of the career opportunities throughout the hotel" received the highest score from the total instruments of the promotion variable. This indicates that multi-skilling training provides employees opportunities for career advancement. Prior studies have shown that multi-skilling involves exposure of employees to different tasks in the same department or brief rotations to other departments, so internal promotion opportunities can be facilitated (Baum & Odgers, 2001; Knox & Walsh, 2005). In addition, multi-skilling also involves up-skills training which develops employees with a higher level of knowledge of familiar principles and process (Clark, 1989). Therefore, it is believed that multi-skilling is a way to develop a managerial career, specifically for hospitality managers who constantly acquire new knowledge and skills for further opportunities (Akrivos, Ladkin, & Reklitis, 2007; Walsh & Taylor, 2007).

#### **Multi-Skilled Front-Line Managers Increased Organizational Efficiency**

This hypothesis was supported, as the result for multi-skilled employees in comparison to non-multi-skilled employees was significantly different,  $t(66)=4.077$ , with  $p<0.05$ . In addition, when comparing mean scores of these two groups, the multi-skilled employees (3.83) had higher mean scores for organizational efficiency than the non-multi-skilled employees (3.37). This indicated that organizational efficiency was much better supported by the multi-skilled employees in comparison to the non-multi-skilled employees.

As organizational efficiency is an aggregator of the six affective factors, it presents a position of an organization in relation to multi-skilling training. Joseph (2004) stresses that organizational agility can be sustained by developing employees with more adaptive capabilities and skills, which help organizations to cope with rapidly changing environment. This was also supported by some studies that multi-skilling training used as a cost-reduction strategy can facilitate and lead entire team's operation to increase productivity and efficiency (Kelliher, et al., 2000; Pan, Nickson, & Baum, 2005).

#### **Multi-Skilled Front-Line Managers were not linked to increased rates of pay**

This hypothesis was rejected by the research, as the result for multi-skilled employees in comparison to non-multi-skilled employees was not significant, with  $p>0.05$ . This indicated that multi-skilled employees received similar payment compared to non-multi-skilled counterparts in the hotel industry in Taiwan. This is contrary to some studies in Western countries such as Australia that multi-skilling is highly associated with higher compensation, as the aim of labor flexibility is to incorporate a link between financial rewards and skills acquisition within jobs (De Cieri, et al., 2008; Knox & Walsh,

2005). However, the reason behind the findings could be that a fair pay system is not well-established to reflect the skills acquisition in the Taiwanese hotel industry.

### **Summary**

The first hypothesis was supported, as the multi-skilled training for front-line managers is adopted by the hotel industry in Taiwan. In addition, multi-skilled front-line managers were also found to be significantly associated with the other six hypotheses, including increased organizational productivity, service quality, retention, job satisfaction, promotion, and organizational efficiency. However, remuneration hypothesis was rejected by the research, which indicated that multi-skilled front-line managers were not linked to increased rates of pay compared to non-multi-skilled counterparts.

### **CONCLUSION**

This exploratory study has identified that the 5-star hotel industry in Taiwan appears to have adopted multi-skilling for their front-line managers, such as supervisors and assistant managers. In addition, the study has also identified that multi-skilled training for front-line managers is strongly associated with the six affective factors. In descending order to the mean scores, they are service quality (m=4.27), job satisfaction (m=4.06), organizational productivity (m=4.00), organizational efficiency (m=3.83), promotion (m=3.69), and retention (m=3.68). However, remuneration (m=3.26) was not linked to the skills acquisition within or between jobs, as multi-skilled front-line managers were not significantly associated with increased rates of pay.

The results indicate that service quality is rated as the top effect of the multi-skilling. Teamwork within or between individuals in departments has been used to reduce departmental boundaries and thus deliver a sustainable quality of service. Job satisfaction has been increased, as multi-skilling provides front-line managers opportunities to learn new skills and to have greater job variety. Organizational productivity is a result of such labor flexibility, which enables the hotels cope with uncertain service environment. Multi-skilling also provides front-line managers with opportunities for career development, as a result of their decision to stay and through retaining them. However, skills acquisition seems not linked to the rates of pay perceived by the multi-skilled front-line managers in the Taiwanese hotel industry.

