

**STUDIES ON THE IMPACT OF WORK-LIFE
INITIATIVES ON EMPLOYEE AND FIRM
PERFORMANCE¹**

**EXECUTIVE REPORT
(FOR PUBLIC RELEASE)**

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STUDIES ON THE IMPACT OF WORK-LIFE INITIATIVES ON EMPLOYEE AND FIRM PERFORMANCE

EXECUTIVE REPORT

A team of researchers from the Nanyang Business School (NBS), Nanyang Technological University (NTU), in collaboration with the Ministry of Manpower of Singapore (MOM), conducted two separate studies on the relationships between Work-Life initiatives and their impact on employee and organizational outcomes. The first study examines the relationships between Work-Life practices and firm performance in Singapore firms using the Condition of Employment survey data (hereafter referred to as the COE study). The second study is an in-depth case study investigating the impact of Work-Life practices and climate on employee and firm outcomes in Sakae Sushi² (hereafter referred to as the Sakae Sushi study).

This report presents the summarized results of these two studies. Section A presents the summarized results of the COE study and Section B the summarized results of the Sakae Sushi study. Section C presents the conclusions of the two studies.

² Sakae Sushi is owned by Apex-Pal International Ltd., a medium sized firm in the F&B industry.

SECTION A: THE COE STUDY

A Study on the Relationships between Work-Life Practices and Firm Performance in Singapore Firms

1. Background

1.1 Work-Life harmony is a relatively new concept amongst Singapore employers. As such, there is little research and information on the costs and benefits of Work-Life practices in Singapore firms. Evidence on the benefits of Work-Life practices is largely anecdotal or based on the subjective perceptions of employers and employees. This study is the first extensive empirical study examining the impact of Work-Life practices on employee turnover and bottom-line firm performance in Singapore.

1.2 The objectives of the study are to:

- examine whether and how Work-Life practices are related to employee turnover, and ultimately firm performance such as return on assets, employee labour productivity, and stock return in Singapore companies; and
- describe the characteristics of Singapore firms that vary in the extent to which they implement Work-Life practices.

1.3 Methodology

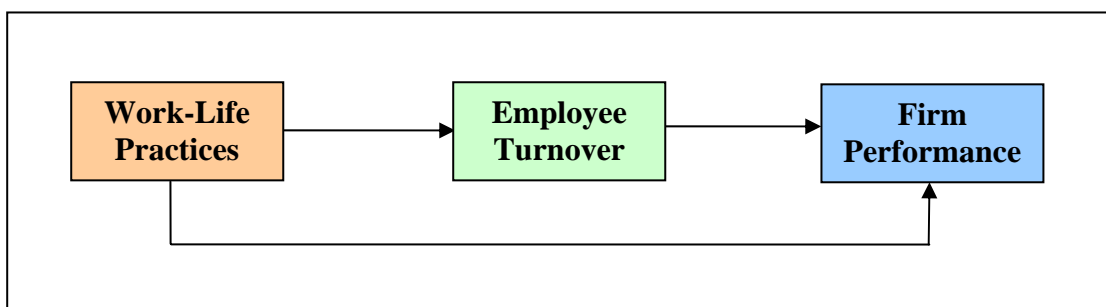
The results are based on data from the Conditions of Employment (COE) surveys conducted by the Ministry of Manpower (MOM) from 1996 to 2003, financial data from the Accounting and Corporate Regulatory Authority of Singapore (ACRA), and stock market data from Datastream and Worldscope.

- Three-stage least squares regressions are used to analyze the relationships between Work-Life practices, employee turnover, and firm performance. The reported relationships in this study are statistically significant at $p < 0.05$, after controlling for the size of the firm (logarithm of number of employees), firm ownership (public or private), industry (manufacturing or service), industry concentration, and year (where multiple years of data are used). For stock return, we also control for the age of the firm and the systematic risk of the firm's stock (beta).
- Two-step cluster analysis is used to categorize firms into different groups with varying extensiveness of Work-Life practices. We then examine whether firms in different groups have different characteristics; namely, size, industry, industry concentration, public ownership, and foreign ownership.

2. Relationships between Work-Life Practices, Employee Turnover, and Firm Performance

2.1 This study investigates the indirect impact of Work-Life practices through employee turnover as well as the direct impact of Work-Life practices on firm performance (see Figure 1).

Figure 1: Relationships between Work-Life practices, employee turnover and firm performance



2.2 The results indicate that **employee turnover is costly** for Singapore firms.

Voluntary turnover of both management and rank and file employees negatively affects:

- firm profitability (return on assets),
- employee labour productivity (logarithm of sales per employee), and
- stock return (one-year compounded stock return).

