

**The Relationship between After-Hours Information Communication  
Technology Usage, Organizational Identification, and Work-Life Conflict  
of Generation Z Employees in Taiwan**

by

Joshua Vernon

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Advisor: Chih-Chien Lai, Ph.D.

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To end, I'll borrow the words of the late, great Kobe Bryant, but with my own twist.

Joshua out.



## ABSTRACT

This study explored the relationship between after-hours information and communication technology (ICT) usage and work-life conflict among Generation Z employees in Taiwan, with the potential moderating role of organizational identification. This research addressed a gap in the literature by examining these dynamics in a smaller market with unique cultural developments surrounding the right to disconnect. By doing so, it aimed to contribute relevant insights to strengthen organizational policies that support healthier work-life boundaries and support employee well-being among younger employees in Taiwan. This study examined two key questions: Does after-hours ICT usage have a relationship with work-life conflict? and Does organizational identification moderate this relationship? A quantitative research design was applied, using convenience and snowball sampling methods to collect data from 217 full-time Gen Z employees working across different industries in Taiwan. Data analysis was conducted through the use of IBM SPSS 23 and JASP 0.19.3 to test the proposed hypotheses. The results revealed that after-hours ICT usage is significantly and positively associated with work-life conflict, while organizational identification does not moderate this relationship. Instead, organizational identification functions as a factor that may increase employees' willingness to remain digitally connected. These findings emphasize the importance of establishing clear boundaries with digital communication.

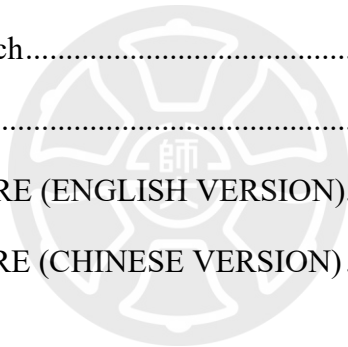
*Keywords:* after-hours information and communication technology usage, organizational identification, work-life conflict, generation z



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# CHAPTER I INTRODUCTION

This chapter provides essential information regarding the background, statement of the problem, research purpose, research questions, significance of the study, delimitations of this study, and definitions of key terms.

## Background of the Study

Work-life conflict has been increasingly recognized as a significant issue for employees, especially in modern working environments where the boundary between personal and professional life has been blurred. Finding a balance between the two has become challenging for many employees, leading to work-life conflict. Greenhaus and Beutell (1985) conceptualized work-life conflict as a two-way dynamic where demands of work and those of personal/family interfere with each other. It is often categorized into three types: strain-based, behavior-based, and time-based. Each of these conflicts describe a different form of interference between work and personal responsibilities. In Taiwan, time-based conflict presents a great challenge as the country has high average annual working hours, ranking it as one of the highest globally (Ministry of Labor, 2024). This shows that Taiwanese work culture emphasizes long working hours, which can then contribute to work-life conflict.

A key contributor to work-life conflict has been that of information and communication technology (ICT). While the increasing integration of ICT into the workplace has transformed interactions between organizations and their employees—enhancing efficiency—it has played a key role in distorting work and personal boundaries. Through the usage of platforms such as LINE, WhatsApp, and emailing, restrictions have been removed and work-related interactions now extend past the traditional working hours (Chen, 2021). This contributes to employees having an ‘always on’ state. A particular group that is especially affected by this is Generation Z (Gen Z). As digital natives, they are more comfortable using technology for communication, making them more likely to engage in after-hours work-related communication (Jannsen & Carradini, 2021; Schroth, 2019). Their constant connectivity through the use of mobile phones, emails and other digital tools may create an even bigger challenge for them to disconnect from work.

In Taiwan, this growing phenomenon has gained legal attention surrounding employees’ right to disconnect—the ability to disengage from work-related activities such as communication, during their nonwork hours (Lee, 2024). While the discussion surrounding this issue is still developing and has not yet been enacted into law, the current legal

framework under Taiwan's Labor Standards Act mandates that if an employer extends an employee's working hours, they must provide overtime compensation (Ting, 2023). In spite of legal measures, employees may still feel pressured to remain available during non-working hours. This often results in a perceived obligation to respond to emails, messages, and calls during their personal time, even if the message is related to tasks meant for the following day. The continuous connectivity facilitated by communication tools has significantly contributed to this pressure. As a result, it is important to establish clear guidelines and boundaries to help employees better handle this challenge to mitigate the possible negative outcomes, particularly work-life conflict.

A key factor that may influence how employees respond to work-life conflict is that of organizational identification. Grounded in social identity theory, organizational identity refers to the degree to which employees identify with the organization, fostering a sense of belonging and commitment (Ashforth & Mael, 1989). However, strong identification may also contribute to work-life conflict, as employees with strong organizational identification often feel a heightened obligation to stay connected to work at all times, even outside of working hours. As a result, this study seeks to explore the relationship between after-hours ICT usage after hours, work-life conflict and organizational identification within the context of Gen Z Taiwanese employees. It will investigate how ICT usage after hours contributes to work-life conflict and whether organizational identification moderates the relationship by adding to or reducing these effects.

### **Statement of the Problem**

As technological advances continue to reshape the workplace dynamic, and the boundaries between professional and personal life become increasingly blurred, it is important to better understand how this shift affects employee well-being. The occurrence of after-hours communication and its implications for employees and organizations have raised concerns for employees. One major concern is work-life conflict where employees are struggling to disconnect from work. This significantly reduces the time they have available for any personal activities and possibly rest. In Taiwan where high average working hours is already an issue, not being able to disconnect becomes an even greater issue for Gen Z as they are digital natives. As a result of these factors increasing, it is important to conduct research to establish cause and effect as it relates to work-life conflict.

While previous research has been able to provide a basis to understand the variables of ICT usage after hours, work-life conflict, there were limitations in regards to organizational

identification as a moderating variable. While organizational identification may help to reduce the feeling of conflict as it would be viewed as contributing to the organizations goal, it may also prove to be counterproductive causing employees to overwork themselves, indirectly leading to greater negative effects. Additionally, with the growing use of digital tools for work-related communication and Gen Z continuing to enter the labor market, there is a lack of research exploring how these variables affect them (Schroth, 2019). This research will thus aim to address the gap in research as it relates to the relationship between ICT usage after hours and work-life conflict, moderated by organizational identification among Gen Z employees in Taiwan.

### **Purpose of the Study**

The purpose of this quantitative study is to examine the relationships between communication technology usage after hours, organizational identification, and work-life conflict among Gen Z employees in Taiwan. This research was chosen in order to explore the extent to which after-hours messaging impacts work-life conflict. Exploring this relationship will help to contribute to the existing research that studies how digital connectivity influences work-life balance. This would help organizations to better understand the effects after-hours communication has on its employees and how to promote ways to establish work-life boundaries. The second aim of this study would be to explore organizational identification as a moderator between after-hours messaging and work-life conflict. This would help to identify the integral role that employees' sense of connection to their organization can have in influencing an employee's ability to manage the boundaries between work and personal life.

### **Research Questions**

This study is to understand the relationship between after-hours information communication technology usage and work-life conflict and how organizational identification moderates that relationship. It aims to address and answer the following questions:

1. Does after-hours communication through ICT usage have a relationship with employees' work-life conflict?
2. Does organizational identification moderate the relationship between after-hours communication and work-life conflict?

## **Significance of the Study**

The findings of this study will contribute to existing literature by addressing a gap in research on after-hours ICT usage and work-life conflict. While many studies have explored this relationship in larger economies and industries, there is limited research that addresses how these factors can affect employees, especially that of Gen Z, in smaller markets such as Taiwan. Given that after-hours ICT usage is quite prevalent in Taiwan and policymakers are working to establish the legal framework for the right to disconnect, this study will provide insights into the regional and cultural nuances of Taiwan. As such, it will help to differentiate Taiwan from existing global findings. Additionally, it will examine the role organizational identification plays in impacting the effects of after-hours ICT usage on work-life conflict. By doing so, it will further enhance the understanding of how cultural and organizational dynamics influence the way in which employees experience this phenomenon.