### **Recommendations**

Multi-skilling is believed to be the most cost-effective approach to help hotels handle the issues of insufficient qualified workers and high turnover rate, which are two major issues confronting the Taiwanese hotel industry. In addition, since there is less or no knowledge about multi-skilling in the Taiwanese hotel industry, this research is able to provide a set of guidelines regarding the benefits of multi-skilling training of front-line managers to the hotel industry in Taiwan. It is believed that hotels can benefit from the service quality, organizational productivity, organizational efficiency, and

retention, while individuals can benefit from job satisfaction, and promotion. However, remuneration was found to not significantly contribute to the individual benefits of the multi-skilling. Therefore, a set of guidelines is suggested for the hotel industry in Taiwan as follows;

- Multi-skilling is worthwhile investing, as this is the most cost-effective approach to help hotels in response to environmental change and economic success.
- Multi-skilling offers tremendous benefit, as this enables employees to cope with unpredictable service situations. Particularly front-line managers who are bottom line of supervision, carrying out business strategies in the daily operations.
- Multi-skilling collapses departmental boundaries, as this facilitates teamwork, and thus improving service quality. This leads employees think more about the entire hotel rather than their individual department.
- Multi-skilling increases organizational productivity, as this can sustain same productivity with a potential 5% or more total saving labor costs.
- Multi-skilling increases organizational efficiency, as this can develop employees with more capabilities and skills to cope with rapidly changing environment.
- Multi-skilling reduces turnover, as this offers employees opportunities to learn new skills and thus preempting their decisions to leave for development reasons.
- Multi-skilling increases job satisfaction, as this provides employees opportunities to have greater job variety with the quality of working life.
- Multi-skilling develops a managerial career, as this facilitates internal promotion opportunities, specifically for front-line managers who constantly acquire new knowledge and skills for further opportunities

### **Areas for Further Research**

Remuneration was found to not significantly correlate to multi-skills acquisition, which was a surprising for the researchers, so a further study could investigate the relationship between them. In addition, as multi-skilling regards to enable hotels cope with uncertain service environment as well as to enhance the employability of employees, a further study could focus on identification of which party has mostly driven the training for multi-skilling. Finally, multi-skills formation bears costs so a further study could investigate the responsibility of parties for multi-skills training planning, implementation, and return on investment.

### **Limitations**

There are two limitations identified for this study. Firstly, the research has used quantitative approach in which the reason behind the findings cannot be explained. For instance, remuneration is not significantly associated with skills acquisition, which remains unknown. Secondly, the sampling frame on the selection of 5-star hotels could limit the scale of the research as it may not represent the