2.3 **Implementing Work-Life initiatives** for both management and rank and file employees can be an **effective business strategy** for Singapore firms to **reduce voluntary employee turnover**. The findings of this study reveal that:

- firms that offer a larger number of Work-Life benefits to their employees enjoy lower levels of voluntary employee turnover,³
- firms that have a higher proportion of employees with more generous annual leave entitlement (15 and above days of annual leave) have lower voluntary employee turnover,⁴ and
- firms that have a higher proportion of employees on a shorter work-week (5 and below days work-week) have lower voluntary employee turnover.⁵

While Work-Life initiatives may be costly for firms to implement, the direct costs are offset by the indirect positive benefits that these Work-Life policies have on firm performance through reduced employee turnover.⁶ Moreover, Work-Life initiatives may have long-term benefits which are not examined by this study due to data limitations.

³ We examine firms in the 2003 COE survey here since the 2003 COE survey has the most comprehensive list of employee benefits, with a maximum of 15 Work-Life benefits that firms can offer to their employees. However, the Work-Life benefits in the 2003 COE survey include only leave benefits and part-time work, and exclude other flexible working arrangements such as flexi-time and flexi-place.

⁴ We examine firms in the 2000 and 2002 COE surveys here.

⁵ We examine firms in the 2000 and 2002 COE surveys here. The results obtained here pertain only to the length of work-week and not the number of hours worked per week. Firms may implement a shorter work-week without reducing the number of hours worked per week.

⁶ This study does not examine Work-Life initiatives such as flexi-time and flexi-place arrangements. Different types of Work-Life initiatives have varying costs structures for firms with different characteristics.

2.4 Only a very small percentage of Singapore employees in the private sector are on flexible working arrangements such as flexi-time (0.3%) and flexi-place (0.2%). As such, this study is not able to examine the impact of flexi-time and flexi-place arrangements on firm performance. However, this study does examine a specific type of flexible working arrangement: part-time employment for rank and file employees. The results show that:

- firms that have part-time rank and file employees directly benefit through higher profitability, employee labour productivity, and stock returns, and
- firms that have part-time rank and file employees have higher voluntary employee turnover.

While part-time employees have higher turnover costs, they could give firms greater flexibility to schedule employees to meet business needs and they are cheaper to hire.

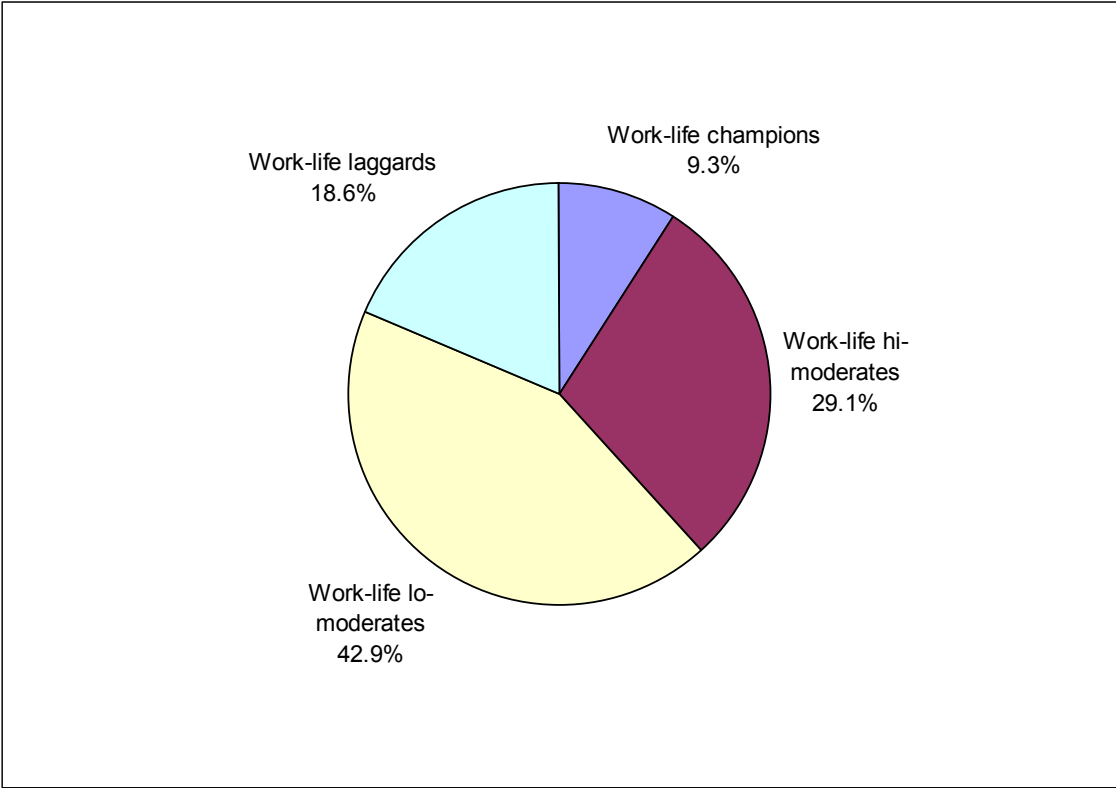
3. Characteristics of Firms with Varying Extensiveness of Work-Life Practices

3.1 Cluster analysis of firms in the 2003 COE survey sample reveals four different groups:

- Work-Life champions
- Work-Life hi-moderates
- Work-Life lo-moderates
- Work-Life laggards

Work-Life champions form only a small percentage of the sample (9.3%). 29.1% of the firms are Work-Life hi-moderates. Majority of the firms are Work-Life lo-moderates and Work-Life laggards (totalling 61.5%). See Figure 2.