In addition to its academic contributions, this study will have important practical implications for employers. As Taiwan moves toward regulating the usage of ICT after-hours, understanding the effects it has on employees will play a key role to develop policies that promote work-life boundaries. The study's findings will help organizations to recognize how important it is to improve the overall quality of life for employees, thus creating strong organizational commitment and boosting employee morale. By creating more ideal working environments for employees, it can then help organizations to retain their most talented employees, thus reducing turnover rates and saving them both the time and money associated with the recruitment and training. By highlighting the real-world impact of after-hours ICT use on employees, it can then contribute to having a healthier and more sustainable workforce.

## **Delimitations**

To ensure that the study remains focused and feasible, specific delimitations have been established. These boundaries will help to define the scope of the research and what will be included.

1. This study is delimited to Gen Z employees currently working full-time in Taiwan.
2. This study is delimited to three variables, specifically, ICT usage after-hours, work-life conflict, and organizational identification.
3. This study is delimited to a quantitative approach, using an online survey with closed-ended questions.

## **Definition of Key Terms**

### **After-Hours Information and Communication Technology Usage**

After-hours ICT usage refers to the practice of employees using communication devices such as mobile phones and computers to engage in work-related communication and tasks beyond working hours (Boswell et al., 2016; Chu et al. 2024).

### **Work-Life Conflict**

Work-life conflict arises when demands or experiences from work—like job pressure, unpredictable schedules, and frequent travel—interfere with an employee’s personal and family life (Taşdelen-Karçkay & Bakalim, 2017).

### **Organizational Identification**

Organizational identification refers to the extent to which employees perceive themselves as belonging to and identifying with their organization (Mael & Ashforth, 1992). It influences employees to align their actions with the goals of the organization (Karanika-Murray et al., 2015; Tajfel & Turner, 1979).

### **Generation Z**

Generation Z (Gen Z) also referred to as the Post-Millennial group, generally refers to individuals who are born between 1997 and 2013 (Dimock, 2019). Generations tend to have different traits as a result of evolving cultural norms and societal practices (Roberts et al., 2010). They are widely recognized as the first fully digital-native generation (Janssen & Carradini, 2021; Schroth, 2019).



## **CHAPTER II LITERATURE REVIEW**

This chapter provides a review of previous research on work-life conflict, after-hours communication technology usage, and organizational identification. The definitions of the variables are discussed and reviewed, along with exploring their interrelationships. Based on these findings, the hypotheses of this study were developed and proposed.

### **Generation Z**

Generation Z (Gen Z), also known as the Post-Millennial generation, is often referred to as individuals born around the mid-1990s to the early-2010s, for this study, they will be defined as individuals born between 1997 and 2013 (Dimock, 2019). Each generation tends to have distinct values and behaviors based on cultural norms, societal practices, and technological conditions that surrounded them during their formative years (Peredy et al., 2024; Roberts et al., 2010). For Gen Z, they have grown up being immersed in smart technologies, which has significantly influenced how they interact with their environment, as such, they are often referred to as digital natives (Janssen & Carradini, 2021; Schroth, 2019). Their emotional attachment to constant online connectivity makes digital communication not just a tool, but a core part of their social and work lives (Turner, 2015).

Despite their technological fluency, Gen Z is also known to face their own set of unique challenges. They are less likely to have any early work experience compared to previous generations and they tend to report higher levels of anxiety and depression (Morisi, 2017; American Psychological Association, 2018). Due to their lack of early exposure to the workforce, it can lead to unrealistic job expectations upon entering the work force, which can then lower their commitment and increase the likelihood of turnover (Huselid, 1995). In addition, it is of utmost importance for Gen Z to ensure that they will have work-life balance when seeking employment (Workforce Institute at Kronos, 2019). This priority reflects their desire for workplaces to not only support professional growth, but also personal well-being, which may make them sensitive to certain work conditions that challenge their ideal workplace desires.

### **Work-Life Conflict**

The term work-life balance is complex, thus defining it is not clear cut. There are numerous factors to take into consideration such as travel time, unpaid hours, work demands, and personal responsibilities. As for balance itself, it can be a blend of objectivity and subjectivity as it takes on various meanings which include equal distribution and stability (Guest, 2002). It is seen as an individual's time spent doing their job compared to the time

spent outside of that, whether it be with family or doing a hobby, etc. (Meenakshi et al., 2013). Balance is also the way in which individuals are able to effectively manage and synchronize their job with other roles and responsibilities (Chawla & Sondhi, 2011). Employees aim to achieve a balance between their work and personal/family responsibilities, however, when they are unable to do so, it highlights the concept of work-life conflict (Lockwood, 2003). Greenhaus and Beutell (1985) conceptualized work-life conflict as a two-way dynamic where an individual's participation in work and personal/family roles affect each other. Work-life conflict is seen as when work-related activities or experiences—such as job stress, irregular working hours, and frequent travel—negatively impact an employee's personal and family life (Taşdelen-Karçkay & Bakalim, 2017).

Work-life conflict is divided into three different categories; strain-based conflict, behavior-based conflict, and time-based conflict. Strain-based conflict occurs when the pressures of one role make it difficult to fulfill the requirements of another (Farivar et al., 2022). This type of strain can be made evident by symptoms such as tension, anxiety, fatigue, among others (Brief et al., 1981; Ivancevich & Matteson, 1980). Secondly, behavior-based conflict refers to when an attitude or behavior that is required in one role is not compatible with their other role (Buonocore & Russo, 2013). For example, work may require a more aggressive behavior which opposes the nurturing behavior that is required at home (Carlson et al., 2000). However, there is the argument that is not easy to measure behavior-based conflict, due to the subjectivity of behavior definitions and limitations of self-reported tools (Kelloway et al., 1999). Lastly, time-based conflict occurs when the time spent on one role, such as work, reduces the time available to spend on the other role such as personal life or family (Barnes et al., 2012).

Building on the concept of time-based conflict, data has shown that employees in Taiwan work notably higher average hours per year compared to OECD countries. Most notably, Taiwan ranked fifth in annual working hours (2,020 hours) for 2023, which also placed them as the second highest Asian country, only behind that of Singapore (2,247 hours) (Ministry of Labor, 2024). Taiwan's work culture, which emphasizes long hours, contributes significantly to this issue. Research has shown that long working hours create interference and spillover effects from work to personal/family life, thus creating a conflict between the two domains (Bruck et al., 2002; Frone, 2003). In addition to time-based conflict, these long working hours can disrupt personal/family life, ultimately leading to further issues such as depression and physical health ailments like fatigue and headaches (Major et al., 2002). Lu (2011) found that longer working hours for Taiwanese employees were positively associated

with work-life conflict and had a negative impact on their life satisfaction. The presence of these conflicts underscores the challenges that can be faced by Taiwanese employees in achieving a work-life balance.

### **After Hours Information Communication Technology Usage**

The use of ICT has transformed how work is carried out. Digital tools have become an increasingly important part of daily workplace operations providing convenience for organizations by enabling instant communication and facilitating remote work. ICT allows employees to stay connected and support work regardless of the time and place (Boswell & Olson-Buchanan, 2007; Mellner, 2016). As a result, employees are able to stay connected to their colleagues and communicate with ease, allowing them to stay up to date on relevant work-related topics (Leonardi & Treem, 2012; Ten Brummelhuis et al., 2021). Amidst the COVID-19 pandemic, ICT usage emerged as a key communication tool in the workplace, offering great flexibility and accessibility, which proved to be critical for the maintenance of operations during lockdowns (Brower, 2020). As a result, these tools have gained an increased role for workplace communication. This shift is particularly relevant for Gen Z employees—those born between 1997 and 2012—who, as digital natives are more comfortable using technology and may therefore be more likely to engage in work-related communication during non-work hours (Janssen & Carradini, 2021; Schroth, 2019).