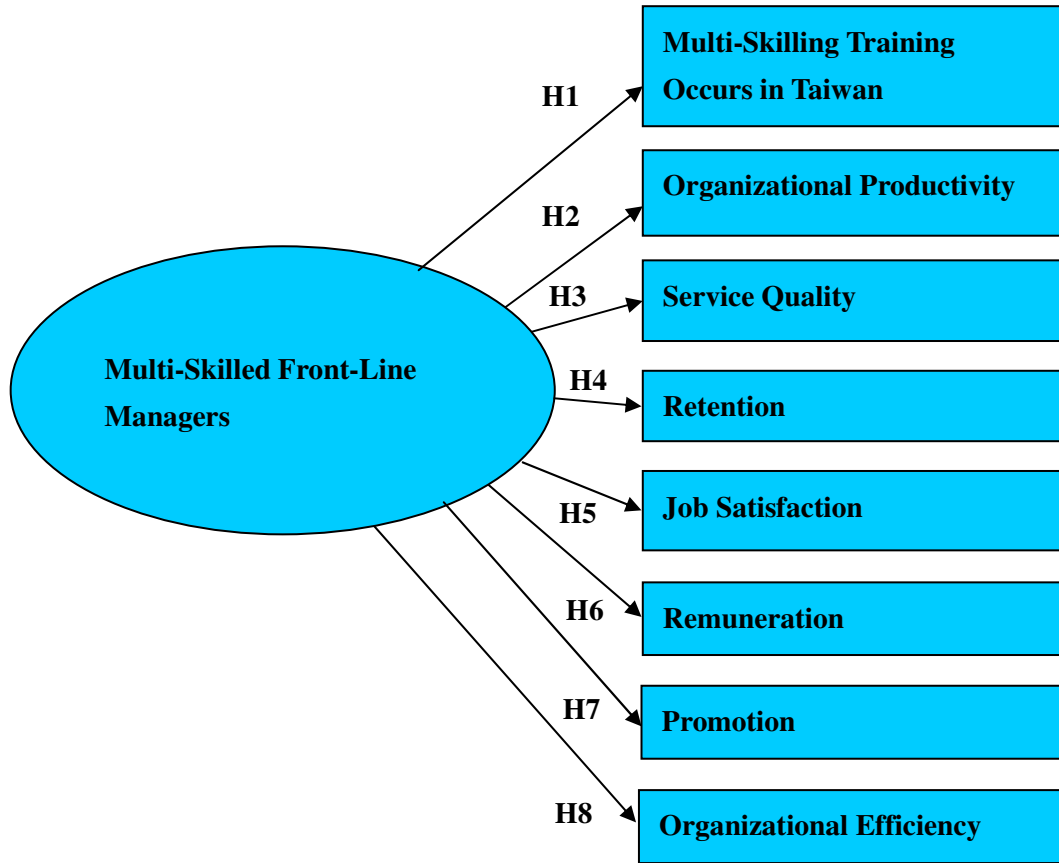
hotel industry as a whole. For instance, general hotels might not think it worthwhile investing in their employees to train them to work more on tasks within or across departments.

### **Contribution**

This exploratory study has contributed new knowledge about multi-skilling in the hotel industry in Taiwan, as there is less or no evidence regarding multi-skilling in the Taiwanese hotel context. This study has also contributed with a set of guidelines regarding the benefits of multi-skilling for the Taiwanese hotel industry based on the literature review and the research model. In addition, the results about findings show that service quality is rated as the top effect of the multi-skilling. This is an important contribution to the hotel industry, as service quality strongly links to a higher level of profit and growth of organizational performance in the service sectors.

**FIGURE**

*Figure 1: Conceptual Model of Multi-Skilling Training*



## TABLES

*Table 1: Summary of Research Hypotheses*

H1:	Multi-skilling training for front-line managers is being adopted by 5-star hotel industry in Taiwan.
H2:	The presence of multi-skilled front-line managers is highly associated with a perception of increased organizational productivity in the hotel industry in Taiwan.
H3:	The presence of multi-skilled front-line managers is highly associated with a perception of a high level of service delivery in the hotel industry in Taiwan.
H4:	The presence of multi-skilled front-line managers is highly associated with a perception of staff retention in the hotel industry in Taiwan.
H5:	The presence of multi-skilled front-line managers is highly associated with a perception of job satisfaction in the hotel industry in Taiwan.
H6:	The presence of multi-skilled front-line managers is highly associated with increased rates of pay in the hotel industry in Taiwan.
H7:	The presence of multi-skilled front-line managers is highly associated with increased promotion in the hotel industry in Taiwan.
H8:	The presence of multi-skilled front-line managers is associated with a perception of increased organizational efficiency in the hotel industry in Taiwan.

*Table 2: Sources of Variables*

Type of Question	Variable	Source
Demographics	Personal details	Self-developed
Multi-skilled training	Multi-skilling of front-line managers	Self-developed, expert panel, Frazer & Lawley (2000)
Attitudes, beliefs, or opinion	Organizational productivity	Mettrick (2005)
	Service quality	Hill & Alexander (2006)
	Retention	Connolly & Connolly (2005)
	Job satisfaction	Connolly & Connolly (2005)
	Remuneration	Connolly & Connolly (2005)
	Promotion	Connolly & Connolly (2005)

*Table 3: Adoption of Multi-skilling*

	Deemed Trained respondents	Deemed Non-trained respondents	Total valid respondents
Skills training for within functional area (department)	57	11	68
Skills training for within and across other functional areas (departments)	40	28	68

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