Figure 2: Proportion of Work-Life champions, Work-Life hi-moderates, Work-Life lo-moderates, and Work-Life laggards in the 2003 COE survey sample



3.2 Work-Life champions, Work-Life hi-moderates, Work-Life lo-moderates, and Work-Life laggards differ in the following characteristics:

- Work-Life champions are the most generous in terms of the number of Work-Life benefits provided, followed by Work-Life hi-moderates, Work-Life lo-moderates, and Work-Life laggards.
- Work-Life champions are the largest in terms of the number of employees, followed by Work-Life hi-moderates, Work-Life lo-moderates, and Work-Life laggards.
- The Work-Life champions group (33%) has fewer firms that are in the manufacturing and construction industries as compared to the Work-Life hi-

moderates group (44%), the Work-Life lo-moderates group (46%), and the Work-Life laggards group (58%).

- Firms in the Work-Life champions group tend to be in industries with higher levels of concentration and fewer players as compared to firms in the Work-Life hi-moderates group, the Work-Life lo-moderates group, and the Work-Life laggards group.
- The Work-Life laggards group (1%) has a smaller proportion of public-listed firms as compared to the Work-Life lo-moderates group (6%), the Work-Life hi-moderates group (9%), and the Work-Life champions group (12%).
- The Work-Life laggards group (1%) has a smaller proportion of foreign firms as compared to the Work-Life lo-moderates group (3%), the Work-Life hi-moderates group (4%), and the Work-Life champions group (5%).

4. Conclusion

The results from this study indicate that **Work-Life harmony is a critical business strategy** that Singapore firms can employ to **reduce their employee turnover**, and in turn **improve overall firm performance**. Given that Work-Life benefits could be expensive to implement, firms should **assess the needs of their employees** and **offer Work-Life benefits that are valued** by their employees and that also serve the needs of the business. Work-Life laggards and Work-Life lo-moderates which have less extensive Work-Life initiatives tend to be smaller firms that are privately held and locally owned, and they tend to operate in the manufacturing and construction industries as well as in highly competitive environments with low levels of concentration.

SECTION B: THE SAKAE SUSHI STUDY

A Case Study on Work-Life Practices and Climate on Employee and Firm Outcomes in Sakae Sushi

5. Background

5.1 Objectives of the case study are to:

- develop a causal model to examine the underlying mechanism on how Work-Life practices and climate can affect employee and firm outcomes; and
- examine the costs of employee behaviours (turnover and absenteeism) and Work-Life practice (part-time work arrangement) through application of human resource metrics

5.2 Data Collection Methodology

- We adopted a four-stage multi-source data collection approach to develop and test the causal model.

Stage 1 – extensive search and review of literature relating to Work-Life practices and employee and firm performance

Stage 2 – interviews with management and staff to obtain background information and understand the company's Work-Life practices, workplace climate and their potential impact on employee attitudes and behaviours

Stage 3 – data collection from company records on employee data

Stage 4 – data collection from employees on employee attitudes, from company supervisors on employee behaviors and performance, and from customers on satisfaction with employee service performance and quality

- We used human resource metric calculations on Sakae Sushi's 2004 company records and cost data to examine the cost of employee behaviours and Work-Life practice.

6. Company Context

6.1 Apex-Pal started in July 1996 as a trading and garment manufacturing company. In 1997, the company reviewed its business strategy and moved into the food industry. Through its market research, Apex-Pal decided to tap on the global trend of growing health consciousness. Japanese cuisine was chosen for its healthy nature and the company targeted a mid-range price market.

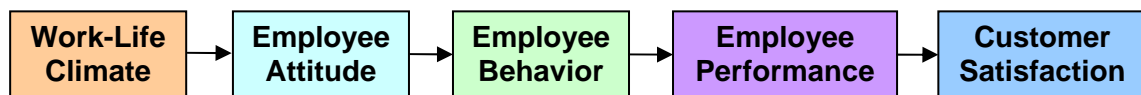
6.2 Apex-Pal adopts the philosophy that all staff, management and rank and file employees are co-owners of the business. Its human resource practices are driven by a holistic approach to life.

6.3 Sakae Sushi is the pioneer and flagship brand of Apex-Pal. Currently it has 26 company-owned outlets in Singapore. Our case study is conducted on Sakae Sushi.

7. The Causal Relationships

Based on our literature search and interviews with Sakae Sushi employees, we tested the following linkages: **Work-Life climate affects employee attitudes, which in turn affects employee behaviours, in turn, employee performance, and in turn, customer satisfaction** (see Figure 3).

