Research Article   Open Access

The Mediating Effect of Technological Innovations on the Relationship Between Work-Life Balance and Employee Engagement of Hotel Front-Liners

Raymart I. Felicilda, Stilo Floyd Schneider, PhD, DBA

University of Mindanao
Philippines

ABSTRACT: *The study's principal purpose was to discover the mediating effect of technological developments on the relationship between work-life balance and hotel front-line employee engagement in the hospitality industry. Using the statistical tools mean, Pearson r and regression, an adaptive questionnaire measured the level of technological innovations, work-life balance, and employee engagement of hotel front-liners. A quantitative method was employed to select 274 employees through simple random sampling of various hotel employees in the Davao Region. Furthermore, technological innovation is significantly related to and positively affects employee engagement, implying that as technological innovation rises, so does employee engagement. Still, it found a negative correlation, implying that increased work-life balance leads to decreased employee engagement. Lastly, the Sobel test yielded a z-value of -.583 with a p-value of 0.01, significant at 0.05 level. The original direct impact of work-life balance on employee engagement improved upon the addition of technological innovations.*

I.   INTRODUCTION

Many people consider our generation to be the most innovative ever because of the rapid pace of technological change today (Polimenov et al., 2015). Despite the undeniable benefits of technological advancements, the human factor remains a critical and irreplaceable component of the hospitality service process. Despite massive investments in information technology by hoteliers, evidence of increased productivity is scarce, leading to speculation about a "productivity paradox" (Brynjolfsson et al., 2020). Despite the emergence of these new technologies, which have enormous industrial potential, productivity growth has been disappointingly slow in recent years. This research will be carried within this framework to determine the effect of technological developments on hotel employees' work-life balance and engagement. Because of the Covid-19 pandemic, technological advancements were used more than ever before.

Numerous emerging and industrialized economies in South and East Asia have witnessed tremendous economic expansion (Tongchaiprasit&Ariyabuddhiphongs., 2016). According to Ollier-Malaterre (2017), the degree of industrialization impacts the nature of work-family needs since it impacts both employee demands and resources. Along with this expansion, the tourism and hospitality industry has emerged as one of the world's most powerful economic engines. More importantly, the widespread adoption of new technologies in this industry has fundamentally altered the way services are provided and consumed in recent years (Ollier-Malaterre, 2017). Because of the tremendous pace of technological change today, our generation is regarded as the most innovative ever.   Despite the clear advantages of technological advancements, the human element remains an essential and irreplaceable component of the hospitality service process.

In light of the fact that companies are keen on leveraging improved individual and organizational success through high levels of employee engagement, engagement has become one of the most important concepts in the field of management (Bailey et al., 2017). It has also been repeatedly recorded those levels of engagement are at an all-time low. Gallup (2015), a pioneering organization that has been monitoring employee engagement in various countries since 2000, found that only 13% of the working population worldwide is engaged (Mann et al., 2016). In reality, over the last decade, levels of

interaction have barely increased. According to Mann et al. (2016), the current employee engagement crisis is having severe and long-term consequences for the global economy.

Research has been conducted in various parts of the world on the impact of technological innovations on work-life balance and employee engagement. The researcher, on the other hand, has not come across any studies on the impact of technological advances on work-life balance and employee engagement in a local setting. The hospitality industry acts as a valuable human resource in providing service and achieving long-term goals, so if these goals and expectations are achieved, it will have a positive impact on society. Thus, this research is urgently required.

II.   METHODOLOGY

This study employed a causal-effect methodology in a quantitative, non-experimental research design. It is a quantitative research design in that the researcher will use measurement to test the hypothesis by collecting data through surveys, which will result in statistical data (Labare, 2009). Employees of hotel establishments in Davao City accredited by the Department of Tourism Area XI (September, 2020) are the respondents, regardless of their employment status. They are the ones who are appropriate for the survey respondents and provide useful information for testing the study's hypothesis. In order to determine the number of employees per hotel establishment, the researcher will use stratified random sampling. In this segment, the researcher will collect and gather relevant data using a printed and electronic structured questionnaire. These survey questionnaires were believed to be appropriate for it was already treated to be valid and reliable. Furthermore, pilot testing was also done prior to the conduct of the study and has a value of the Cronbach Alpha which is 0.983 for technological innovations, 0.958 in employee engagement and 0.784 in work-life balance. This means that the terms used in the questionnaires were excellently related to each other. The questionnaire followed the 5-point Likert scale, 5 being the highest while 1 being the lowest.