Recent research has primarily focused on ICT usage for after-hours work communication, defining it as employees using digital tools—such as cell-phones, email, voicemail, and other software applications—to engage in work-related communication outside of traditional work hours (Boswell et al., 2016; Chu et al., 2024). The findings of Middleton and Cukier (2006) highlight that mobile communication devices have added to the ubiquity of work as it is possible to receive work information whenever an individual receives a signal. This has been a key contributor for work to extend beyond the traditional office space and hours. By allowing employees to be connected, it provides flexibility and a sense of autonomy, thus improving their work efficiency (Ten Brummelhuis et al., 2021). While this constant connectivity has been proven to provide a positive impact on employees' productivity, and as a result the organization, it has raised concerns about its long-term impact. The increasing expectation to remain connected at all times, specifically outside of working hours, has presented potential downsides.

While after-hours connectivity provides some employees with a sense of autonomy and flexibility, for others it becomes a source of stress. As a result, ICT usage after-hours can

be considered to have a double-edged sword effect. While employees would prefer to leave work at work, due to the accessibility provided by technology, an added obligation has been presented for some employees. Greater accessibility has caused some employees to feel obligated to reply to messages during non-working hours (Van Zoonen et al. 2017). Whether they do so voluntarily or not, the feeling of being mentally connected with their jobs has caused employees to experience things such as anxiety, stress, and decreased work satisfaction. (Boswell & Olson-Buchanan, 2007; Diaz et al., 2020; Sonnentag & Fritz, 2015; Yue, 2022). While technology enhances flexibility, it can also come at the cost of the employees. As a result, this study aims to explore the consequences of ICT usage after-hours, specifically that of its effects on work-life conflict.

### **After Hours ICT Usage and Work-Life Conflict**

While technological advancements often bring numerous benefits, helping to make both personal and work lives easier, it has added to the issue of achieving work-life balance. Historically, the boundaries between work and personal life were more clearly defined as work would end when an individual would leave the office. However, with the rise in remote work and virtual offices, along with improvements in mobile technology, it has been increasingly difficult for individuals to distinguish between work and personal life, further blurring these boundaries (Khan & Fazili, 2016). Boundary theory helps to explain this phenomenon as it suggests that individuals strive to create/maintain psychological, physical, or behavioral boundaries across different domains in their lives such as work and home (Ashforth et al., 2000; Nippert-Eng, 1996). Their aim is to distinguish the different experiences and manage conflicting demands in each domain. As these boundaries become more easily crossed due to ICT usage, it creates an ‘always on’ state where employees feel obligated to remain connected to work outside of normal business hours.

This ‘always-on’ state not only affects employees’ well-being but also disrupts their interactions with family and friends. This issue will continue to grow as organizations are increasingly encouraging employees to use their own devices or cover the costs of cell phones and other devices (Driscoll, 2019). As a result, these policies then encourage the use of devices regardless of time and place. By using their smartphone for work-related communication after hours, it sends a signal to family and friends that the person is not fully engaged with them and is busy working, thus creating a conflict between their work and personal life (van Zoonen et al., 2020). Research has shown that when employees use ICT to do work-related tasks after hours, they often have high levels of stress and experience work-

life conflict (Fenner & Renn, 2010). When after-hours communication occurs and interrupts family or leisure time, it can be mentally and physically draining for employees as they are not able to gain the necessary recharge needed after working (Lanaj et al., 2014; Steed et al., 2021). Not only are individuals expected to always be connected for work, their family and friends also expect to have greater access to them during working hours. The growth of ICT then becomes counterproductive at work as employees may compensate for lost personal time by using work hours for personal activities (Xu et al., 2022).

Psychological detachment, which is essential for employees to maintain their well-being, involves not only being able to physically leave the work place, but to disengage from work-related thoughts (Sonnetag & Bayer, 2005; Sonnetag et al., 2008). It is to be noted that this does not mean an employee lacks commitment to their job, it is simply a mechanism that is being used to provide sustained well-being and long-term productivity (Siltaloppi et al., 2009; Sonnetag et al., 2010). However, digital communication often happens at different times, so employees may use their personal time to reply to messages or finish tasks, this leading to diminished recovery time (Rennecker & Godwin, 2005). the increasing reliance on In response to this challenge, organizations play a crucial role in facilitating detachment by setting policies regarding after-hours communication. Detachment is important as it enables employees to return to work with improved engagement and productivity, ultimately proving to be beneficial to both the individual and the organization (Sonnetag et al., 2010). Therefore, it is important to understand how effective detachment from work can help to combat the challenges posed by after-hours ICT usage , as these challenges can affect both their personal relationships and also their productivity at work. Thus, the following hypothesis was developed:

*Hypothesis 1: There is a significant relationship between after-hours ICT usage and work-life conflict.*

### **Organizational Identification**

Organizational identification, grounded in social identity theory, suggests that people are motivated to enhance their self-image by way of elevating the status of the group they belong to (Tajfel & Turner, 1979). Social identity theory explains that individuals can associate themselves with various social groups such as gender, nationality, profession, among others (Karanika-Murry et al., 2015). In an organizational context, this implies that employees aim to uphold and promote the organization's values and achievements as a reflection of themselves. As such, organizational identification refers to the extent to which

individuals characterize themselves in relation to their membership in an organization, viewing themselves as being one with that organization (Mael & Ashforth, 1992). Understanding organizational identification is important for examining relationships between employees and the organization they work for, as it helps to shape workplace dynamics.

Organizational identification is not a static characteristic but rather a dynamic, ongoing behavioral process that evolves over time (Mael & Tetrick, 1992). Employees may strengthen their identification with the organization through different work projects, interactions, or shared experiences. While some employees may develop a strong and stable level of identification, others may have fluctuating experiences based on varied work circumstances or personal factors. Identification has been linked to numerous positive work-related outcomes. Employees that exhibit stronger organizational identification are more likely to display higher levels of engagement and commitment, resulting in higher job satisfaction (Boroş, 2008). This heightened connection often drives these employees to make proactive decisions that are beneficial to the organization, without the need for direct supervision (Miller et al., 2000). As such, the importance of understanding how employees' connection to the organization is highlighted.

Boundary theory further explains how role identification influences organizational identification, it emphasizes the importance a particular role or domain carries within an individual's psychological self-concept (Ashforth et al., 2000; Clark, 2000; Park & Jex, 2011). Boundaries help to create a separation of these domains, thereby helping to highlight which identities are more important for each respective role. Thus, the importance of organizational identification can vary not only based on an individual's subjective importance, but also depending on situational relevance. Situation relevance highlights that certain identities can be triggered based on certain settings that may have institutional symbols or social cues (Ashforth, 2001). In this research, the usage of ICTs after-hours can be seen as one such cue, as it represents a connection with the organization and may trigger an employee's organizational identification. Overall, organizational identification is a complex and dynamic process that is influenced by both personal importance and external conditions. Moreover, employees with stronger organizational identities often integrate this role into their broader self-concept (Van Zoonen et al., 2020). This highlights the connection that employees can have with their workplace and how it helps to shape their behavior at work and in their personal lives. Understanding these dynamics can be crucial for organizations create an engaged workforce.

## **The Moderating Effect of Organizational Identification**

According to studies, after-hours ICT usage has been shown to have negative effects on employees, most notably reducing their ability to separate their professional and personal lives, adding to the frequency of work-life conflict they experience (Khan & Fazili, 2016; an Zoonen et al., 2020). This in turn compromises the employee's functionality in their personal/family roles. However, organizational identification may help to moderate this relationship by influencing how employees perceive and respond to after-hours ICT usage. For employees that have high organizational identification, remaining connected may help to reinforce their sense of belonging and lessen any possible conflict (Ashforth et al., 2000; Fonner & Roloff, 2012; Stryker, 1980). These employees may feel a higher inclination to remain engaged with work after normal working hours due to their strong identification. As a result, they may perceive after-hours ICT usage as a meaningful way to contribute rather than an issue, reducing the likelihood of experiencing work-life conflict (Boswell & Olson-Buchanan, 2007).