Figure 3: Overall causal model for Sakae Sushi



8. Relationships between Work-Life Climate and Employee Performance

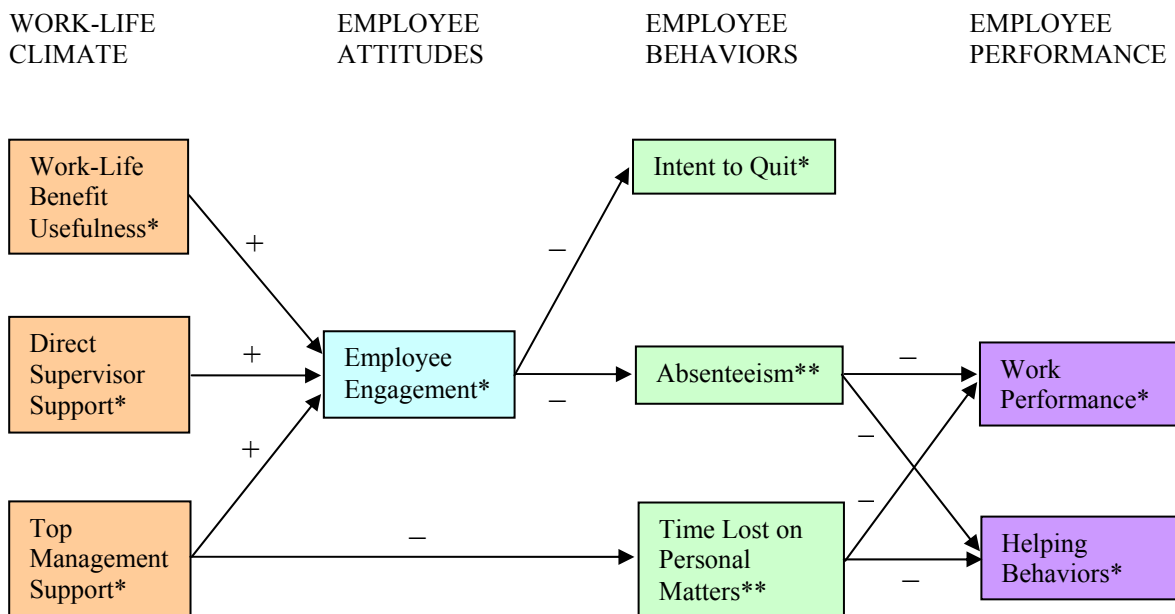
8.1 To test the Work-Life climate to employee performance relationships, we obtained

- Employee ratings on
 - Work-Life benefit usefulness
 - direct supervisor support
 - top management support
 - employee engagement
 - intent to quit : turnover intentions
- Supervisor ratings of employees on
 - absenteeism: missed scheduled work without prior notice
 - time lost on personal matters: time lost at work attending to family or personal issues
 - work performance

- helping behaviours: employees' cooperative behaviours toward co-workers and supervisors.

8.2 Controlling for gender, tenure, educational level, marital status and work arrangement (i.e., full-time or part-time), we tested the relationships on 484 Sakae Sushi employees (see Figure 4).

Figure 4: Work-Life climate to employee performance relationships



*7-point Likert measurement scale
 **5-point Likert measurement scale

8.3 The results show that:

- Employees who find Work-Life benefits useful and valuable, and who receive support from their direct supervisors and top management, are more engaged and fulfilled in their work. In turn, employees who are more engaged in their work are **less likely to be absent on the job and less likely to quit.**

- Employees who perceive top management to be supportive of Work-Life balance are **less likely to lose productive time at work attending to family or personal issues**.
- Absenteeism and time lost at work due to personal matters negatively affect **employee performance** on their job tasks as well as **helping behaviours** toward their co-workers and supervisors.

8.4 With reference to the model in Figure 4 and the respective 5- or 7-point measurement scales of the variables, our calculations show that:

1 unit increase in	DRIVES
Work-Life benefit usefulness	1.4% of a unit increase in work performance 1.0% of a unit increase in helping behaviours 12.5% of a unit decrease in employees' intent to quit
direct supervisor support	1.5% of a unit increase in work performance 1.1% of a unit increase in helping behaviours 13.8% of a unit decrease in employees' intent to quit
top management support	6.4% of a unit increase in work performance 4.5% of a unit increase in helping behaviours 6.0% of a unit decrease in employees' intent to quit