III.   RESULTS AND DISCUSSION

RESULT
Shown in Table 1 are the results of the descriptive statistics on assessing the level of technological innovations as perceived by hotel front-liners in the Davao Region, which has an overall mean of 4.45 (SD=0.575), described as very high. The very high levels surmised of its indicators, to include data management ($\bar{x}$=4.48, SD=0.579), performance targets and achievements ($\bar{x}$=4.46, SD=0.600), accountability ($\bar{x}$=4.40, SD=0.641) and quality of service ($\bar{x}$=4.48, SD=0.626). Overall, hotel employees believe that their company values data processing and providing high-quality service in their operations. Furthermore, the very high levels of data management and service quality compared to other measures may indicate that situations involving providing quality of service to guests and securing pertinent information are more pronounced in Davao City's hotel establishments.

Table 1
Level of technological innovation

Indicators	Mean	SD	Descriptive Level
Data Management	4.48	.579	Very High
Performance Targets and Achievements	4.46	.600	Very High
Accountability	4.40	.641	Very High
Quality Of Service	4.48	.626	Very High
Overall	**4.45**	**.575**	**Very High**

Manifested in Table 2 are the results of the descriptive statistics in measuring the level of work-life balance of hotel front-liners in the Davao Region. The overall mean of work-life balance is 3.69 (SD=0.699), assessed to be high. The high level could be attributed to predominantly high ratings given by employees on job stress ($\bar{x}$=3.68, SD=0.810), long working hours ($\bar{x}$=3.90, SD=0.884), and work-family conflict ($\bar{x}$=3.85, SD=0.756) with role overload ($\bar{x}$=3.33, SD=1.107) being the only measure assessed as moderate.

Table 2
Level of employee engagement

Indicators	Mean	SD	Descriptive Level
Leadership	4.37	.649	Very High
Communication	4.21	.693	Very High
Commitment	4.15	.844	High
Employee Involvement	3.87	.865	High
Overall	**4.15**	**.679**	**High**

In general, hotel workers are thought to be reasonably sensitive to circumstances that are perceived as adverse or contradictory in their quest to balance work and personal life. Since hotel employees work such long hours, this dimension is more prominent than three other measures of work-life balance among hotel front-line employees.

Table 3 exhibit the descriptive statistics results on assessing the level of employee engagement as perceived by hotel front-liners in Davao Region, which has an overall mean of 4.15 (SD=0.679), described as high. The high level is also reflective of high to very high levels of its indicators, to include leadership ($\bar{x}$=4.37, SD=0.649), communication ($\bar{x}$=4.21, SD=0.693) – both of which are very high –commitment ($\bar{x}$=4.15, SD=0.844), and employee involvement ($\bar{x}$=3.87, SD=0.865).

Table 3
Level of employee engagement

Indicators	Mean	SD	Descriptive Level
Leadership	4.37	.649	Very High
Communication	4.21	.693	Very High
Commitment	4.15	.844	High
Employee Involvement	3.87	.865	High
Overall	**4.15**	**.679**	**High**

It is clear that the hotel employees' approach to implementing management techniques is similar to their activities, which includes the type of leadership and communication. These two steps are at a very high level, indicating that hotel employees in Davao City deal with circumstances like these nearly all of the time, if not all of the time. Furthermore, the high degree of commitment in the remaining two metrics shows that hotel employees have been seen to complete their performance tasks the majority of time.

Displayed in Table 4 are the results of the relationship between the independent (work-life balance), dependent (employee engagement), and mediator (technological innovations) variables. Bivariate correlation analysis using Pearson product-moment correlation was employed to determine the relationship between the variables mentioned.

The first zero-ordered correlation analysis between work-life balance and employee engagement revealed a computed r-value of -0.0601 with a probability value of p<0.000, which is significant at the 0.05 level. It indicates a positive and robust association between the two variables. So, since the null hypothesis of no significant link is false, the null hypothesis of substantial relationship must be accepted.