While organizational identification may allow employees to be seamlessly engaged in work-related communication after-hours through the usage of ICT, it is worth examining whether or not this may prove to be detrimental to those employees. Despite its offering of a heightened connection which leads employees to become more proactive (Miller et al, 2000), it raises the question of whether excessive connectivity eventually creates a bigger issue for them across their work and personal life domains. Employees with strong organizational identification may experience great difficulty to disengage from their work due to having their sense of self being closely tied to the organization. Additionally, with the blurring of boundaries caused by after-hours ICT usage, they are now regularly exposed to cues that would activate their organizational identity. This constant availability may unintentionally increase time-based work-life conflict, as these employees would then struggle to find time for their personal/family time, and also the chance to recharge.

This concern is particularly relevant in Taiwan, which ranks among the top five OECD countries for the longest yearly average working hours (Ministry of Labor, 2024). With long working hours deeply embedded in their work culture, employees with high identification may willingly go beyond their normal working hours as a way of demonstrating their commitment to the organization in order to advance their career. As a result, their sense of belonging may gradually intensify, making them more inclined to remain connected and available after hours, even at the expense of their personal/family time. Thus, while

organizational identification may initially moderate the negative effects of after-hours ICT usage by changing how employees perceive extra connectivity, its long-term implication could worsen work-life conflict rather than alleviate it. Employees with high organizational identification may find themselves trapped in a cycle of being overly committed. As such, this constant connectivity would then place them in an ‘always on’ state, making it difficult to disconnect and overshadowing other aspects of life. Therefore, this study will examine the role of organizational identification in moderating the relationship between after-hours ICT usage and work-life conflict. Thus, the following hypothesis was developed:

*Hypothesis 2: The relationship between after-hours ICT usage and work-life conflict is moderated by organizational identification.*



## CHAPTER III METHODOLOGY

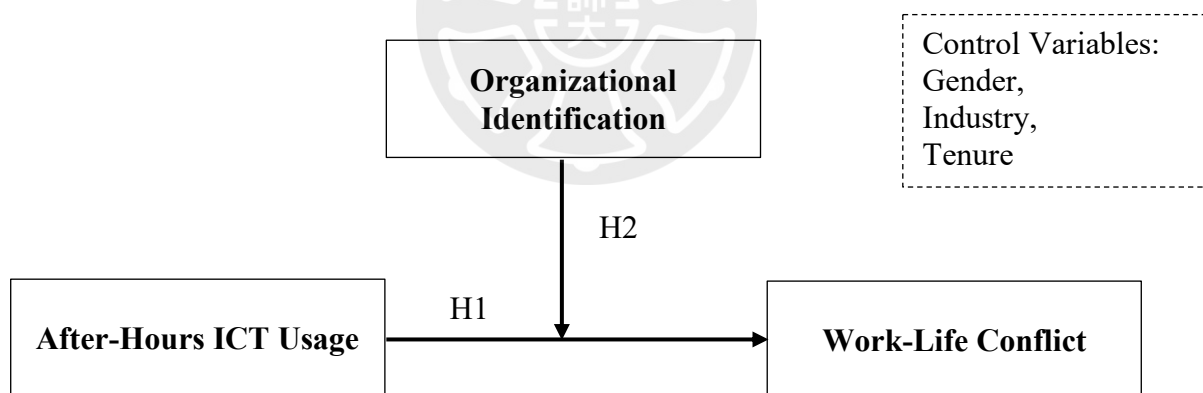
Through a quantitative approach, this chapter provides a detailed explanation of the research methodology required to test the hypotheses and achieve the research objectives. It outlines the research framework, research procedures, research sampling, data collection, measurement instruments, and data analysis methods.

### Research Framework

The research framework of this study has been developed as a result of analysing the existing literature and it will be used to guide this research. The framework shown in Figure 3.1 helps to illustrate the relationships that exist between the variables involved in the study. The study investigates ICT usage after-hours as the independent variable, work-life conflict as the dependent variable, and organizational identification as the moderating variable. Organizational identification was used to assess its moderating effect on the relationship between ICT usage after-hours and work-life conflict. In addition, gender, industry, and tenure are included as control variables to account for their potential influence.

**Figure 3.1**

*Research Framework*



### Research Hypotheses

The research proposed the below hypotheses to test the variables and the correlations that exist among them:

*Hypothesis 1:* There is a significant relationship between after-hours ICT usage and work-life conflict.

*Hypothesis 2:* The relationship between after-hours ICT usage and work-life conflict is moderated by organizational identification.

## Research Procedure

This section provides a description of the process that this study will undergo. Figure 3.2 illustrates the way in which the research will be broken down into different sections along with the process of the study.

### Identifying Research Problems

The research problem was identified through discussions with employees who shared their experiences, along with existing literature. While prior research has explored how constant connectivity contributes to work-life conflict, limited studies have examined whether organizational identification influences the way employees respond to after-hours ICT usage. As after-hours work communication becomes more common in Taiwan, understanding how it affects employees has become increasingly important. Therefore, this study aims to investigate the relationship between work related after-hours ICT usage and work-life conflict, with organizational identification as a potential mitigating factor.

### Reviewing Literature

Through the literature review, research gaps were highlighted, especially the limited research related to Gen Z employees in Taiwan. As such, the research framework was finalized based on the review of literature related to the variables of this study. Additionally, hypotheses were developed based on the literature review.

### Developing Questionnaire

The data for this quantitative study was collected using an online questionnaire as the data collection method. The questionnaire was designed to examine the variables involved in the study: after-hours ICT usage, work-life conflict, and organizational identification. The measurements used were found in previous literature to help ensure accurate data collection with scales that showed reliability and validity.

### Collecting Data

**Pilot Study:** The pilot test was very important as it helped to test the reliability of the test. It represented a smaller portion of the entire sample size, which would help to ensure that the measurement was both valid and reliable. The pilot test was performed by sharing the questionnaire with Gen Z employees in Taiwan.

**Main Study.** The main study utilized convenience and snowball sampling methods to distribute the questionnaire to Gen Z employees in Taiwan. The questionnaire was shared via a Google Form link. A few colleagues of the researcher were targeted to assist with sharing to their coworkers and other associates.

## Analysing Data

After data collection, the responses were analysed using the statistical software programs IBM Statistical Package for the Social Sciences (SPSS) version 23 and Jeffrey's Amazing Statistics Program (JASP) version 0.19.3. To conduct an in-depth analysis, the study used a reliability analysis (Cronbach's alpha test), confirmatory factor analysis, descriptive data analysis, Pearson correlation analysis, and hierarchical regression.

## Interpreting Results

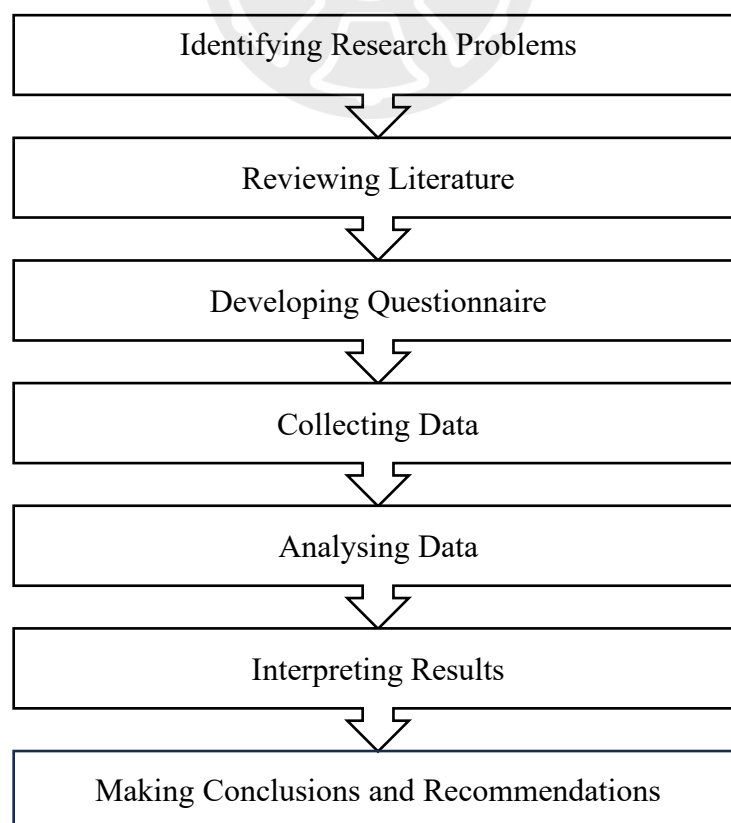
The statistical data from the analysis was used to find any patterns and relationships that exist between the variables. The proposed hypotheses were reviewed to determine whether they were validated or rejected, as well as the implications of the study.