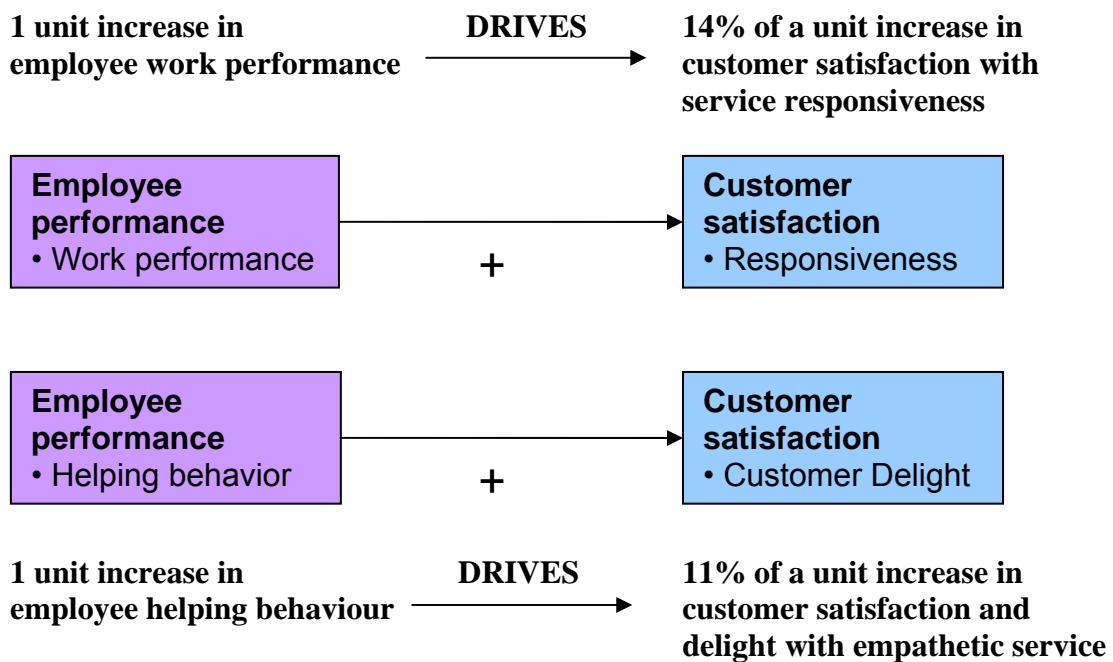
Note: The units reported in the table above are standardized units for meaningful comparisons of unit changes amongst the variables.

9. Relationships between Employee Performance and Customer Satisfaction

9.1 To examine whether employees' workplace performance has an effect on customer outcomes, we asked customers to rate their satisfaction with employee service outcomes, namely, Service Responsiveness and Customer Delight.

9.2 Controlling for gender, tenure, educational level, marital status and type of work arrangement, we examined the relationships for 211 Sakae Sushi service employees who had corresponding customer ratings. Figure 5 shows the relationships.

Figure 5: Relationships between employee performance and customer satisfaction (N=211)



9.3 The results show that:

- Sakae Sushi service staff who perform better at work are **more responsive** to customer service requirements and needs, e.g., being prompt and able to attend to their special requests.
- Employees with higher levels of helping behaviours are better able to **delight customers** and provide more empathetic service in making customers feel special and attended to, e.g., being sympathetic and reassuring when something is wrong.

- With reference to 7-point measurement scales,
 - a one unit increase in service employees' work performance drives 14% of a unit increase in customer satisfaction with service responsiveness.
 - a one unit increase in service employees' helping behaviours drives 11% of a unit increase in customer satisfaction and delight with empathetic service.

10. Relationships between Workload and Employee Performance

10.1 In addition to examining the links in the overall causal model, we examine whether annual leave days taken and total hours worked affect employee performance. We obtained from company records, annual leave days taken for fifteen months from January 2004 to March 2005, and total hours worked inclusive of overtime hours for the same period.

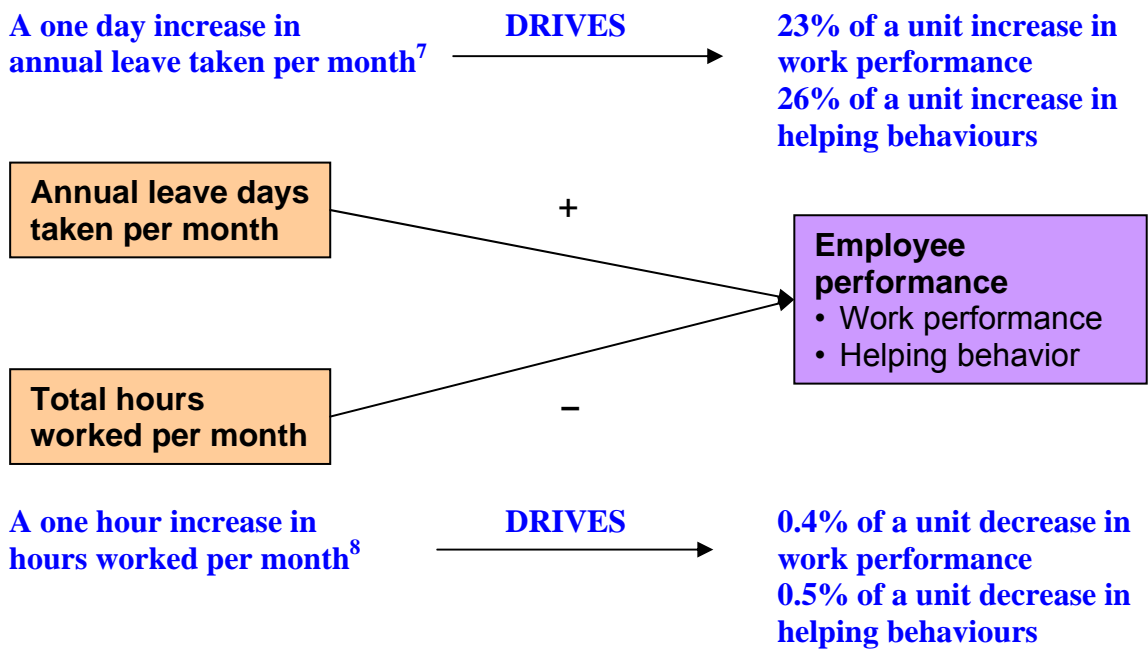
10.2 Controlling for employees' gender, tenure, marital status, and educational level, we tested the relationships with 310 full-time Sakae Sushi employees (see Figure 6).