Table 4
Correlation Analysis of the Variables

Pair	Variables	Correlation Coefficient	*P*-Value	Decision On Ho
IV And DV	Work-Life Balance and Employee Engagement	-0.601	0.000	Reject
IV And MV	Work-Life Balance and Technological Innovations	-0.429	0.000	Reject
MV And DV	Technological Innovations and Employee Engagement	0.681	0.000	Reject

Similarly, the second bivariate correlation analysis involving work-life balance and technological innovations yielded an r-value of -0.429 with a probability value of $p<0.000$, which is significant at 0.05 level. It can be seen as showing a favorable relationship between the two variables. Since the null hypothesis is rejected, the idea that there is no meaningful link is likewise disproved.

An r-value of 0.681 was obtained with a probability value of $p = 0.000$, which is significant at the 0.05 level. The two variables have a positive correlation. The rejection of the null hypothesis implies that there is indeed a meaningful link.

Furthermore, the result of the computation of mediating effects is shown in Figure 3. The Sobel test yielded a z-value of -.583 with a p-value of 0.01, which is significant at 0.05 level. It means that the mediating effect is partial. The original direct effect of work-life balance on employee engagement improved upon the addition of technological innovations. The negative value of Sobel z indicates that the addition of adversity response does not reduce but somewhat improves the effect of work-life balance on employee engagement. The figure also shows the effect size computation in the mediation test conducted between the three variables. The effect size measures how much of the effect of work-life balance on employee engagement can be attributed to the indirect path. The total effect value of -0.583 is the beta of work-life balance towards employee engagement. The direct effect value of -0.367 is the beta of work-life balance towards employee engagement with technological innovations included in the regression.

Table 5
Regression results of the variables in the four criteria of the presence of mediating effect

Step	Path	Beta (Unstandardized)	Standard Error	Beta (Standardized)
Step 1	c	0.910	0.032	0.685
Step 2	a	0.188	0.046	0.134
Step 3	b	-0.073	0.023	-0.078
Step 4	c′	0.924	0.032	0.695

IV.   DISCUSSION

First, the relationship between technological innovations and work-life balance, which is more likely to contribute to employee engagement, the result of the study confirmed that technological innovations have a significant relationship to work-life balance since the result revealed that the overall r-value is -0.429, which is higher than the 0.05 level of significance. It indicates that the null hypothesis has been rejected and that the variables have a strong correlation. TRA (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) is the theory of reasoned action (TRA) that describes the link between technology advances, work-life balance, and employee engagement of front-line hotel employee's foundation of this study.

Maharshi and Chaturvedi (2015) assert that combining work and life domains is getting increasingly challenging as the workplace, and the demographic composition of the labor force, change rapidly. According to the study, the desire to disengage from work has long been a talking point. Still, the pandemic's work-from-home trend has made the issue even more prevalent. Many people struggle to create boundaries, leading to burnout, poor performance, stress, and sick time.

In addition, if the work-life balance is high, the level of employee engagement is low. It is parallel to the findings of Ernest and Young's (2014 cited by Twaronite, 2015) Global Generation survey where they examined generational workplace issues in the U.S., Germany, Japan, China, Mexico, Brazil, India, and the U.K., and found that 49% of workers

who participated in the study experienced the most difficulty overall managing work, family, and personal responsibilities (Twaronite, 2015).

Next, the relationship between technological innovations and employee engagement established a significant relationship between the two variables. The result revealed that the overall r-value is -0.601, greater than the 0.05 level of significance. Once the null hypothesis is rejected, the variables start to correlate strongly. It was stated by Devi, Suganya, and Ravi (2018) that although while technology poses a danger to the stability of employees and blurs the barrier between work and personal life, the advantages exceed the costs, therefore demonstrating that it has a positive influence on employee engagement (Devi, Suganya, & Ravi, 2018). Employee engagement is made possible by tools like virtual technology, social networking, and online portals. The advancement of business technology is also critical since it improves communication by allowing information to be transmitted instantly across many channels.