## Making Conclusions and Recommendations

The findings were summarized, placing emphasis on the key findings. The practical and academical implications as well as the limitations of the study were discussed. Lastly, recommendations were provided for future studies that will help to address the gaps identified in this study.

**Figure 3.2**

*Research Procedure*



## **Sample and Data Collection**

The target sample for this study consisted full-time Gen Z employees currently employed in Taiwan. Participants were required to have been working in their current organization for at least six months to ensure adequate engagement with the organization's communication practices. The sampling was not limited to a specific industry, as the study aimed to include employees across various sectors for generalizability. To achieve the purpose of this research, a quantitative approach was adopted and applied using developments from previous research. An online self-administered survey instrument was developed to collect data for the variables of this study including after-hours ICT usage, work-life conflict, and organizational identification. The introduction section clearly defined the purpose of the research along with the guarantee of confidentiality. The research used a convenience sampling along with the snowball method. These methods would assist the research in reaching the target sample. By way of convenience sampling, the survey link was sent to past associates of the researcher that currently meet the required criteria for the research. Following that, the snowball sampling occurred as those initial respondents assisted the research to gain additional responses by forwarding the link to coworker, and/or other colleagues of theirs. The data collection process consisted of two phases: a pilot study and a main study. The pilot study was conducted from April 1, 2025 to April 4, 2025, and obtained 40 valid responses. The main study followed shortly after from April 7, 2025 to May 20, 2025, and collected 217 valid responses.

## **Measurements**

The survey comprised of four sections utilizing question from previous research used to measure the three variables along with demographic information. The sections related to the respective variables were placed in the following order: work-life conflict, after-hours ICT usage, and lastly, organizational identification. The survey then concluded with the demographic questions so as to mitigate potential reliability issues.

### **Work-Life Conflict**

The measuring scale for work-life conflict contained 5 items and was adapted from Taşdelen-Karçkay and Bakalım (2017). This scale was developed by Netemeyer et al. (1996) where they documented the reliability of the scale with a Cronbach's alpha value of 0.83, while Taşdelen-Karçkay and Bakalım documented the Cronbach's alpha value of 0.90. The

responses were based on a 5-point Likert-scale ranging from 1 (strongly disagree) to 5 (strongly agree). See table 3.1.

**Table 3.1**

*Work-Life Conflict*

---

Questions
1. The demands of my work interfere with my home and family life
2. The amount of time my job takes up makes it difficult to fulfill my family responsibilities
3. Things I want to do at home do not get done because of the demands my job puts on me
4. My job produces strain that makes it difficult to fulfill family duties
5. Due to work-related duties, I have to make changes to my plans for family activities

---

*Note.* Adapted from “The mediating effect of work-life balance on the relationship between work-family conflict and life satisfaction” by Taşdelen-Karçkay, A. & Bakalım, O., 2017, *Journal of Career Development*, Vol. 26(1), pp. 3-13.

**After-Hours ICT Usage**

The measuring scale for After-Hours ICT Usage consisted 8 items and was adapted from Chu et al. (2024), who modified the scale by Richardson and Benbunan-Fich (2011) to better fit the Chinese context. Chu et al. (2024) documented the reliability of the scale with a Cronbach’s alpha value of 0.83. The scale included both frequency and duration items. For items 1 to 4, responses were based on a 5-point Likert-scale ranging from 1 (Never) to 5 (Always), while items 5 to 8 assessed duration on a 5-point scale from 1 (1-30 minutes) to 5 (121-150 minutes). An additional option of “None” was provided for the duration items to account for cases in which respondents reported never engaging in the activity in the corresponding frequency question. See table 3.2.

**Table 3.2**

*After-Hours ICT Usage*

---

Questions
1. How often do leaders use communication tools to contact me during non-work time?
2. How often do I view various work-related messages (such as group messages, news, emails, online notifications) during non-work time?
3. How often do I communicate with the relevant people through communication tools due to work related matters during non-work time?
4. How often do I need to view and edit relevant work materials due to task requirements during non-work time?
5. For how long have I been in contact with relevant people through communication tools for work-related matters during non-work time?
6. For how long do leaders use communication tools to contact me during non-work time?
7. For how long do I view various work-related messages (such as group messages, news, emails, Online notifications) during non-work time?
8. For how long do I need to view and edit relevant work material for task during non-work time?

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*Note.* Adapted from “ Staying connected beyond the clock: a talent management perspective of after-hours work connectivity and proactive behaviours in the digital age” by Chu et al., 2024, *Management Decision*, 62(10), pp. 3132-3154.

### **Organizational Identification**

The measuring scale for organizational identification contained 6 items and was adapted from Yang et al. (2022). This scale was developed by Mael and Ashforth (1992), where the documented reliability of the scale with a Cronbach’s alpha value of 0.87, while Yang et al. documented the Cronbach’s alpha value of 0.95. The responses were based on a 5-point Likert-scale ranging from 1 (strongly disagree) to 5 (strongly agree). See table 3.3.

**Table 3.3**

*Organizational Identification*

---

Questions
1. When someone criticizes this organization, it feels like a personal insult
2. I am very interested in what others think about the organization
3. When I talk about this organization, I usually say ‘we’ rather than ‘they’
4. This organization’s successes are my successes
5. When someone praises this organization, it feels like a personal compliment
6. If a story in the media criticized the organization, I would feel embarrassed

---

*Note.* Adapted from “Work-Family Conflict, Organizational Identification, and Professional Identification Among Chinese Nurses from a Resource Perspective” by Yang et al., 2022, *Journal of Nursing Research*, 30(5), pp. 1-11.

**Control Variables**

Control variables in this study include gender, nationality, and tenure as prior research has shown that these demographic factors can influence how individuals experience work-life conflict. Controlling for these variables help to ensure a more accurate analysis of the correlations among the main research variables, leading to an enhanced validity of the findings.

***Gender***

According to Byron (2005), gender significantly shapes employees’ experiences of work-life conflict. As a result, these gender differences can influence perceptions of organizational support and how effective work-life balance policies with the organization are. To account for these variations, this study included gender as a control variable for work-life conflict, with the following coding: 1 = male and 2 = female.

***Industry***

Work-life conflict often varies across industries based on the different work characteristics and work environment. Hammig (2014) found that individuals in different industries experienced distinct patterns of work-life conflict. As such, this study included industry as a controlling variable and it was categorized into eight groups: ‘technology’, ‘finance and banking’, ‘management and consulting’, ‘marketing, media, and advertising’, ‘education’, ‘healthcare’, ‘hospitality and tourism’, ‘manufacturing and supply chain’, and ‘retail and e-commerce’.

## *Tenure*

Karatepe and Uludag (2008) suggested that tenure with an organization can impact work-life conflict. This can mean that longer-tenured employees may either develop coping strategies, or it can lead to heightened work-life conflict. To capture these effects, this study included tenure as a controlling variable and it was coded as: 1 = less than 1 year, 2= 1-2 years, 3 = 3-4 years, and 4 = 5 or more years.

## **Pilot Study**

A pilot test was conducted prior to the main data collection to identify any potential issues with the questionnaire and to test the reliability of the scales being used in the questionnaire (Akeem, 2015). A total of 40 participants were chosen through convenience sampling, and the pilot questionnaire was the same as the one used in the main study. The questionnaire was administered through the use of the online platform, Google Forms. The opening section of the questionnaire outlined the purpose of the study's along with an informed consent statement. Immediately after, a screening question was used to confirm that the respondents matched the target population. The next three sections focused on measuring the core variables of the study: after-hours ICT usage, organizational identification, and work-life conflict. The final section gathered the demographic information of the respondents such as gender, nationality, and tenure.