10.3 The results show that:

- With reference to 7-point measurement scales,
 - A one day increase in annual leave taken in a month drives 23% of a unit increase in work performance and 26% of a unit increase in helping behaviours.
 - On the other hand, a one hour increase in hours worked per month drives 0.4% of a unit decrease in work performance and 0.5% of a unit decrease in helping behaviours.

- Hence, **under consuming annual leave and working long hours are negatively associated with work performance and helping behaviours** toward co-workers and supervisors.

Figure 6: Relationship between annual leave days, hours worked and employee performance (N=310 – full-time staff)



11. Turnover Cost Analyses

11.1 Employee turnover can be costly.⁹ Findings from the COE study show that Work-Life initiatives are associated with lower employee turnover, which in turn is associated with improved firm financial performance. We further examine and analyze the impact of employee turnover as well as absenteeism costs with the use of human resource metrics in Sakae Sushi.

⁷ Employees in this sample took between zero (0) to four (4) days of annual leave per month.

⁸ Employees in this sample worked between 69.5 to 284.6 hours per month.

⁹ For example, Merck & Company found that their turnover cost was 1.5 to 2.5 times the annual salary of their employees in Solomon, J. (1988, Dec 29). Companies try measuring cost savings from new types of corporate benefits. *The Wall Street Journal*.

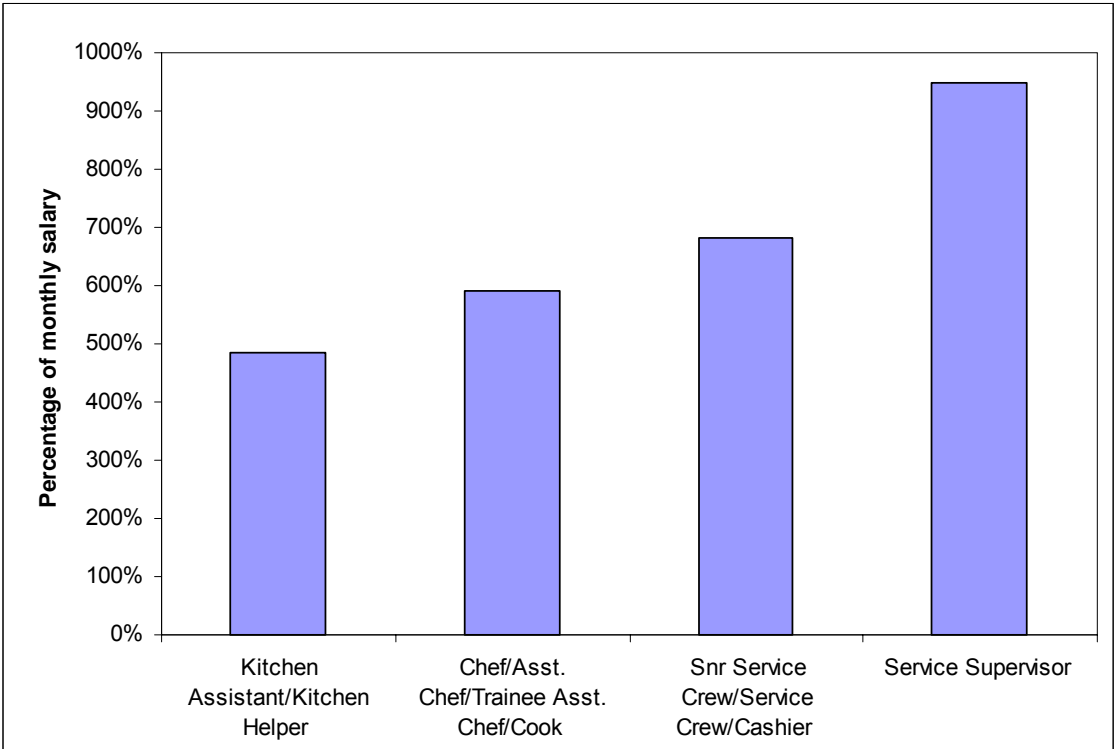
11.2 Four components of employee turnover costs (i.e., Separation cost, Replacement cost, Training cost and Performance differential cost) were computed and analyzed. We computed turnover costs for the following categories of full-time employees in Sakae-Sushi based on 2004 company data:

- Service Supervisor
- Senior Service Crew/Service Crew/Cashier
- Chef/Assistant Chef/Trainee Assistant Chef/Cook
- Kitchen Assistant/Kitchen Helper

11.3 The results show that:

- Total turnover costs as a percentage of monthly basic wages of the respective employee categories range from **480%** (Kitchen Assistant/Kitchen Helper) to **950%** (Service Supervisor). See Figure 7.