Finally, the study revealed the relationship between work-life balance and employee engagement. The overall r-value is 0.681, greater than the 0.05 level of significance, which established a significant relationship between the two variables. Thus, the null hypothesis is rejected. It abides with the study of Benito-Osorio, et al. (2015). They state that WLB has a role in increasing employee engagement. In addition, according to Lazar et al. (2015), the benefits of WLB are the existence of commitment, loyalty, and increasing employee productivity. According to Corporate Executive Board (CEB), employees who think they have a good work-life balance work 21 percent harder than those who do not. work-life conflict decreases productivity, decreases attendance, causes health problems, depletes energy, increases stress, and is more likely to lead to mental breakdown (Lazar et al., 2015).

CONCLUSION

Based on the results of the study, the following conclusions were drawn:

The level of technological innovations is very high, and its indicators data management, performance targets and achievements, accountability, and quality of service have a very high descriptive equivalent. Next, the study reveals that the level of technological innovations is observed as perceived by hotel front-liners. Also, the level of work-life balance is high, and it's an indicator of job stress, long working hours, and work-family conflict. Only role overload among the four indicators has a moderate descriptive equivalent. Lastly, the indicators of leadership and communications are very high, and commitment and employee involvement are high on employee engagement. The level of employee engagement has a high descriptive equivalent.

Furthermore, technological innovation is significantly related to work-life balance and employee engagement of hotel front-liners. Therefore, the study results confirm that the employee engagement of hotel front-liners is interrelated to employee's work-life balance. Lastly, the study's outcome concurs with the Technology Acceptance Model (TAM) developed by Davis (1989). Hence, the Technology Readiness (TR) model introduced by Parasuraman (2000) reflects the tendency of users to incorporate the new technology, which believed that the two variables are significantly connected.

ACKNOWLEDGMENT

REFERENCES

[1.] Afsar, B., Shahjehan, A., & Shah, S. I (2018) 'Frontline employees' high–performance work practices, trust in supervisor, job–embeddedness and turnover intentions in hospitality industry.', International Journal of Contemporary Hospitality Management, 30(3), pp. 1436–1452.

[2.] Bailey, C., Madden, A., Alfes, K., & Fletcher, L. (2017). The meaning, antecedents and outcomes of employee engagement: A narrative synthesis. International Journal of Management Reviews, 19(1), 31–53.

[3.] Brynjolfsson, Erik (1993). "The Productivity Paradox of Information Technology," Communications of the ACM, 36(12):66-77. Gallup, Inc. (2017) 'State of the American Workplace', [Online]. Available at: https://news.gallup.com/reports/199961/7.aspx (Accessed: 22 November 2020).

[4.] Brynjolfsson, E., 2020. Covid-19 and remote work: An early look at us data. National Bureau of Economic Research.

[5.] Gallup, Inc, 2017. State of the american workplace, s.l.: Gallup Reports.

[6.] Lombardi, S., Sassetti, S., & Cavaliere, V. (2019) 'Linking employees' affective commitment and knowledge sharing for an increased customer orientation. ', International Journal of Contemporary Hospitality Management, 31(11), (4293–4312).

[7.] Mann, A., & Harter, J. (2016). The worldwide employee engagement crisis. Gallup. Washington, DC, U.S.A. Retrieved from http://www.gallup.com/businessjournal/188033/w orldwideemployee- engagementcrisis.aspx

[8.] Polimenov, M. et al. (2015). Traditions of national cuisine as the basis for innovations of the restaurant product. Report, International Scientific Conference "Tourism in the Age of Transformation", Varna: Naukaiikonomika.

[9.] Ollier-Malaterre, A. 2017. Cross-national work-life research: A review at the individual level. In Allen, T. D., Eby, L. E. (Eds.), Oxford handbook of work and family: 315-332. New York: Oxford University Press. Vol 43, Issue 1, 2017.

[10.]Tongchaiprasit, P. &Ariyabuddhiphongs, V., 2016. 'Creativity and turnover intention among hotel chefs: the mediating effects of job satisfaction and job stress'. Int. J. Hosp. Manage, Volume 55, pp. 33-40.

[11.]Twaronite, K., 2016. Global generations: a global study on work-life challenges across generations, s.l.: Ernst & Young.