After the data collection was complete, the reliability of the scales was tested using Cronbach's alpha, with the results being presented in Table 3.4. The reliability of the after-hours ICT usage scale ( $\alpha = .898$ ) and the work-life conflict scale ( $\alpha = .878$ ) both demonstrated very good internal consistency, which make them reliable. In contrast, the organizational identification scale ( $\alpha = .688$ ) had a lower Cronbach's alpha value, suggesting that it's reliability may be questionable (Nunnally, 1978). Participants' feedback was taken into account, especially in relation to the clarity of the Chinese translations, and the necessary adjustments were applied prior to the main study.

**Table 3.4**

*Reliability of the Pilot Test*

Variable Name	Cronbach's Alpha
After-Hours ICT Usage	.898
Organizational Identification	.681
Work-Life Conflict	.878

*Note.* N = 40.

## Data Analysis

After sufficient data was collected, IBM SPSS 23 and JASP 0.19.3 were used to analyse the statistical data. Descriptive and inferential statistical techniques were applied to analyse the hypotheses used in this study. The following analytical techniques were used.

### Reliability Analysis

The reliability of the measurements was examined with the use of the Cronbach's alpha. This measure is conducted to determine the extent to which test items reliably measure the same thing. A higher alpha value represents greater reliability. The acceptable range for Cronbach's alpha is an alpha that is 0.70 or higher (Nunnally, 1978). For the main study, all scales demonstrated good reliability as shown in Table 3.5. After-hours ICT ( $\alpha = .884$ ), organizational identification ( $\alpha = .854$ ), and work-life conflict ( $\alpha = .934$ ) all met acceptable reliability standards. Most notably, the reliability of the organizational identification scale saw great improvement in comparison to the pilot test ( $\alpha = .681$ ), suggesting more consistent responses in the main study.

**Table 3.5**

*Reliability Analysis Results of Main Study*

Variable Name	Cronbach's Alpha
After-Hours ICT Usage	.884
Organizational Identification	.854
Work-Life Conflict	.934

*Note.* N = 217.

### Validity Analysis

A Confirmatory Factor Analysis (CFA) was conducted using JASP 0.19.3 to assess the construct validity of the measurement model. Model fit was evaluated using multiple indexes, including the ratio of Chi-Square to degrees of freedom ( $\chi^2/df$ ), the Comparative Fit Index (CFI), the Tucker Lewis Index (TLI), the Root Mean Square Error of Approximation (RMSEA), and the Standardized Root Mean Square Residual (SRMR).

As shown in in Table 3.6, the CFA results demonstrated an overall acceptable model fit. The  $\chi^2/df$  ratio was 2.47, which falls within the satisfactory range of 2 to 5. Both the CFI (0.97) and TLI (0.96) exceeded their respective acceptable thresholds, placing them both in the satisfactory level. The RMSEA (0.08) was marginally acceptable, and the SRMR was just within the acceptable range. Overall, these indices support the construct validity of the measurement model.

**Table 3.6***Summary of Model Fit Indices Results*

<b>Index</b>	<b>Acceptable Level</b>	<b>Satisfactory Level</b>	<b>CFA Test Results</b>
$\chi^2/df$	$\leq 5$	2-5	2.47
CFI	$\geq 0.90$	$> 0.95$	0.97
TLI	$\geq 0.90$	$> 0.95$	0.96
RMSEA	$\leq 0.08$	$< 0.05$	0.08
SRMR	$\leq 0.08$	$< 0.05$	0.07

*Note.* Adopted from “Structural equation modelling: Guidelines for determining model fit” by Hooper, D., Coughlan, J., & Mullen, M. R. 2008, *Electronic Journal of Business Research Methods*, 6(1), pp. 53-60. Copyright 2022 by Academic Conferences International Limited.

### **Descriptive Statistics Analysis**

Descriptive analysis is important to the researcher as they help to identify data that would influence the final results and their conclusions (Thompson, 2009). It helped to provide numerical representation of demographic information of the respondents. Furthermore, the mean, median, and variance were analysed to provide the tendency of the respondents such as their behaviors and preferences in relation to the variables in the study.

### **Pearson Correlation Analysis**

Pearson Correlation coefficient was used to measure the strength and direction of the relationship that exists between two variables. The coefficient can range from -1 through 0 to +1. It helps to understand how changes in one variable may have been related to the changes in another variable. A positive correlation would signify that as one variable increased, there is a simultaneous increase in another. Conversely, a negative correlation value would signify that as one variable increased, the other simultaneously decreased. However, it is to be noted that if a correlation is zero, it shows that there is no association between the two variables (Sedgwick, 2012).

### **Hierarchical Regression Analysis**

Hierarchical regression analysis was used to assess if there are any signification correlations between after-hours ICT usage, work-life conflict, and organizational identification, controlled by gender, industry, and tenure. Additionally, the hierarchical regression analysis was used to evaluate the moderating role of organizational identification between after-hours ICT usage and work-life conflict.

## CHAPTER IV RESULTS AND DISCUSSIONS

This chapter presents the finding of the statistical analysis conducted using the IBM SPSS 23. A total of 217 valid responses were collected from the questionnaires distributed to Gen Z employees in Taiwan. The first section of this chapter includes descriptive statistics of the participants, along with item statistics for each variable measured in the study. This is followed by a Pearson correlation analysis which examined the strength and linear relationships among the variables: after-hours ICT usage, organizational identification, and work-life conflict transactional leadership. Lastly, hierarchical regression was used to test the study's hypotheses, including the potential moderating effect of organizational identification. This chapter concludes with a summary of the analytical findings and a discussion based on the key findings.

### Descriptive Analysis

The demographic profile of the participants was explored using descriptive statistical analysis. The sample comprised of 217 completed surveys, which were obtained through a combination of snowball and convenience sampling methods. The demographic variables analysed include: gender, industry, and job tenure. An overview of these characteristics is presented in Table 4.1

In regards to gender, female participants were the slight majority, accounting for 53% of the sample, while male participants made up 47%. With regard to industry, participants initially selected from a wider range of categories, however, for analytical purposes, these were regrouped based on similarities. As such, respondents working in production and commerce represented the largest group (30%), followed by technology and media (28.6%) and education (23%). Additionally, respondents from financial services and consulting made up 12% of the sample while those in healthcare (3.2%) and hospitality and tourism (3.2%) accounted for the remaining participants. Lastly, in regards to tenure, the largest group had between 1 to 2 years of experience (43.8%), followed by those with less than a year of experience (28.5%). Participants with 3 to 4 years of experience accounted for 21.7% of the sample, while the remaining 6% were those who had five or more years of experience.

**Table 4.1**  
*Descriptive Analysis*

Variable	Category	Frequency	Percentage (%)
Gender	Male	102	47.0
	Female	115	53.0
Industry	Technology and Media	62	28.6
	Production and Commerce	65	30.0
	Education	50	23.0
	Financial Services and Consulting	26	12.0
	Healthcare	7	3.2
	Hospitality and Tourism	7	3.2
Tenure	Less than a year	62	28.5
	1 - 2 years	95	43.8
	3 – 4 years	47	21.7
	5 years or more	13	6.0

*Note.* N = 217.

### **Descriptive Statistics for Work-Life Conflict**

Work-life conflict was measured using 5 items. The results of the descriptive analysis for organizational identification are presented in Table 4.2. The results indicate that WLC2 “The amount of time my job takes up makes it difficult to fulfill my family responsibilities.”, had the highest mean ( $M = 2.59$ ), suggesting that time-related conflict is the most commonly experienced issue among respondents. In contrast, WLC3 “Thing I want to do at home do not get done because of the demands my job puts on me.” had the lowest mean ( $M = 2.49$ ), indicating that this aspect of work-life conflict was slightly less agreed upon by the participants.