Figure 7: Turnover costs per employee as a percentage of monthly salary



- Further analyses of the total turnover costs show that
 - Performance differential cost that measures **productivity losses** of replacement employees accounts for 75%-81% of the total turnover cost.
 - Training cost accounts for 17% to 24%.
 - Employee separation and replacement costs account for only 1% to 2%.

11.4 We compared the total employee turnover costs for 2004 with the total staff cost in Sakae Sushi for the same year. Our analysis show that a 1% reduction in employee turnover costs was equivalent to a reduction of 0.18% of Sakae Sushi's annual staff cost in 2004.

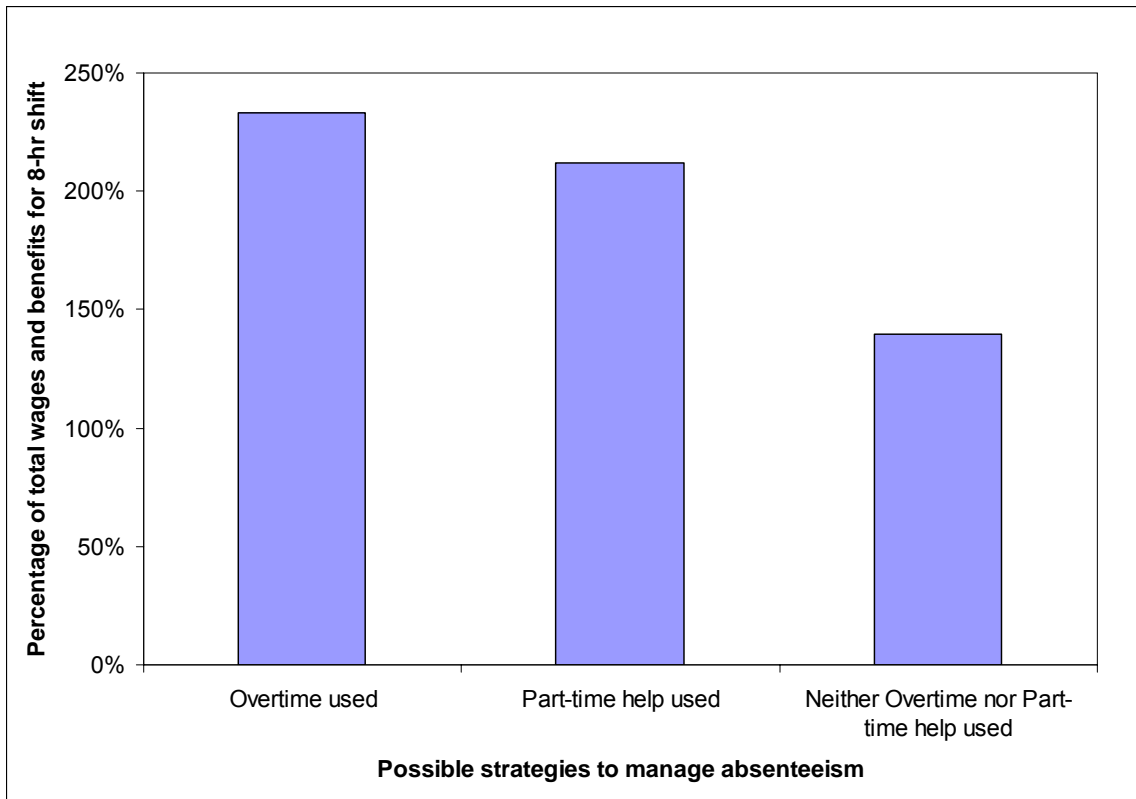
12 Absenteeism Cost Analyses

12.1 **Employee absenteeism**, like turnover, **can also be costly**. To examine the cost, we computed absenteeism cost using company data on medical absences for the job categories of full-time employees mentioned in section 11.2.

12.2 Absenteeism costs vary depending on the strategies used to manage absence events. Three strategies used by Sakae Sushi in such situations are, (1) use overtime, (2) use part-time help, (3) use neither of the above strategies assuming adequate staffing despite absentees.

12.3 Computations based on 2004 company data reveal that when a service crew was absent for medical reasons for an 8-hour shift, the cost to Sakae Sushi was 233% of the daily wages and benefits of that crew when overtime was used, 212% when part-time help was used, and 140% when neither overtime nor part-time help was adopted. See Figure 8.

Figure 8: Costs of medical-related absenteeism when a service crew is absent for an 8-hour shift.



13. Comparative Cost Analyses: Full-Time vs. Part-Time Work Arrangements

13.1 Many organizations use part-time employment as one of the flexible employment options in their operations. Our analysis showed that in 2004, 48% of Sakae Sushi's service crew was on part-time work arrangement.