As it relates to the standard deviation of work-life conflict, 1.203 to 1.239, reflecting a high degree of variability across the scale. Item WLC5 “Due to work-related duties, I have to make changes to my plans for family activities.” had the highest standard deviation ( $SD = 1.239$ ), suggesting that some participants frequently need to adjust their family plans because of work, while others don’t. In contrast, item WLC2 had had the lowest standard deviation ( $SD = 1.067$ ), indicating that the responses for this question were marginally less varied than the others, but still had relatively high variability.

**Table 4.2***Descriptive Statistics for Work-Life Conflict*

Code	Item	Mean (M)	SD
WLC1	The demands of my work interfere with my home and family life.	2.57	1.212
WLC2	The amount of time my job takes up makes it difficult to fulfill my family responsibilities.	2.59	1.203
WLC3	Things I want to do at home do not get done because of the demands my job puts on me.	2.49	1.210
WLC4	My job produces strain that makes it difficult to fulfill family duties.	2.51	1.225
WLC5	Due to work-related duties, I have to make changes to my plans for family activities.	2.56	1.239

*Note.* N = 217. WLC = Work-Life Conflict

**Descriptive Statistics for After-Hours ICT Usage**

After-hours ICT usage was measured using eight items, four measuring frequency (ICT1 to ICT4) and four measuring duration (ICT5 to ICT8). The original duration items included six options (none, 1-30mins, 31-60mins, 61-90mins, 91-120mins, 121-150mins), but to maintain 5-point format across the scale, the two least selected options (91-120 and 121-150mins) were combined based on their low frequency across 868 responses (217 participants x 4 items).

The results of the descriptive analysis for after-hours ICT usage are presented in Table 4.3. Among the frequency-items, ICT1 “How often do leaders use communication tools to contact me during non-work time?” had the highest mean ( $M = 2.87$ ), while ICT3 “How often do I communicate with the relevant people through communication tools due to work related matters during non-work time?” had the lowest ( $M = 2.64$ ). This shows that leader-initiated communication occurred slightly more than other forms of after-hours communication, and self-initiated communication occurred a bit less often. In regard to standard deviation, all four items showed relatively high variability, highlighting that the participants have diverse experiences. As with the mean, ICT1 ( $SD = 1.231$ ) and ICT3 ( $SD = 1.127$ ) had the highest and lowest standard deviation, respectively.

For the duration questions, ICT8 “For how long do I need to view and edit relevant work material for tasks during non-work time?” had the highest mean ( $M = 2.66$ ), while ICT6

“For how long do leaders use communication tool to contact me during non-work time?” had the lowest ( $M = 2.18$ ). This suggests that leader-initiated communication may be short, while independent task could demand more time. As for the standard deviation, the duration items had moderate to high variability, indicating that in certain situations participants had some similar experiences, while in others their experience was more diverse. As with the mean, ICT8 ( $SD = 1.199$ ) and ICT6 ( $SD = .758$ ) had the highest and lowest standard deviation, respectively. This suggests that the time spent of non-working hours tasks varied more than that of leader-initiated communication.

**Table 4.3**

*Descriptive Statistics for After-Hours ICT Usage*

Code	Item	Mean (M)	SD
ICT1	How often do leaders use communication tools to contact me during non-work time?	2.87	1.231
ICT2	How often do I view various work-related messages (such as group messages, news, emails, online notifications during non-work time?	2.76	1.196
ICT3	How often do I communicate with the relevant people through communication tools due to work related matters during non-work time?	2.64	1.127
ICT4	How often do I need to view and edit relevant work materials due to task requirements during non-work time?	2.75	1.199
ICT5	For how long have I been in contact with relevant people through communication tools for work-related matters during non-work time?	2.34	.924
ICT6	For how long do leaders use communication tools to contact me during non-work time?	2.18	.758
ICT7	For how long do I view various work-related messages (such as group messages, news, emails. Online notifications) during non-work time?	2.38	.935
ICT8	For how long do I need to view and edit relevant work material for task during non-work time?	2.66	1.199

*Note.*  $N = 217$ . ICT = Information Communication Technology

## Descriptive Statistics for Organizational Identification

Organizational identification was measured using six items. The results of the descriptive analysis for organizational identification are presented in Table 4.4. The results indicate that OI3 “When I talk about this organization, I usually say ‘we’ rather than ‘they’.” had the highest mean ( $M = 3.66$ ), suggesting a relatively strong sense of belonging among respondents. In contrast, OI1 “When someone criticizes this organization, it feels like a personal insult.” had the lowest mean ( $M = 2.81$ ), indicating that respondents are less likely to be personally affected by criticism directed at the organization.

As it relates to the standard deviation of organizational identification, the overall standard deviation of the items ranged from 1.067 to 1.44, reflecting a moderate to high degree of variability across the scale. Item OI3 had the highest standard deviation ( $SD = 1.144$ ), suggesting greater variability in responses, with some participants having a higher tendency to refer to the organization as ‘we’, while others would choose to only refer to it as ‘they’. In contrast, item OI1 had the lowest standard deviation ( $SD = 1.067$ ), indicating that the responses for this question, while still relatively having high variability, had more closely related responses than others.

**Table 4.4**

*Descriptive Statistics for Organizational Identification*

Code	Item	Mean (M)	SD
OI1	When someone criticizes this organization, it feels like a personal insult.	2.81	1.067
OI2	I am very interested in what others think about the organization.	3.13	1.112
OI3	When I talk about this organization, I usually say ‘we’ rather than ‘they’.	3.66	1.144
OI4	This organization’s successes are my successes.	3.27	1.086
OI5	When someone praises this organization, it feels like a personal compliment.	3.38	1.116
OI6	If a story in the media criticized the organization, I would feel embarrassed.	3.53	1.122

*Note.*  $N = 217$ . OI = Organizational Identification

## Results of Pearson Correlation Analysis

A Pearson correlation analysis was conducted to examine the strength and direction of the relationships among after-hours ICT usage (ICT), organizational identification (OI), and work-life conflict (OI), while also considering the control variables of gender, industry, and tenure. Table 4.5 provides the mean, standard deviation, and correlation coefficients for these respective relationships.

According to the results of the Pearson correlation analysis, ICT and tenure have a weak positive relationship that is highly statistically significant ( $r = .288, p < .01$ ), which suggests that employees with longer tenure tend to experience more frequent or longer durations of after-hours work-related communication. ICT and OI show a very weak positive relationship that is statistically significant ( $r = .0168, p < .05$ ), suggesting that employees that engage in more after-hours communication may feel more connected to their organization. ICT and WLC have a moderate relationship that is highly statistically significant ( $r = .470, p < .01$ ), which suggest that ICT usage during non-work hours may create a greater interference between work and personal life.

OI and gender have a very weak negative relationship that highly statistically significant ( $r = -.193, p < .01$ ), which suggests that male employees are more likely to identify with their organization compared to female employees. OI and tenure have a weak positive relationship that is highly statistically significant ( $r = .181, p < .01$ ), suggesting that the longer an employee is with an organization, their sense of belonging and alignment with the organization may marginally increase.

WLC and tenure have a very weak relationship that is highly statistically significant ( $r = .191, p < .01$ ), which suggests that employees that have worked for a longer time may be more likely to experience interference between work and personal life. Additionally, industry and tenure have a very weak relationship that is highly statistically significant ( $r = .187, p < .01$ ) which suggests that employees in certain industries may tend to have longer or shorter tenure compared to others. Lastly, for the moderating role of OI, it is significantly related to ICT but not to WLC, which then raises questions about its influence in this relationship. Therefore, hierarchical regression analysis is important to help determine whether OI alters the relationship between ICT and WLC.

**Table 4.5***Results of Pearson Correlation Analysis*

Variables	Mean	SD	1	2	3	4	5
1. Gender	1.530	0.500					
2. Industry	2.410	1.281	0.078				
3. Tenure	2.051	0.862	-0.030	0.187**			
4. ICT	2.571	0.806	0.023	0.068	0.288**		
5. OI	3.297	0.843	-0.193**	0.099	0.181**	0.168*	
6. WLC	2.543	1.083	0.24	0.016	0.190**	0.470**	0.015

*Note:* N = 217. \* $p < .05$ , \*\* $p < .01$ . Gender = Male - 1 Female - 2; Industry = Technology and Media – 1 Production and Commerce – 2 Education – 3 Financial Services and Consulting – 4 Healthcare – 5 Hospitality and Tourism- 6 ; Tenure = Less than a year – 1 One to Two Years – 2 Three to Four Years – 3 Five or More Years – 4; ICT = Information Communication Technology; OI = Organizational Identification; WLC = Work Life Conflict.