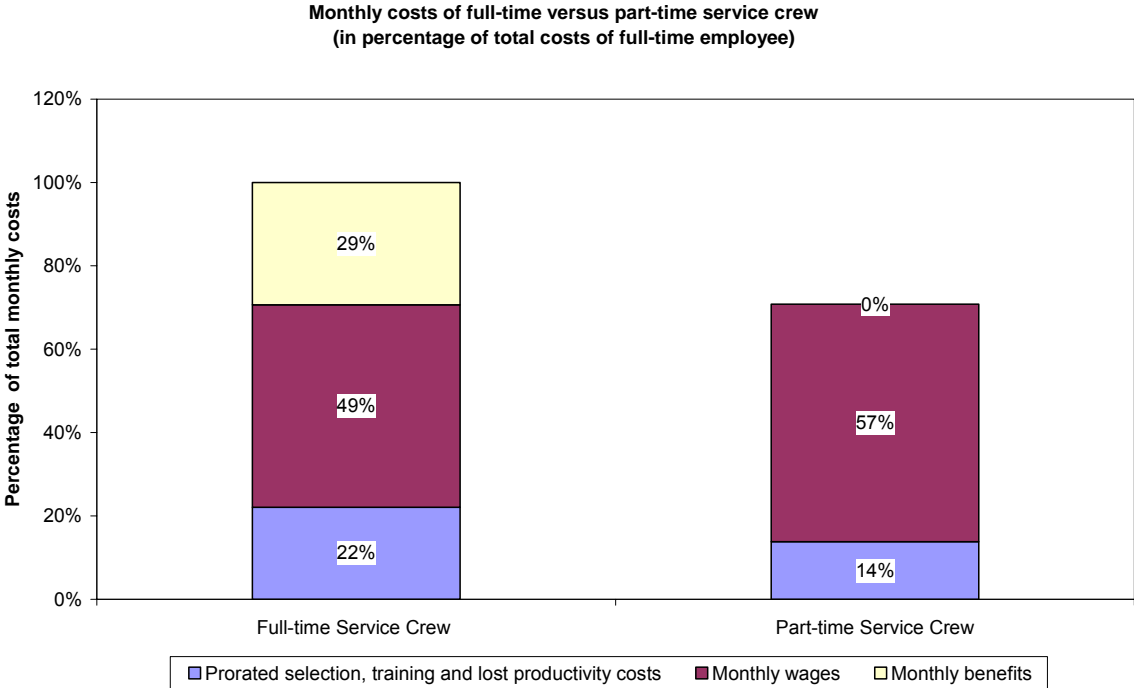
13.2 To compare the costs of full-time vs. part-time work arrangements, we computed and analyzed the fully loaded costs¹⁰ of a full-time service crew and an equivalent part-time

¹⁰ Fully loaded costs include employee separation and replacement cost, new employees depressed productivity cost while he or she is learning, and time cost of co-workers spent guiding him or her (Cascio, W. F. (2000). *Costing human resources: The financial impact of behavior in organizations* (4th ed.): South-Western College Pub. p. 23)

service crew¹¹ that included wages and benefits¹², recruitment and selection costs, training costs and lost-productivity costs in our computation.

13.3 The results show that the equivalent monthly costs of a part-time service crew were about 30% cheaper than that of a full-time counterpart. See Figure 9.

Figure 9: Cost comparison of hiring a full-time vs. part-time service crew



¹¹ Assuming part-time employee worked equivalent hours as that of the full-time employee.

¹² Part-time employees were not entitled to benefits from Sakae Sushi.

SECTION C: CONCLUSIONS

14. Conclusions

14.1 Results from our two studies indicate that a **good Work-Life system**, i.e., employee-valued Work-Life initiatives implemented within a conducive Work-Life climate, benefits both the employee and the firm. It is important for firms not only to **implement Work-Life programmes that are valued by employees** but also to **build a positive Work-Life culture** within the firm.

14.2 **Work-Life harmony is a critical business strategy** that employers can use to **reduce employee turnover, increase employer performance and improve customer satisfaction.**

14.3 Results also suggest that **over-working employees is counterproductive.** Employees who work longer hours or longer work-week without adequate annual leave provisions can adversely affect firm performance through **lowered productivity, performance and turnover.**

14.4 Given the importance of introducing **Work-Life initiatives that employees value,** firms should:

- conduct **employee Work-Life needs assessment and business needs analyses** to identify and implement valuable Work-Life benefits that are aligned to business objectives, and

- develop **human resource metrics** (e.g., turnover cost computations) to **evaluate and track** the impact and effectiveness of Work-Life initiatives.

14.5 Given the importance of having a **supportive Work-Life climate** that includes top management and direct supervisor support, firms should:

- have **CEOs and top management champion Work-Life efforts** within the firm,
- **provide top management support** of Work-Life initiatives through explicit company policies that are clearly communicated and that allay fears of adverse consequences on employee take-up of Work-Life benefits,
- **train and equip direct supervisors** with relevant management skills that support a positive Work-Life culture, and
- **track and review Work-Life climate** in the firm over time.