### **Relationships among Variables**

This section outlines the results of the hierarchical regression conducted to test the two hypotheses of this study. The analysis examines whether significant relationships exist among the independent, moderating, and dependent variables, while controlling for gender, industry, and tenure. The variables were added in sequential stages to identify the unique contribution of each predictor, offering a clear understanding of their impact on engagement.

### **The Relationship between After Hours ICT Usage and Work-Life Conflict**

The first hypothesis examined the relationship between after-hours ICT usage and work-life conflict. A hierarchical regression analysis was conducted, controlling for gender, industry, and tenure. According to Table 4.6 the results indicated that after hours ICT usage was significantly associated with work-life conflict ( $\beta = .453, p < .001$ ). These findings suggest that individuals who engage more frequently in after-hours work-related communication are more likely to experience greater work-life conflict. The  $R^2$  increased from .037 in Model 1 to .235 in Model 2, indicating that after-hours ICT usage accounted for an 18.8% increase of the variance in work-life conflict. As a result, Hypothesis 1 was supported.

**Table 4.6***The Result of the Hierarchical Regression Analysis on Hypothesis 1*

Variable	Model 1	Model 2
	$\beta$	$\beta$
<b>Control Variable</b>		
Gender	0.031	0.017
Industry	-0.023	-0.029
Tenure	0.195**	0.065
<b>Independent Variable</b>		
After Hours ICT Usage		0.453***
$R^2$	0.037	0.225
<i>Adjusted R<sup>2</sup></i>	0.024	0.211
$\Delta R^2$	0.037	0.188
$F$	2.756*	15.424***
$\Delta F$	2.756*	51.467***

Note. N = 217 Dependent Variable = Work Life Conflict, \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

### **The Moderating Effect of Organizational Identification between After-Hours ICT Usage and Work-Life Conflict**

The second hypothesis examined whether organizational identification moderates the relationship between after-hours ICT usage and work-life conflict. A hierarchical regression analysis was conducted in three steps. In Model 1, gender, industry, and tenure were entered as control variables. In Model 2, after-hours ICT usage and organizational identification were added. In Model 3, the interaction term between after-hours ICT usage and organizational identification was included to test for moderation.

As shown in Table 4.7, after-hours ICT usage remained a significant positive predictor of work-life conflict in both Model 2 ( $\beta = .463, p < .001$ ) and Model 3 ( $\beta = .471, p < .001$ ). However, the interaction term between after-hours ICT usage and organizational identification ( $\beta = -.092, p > .05$ ) was not significant, indicating that organizational identification did not moderate the relationship between after-hours ICT usage and work-life conflict. The  $R^2$  increased only slightly from .230 in Model 2 to .238 in Model 3 (0.8% increase), suggesting that the interaction term did not contribute significantly to the explained variance in work-life conflict. As a result, Hypothesis 2 was not supported.

**Table 4.7***The Result of the Hierarchical Regression Analysis on Hypothesis 2*

Variable	Work Engagement		
	Model 1	Model 2	Model 3
	$\beta$	$\beta$	$\beta$
<b>Control Variable</b>			
Gender	0.031	0.003	-0.007
Industry	-0.023	-0.023	-0.028
Tenure	0.195**	0.074	0.084
<b>Independent Variable</b>			
After-Hours ICT Usage		0.463***	0.471***
<b>Moderator</b>			
Organizational Identification		-0.073	-0.068
<b>Interaction Term</b>			
After-Hours ICT Usage x Organizational Identification			-0.092
$R^2$	0.037	0.230	0.238
<i>Adjusted R<sup>2</sup></i>	0.024	0.212	0.217
$\Delta R^2$	0.37	0.188	0.007
$F$	2.756*	12.628***	10.959***
$\Delta F$	2.756*	26.447**	2.245

Note. N = 217 Dependent Variable = Work Life Conflict, \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

### Discussion

The present study aimed to examine the relationship between after-hours ICT usage and work-life conflict among Gen Z employees in Taiwan, while also examining the potential moderating effect of organizational identification. The study controlled for the demographic factors of gender, industry, and tenure. The data collected from the 217 participants was analysed using IBM SPSS 23 and JASP 0.19.3. Descriptive analysis offered insights into the participants' demographic backgrounds, after-hours ICT usage patterns, levels of organizational identification, and work-life conflict experiences. Pearson correlation and hierarchical regression analyses were conducted to examine the relationships among the main study variables, as well as the control variables.

As presented in Table 4.8, Hypothesis 1 was supported, with the hierarchical regression analysis highlighted a significant positive relationship between after-hours ICT usage and work-life conflict. This finding suggests that increased digital connectivity to work during non-working hours interferes with an individual's ability to maintain boundaries between work and personal life. It aligns with prior research (e.g., Boswell & Olson-Buchanan, 2007; Fenner & Renn, 2010; van Zoonen et al., 2020), which indicates that work-related digital interference increases work-life conflict. Specifically, after-hours ICT usage negatively affects psychological detachment, a key component for recovery and well-being, thus interfering with personal responsibilities (Sonnentag & Bayer, 2005). Khan and Fazili (2016) further argue that the growing reliance on ICT blurs work-life boundaries, leading to strain across the domains. This finding is particularly relevant in Taiwanese context, where employees reportedly work some of the longest hours globally (Ministry of Labor, 2024). The combination of extended hours and increased digital connectivity heightens the risk of work-life conflict.

Hypothesis 2 proposed that organizational identification would moderate the relationship between after-hours ICT usage and work-life conflict; however, this hypothesis was not supported. The interaction term between after-hours ICT usage and organizational identification was not statistically significant, indicating that organizational identification did not have a moderating role in this relationship. Although prior research suggested that employees with strong organizational identification may view work demands more positively (Ashforth et al., 2000; Fenner & Roloff, 2012), the current findings provide no evidence that it mitigates the negative effects of after-hours ICT usage on work-life conflict. This may be as a result of Taiwan's work culture, which is characterized by long working hours (Ministry of Labor, 2024). In such a demanding environment, organizational identification may be ineffective in reducing work-life conflict, as the work demands leave little room for its buffering effects.

While the moderating effect of organizational identification was not significant, Pearson correlation analysis revealed that it had a weak, but statistically significant relationship with after-hours ICT usage. This finding suggests that employees who engage in more frequent after-hours communication may also feel a stronger connection to their organization. However, despite this positive correlation, organizational identification does not mitigate the negative effects of after-hours connectivity on work-life conflict. Instead, this correlation might suggest that strong organizational identification may increase employees' willingness to remain digitally available. This pattern may be amplified in Taiwan's work

culture, where long working hours are prevalent. Therefore, while strong organizational identification may increase an employee's willingness to communicate after-hours, it does not appear to alleviate the consequences, such as work-life conflict.

**Table 4.8**

*Hypotheses Testing Results*

	Hypotheses	Result
H1:	There is a significant relationship between after-hours ICT usage and work-life conflict.	Supported
H2:	The relationship between after-hours ICT usage and work-life conflict is moderated by organizational identification.	Not supported





## CHAPTER V CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the conclusion of the study based on the key research findings. It discusses both the academic and practical implications of the study, the limitations of the study, and the suggestions for future research.

### Conclusions

This study examined the relationship between after-hours ICT usage and work-life conflict among Gen Z employees in Taiwan, with the potential moderating role of organizational identification. Guided by growing concerns regarding the impact of constant digital connectivity on the younger working population, the researcher collected quantitative data from 217 Gen Z participants currently working in various industries Taiwan. Statistical analyses were implemented to help examine the relationship among the main variables, while controlling for gender, industry, and tenure.

To address the first research question—Does after-hours communication through ICT usage have a relationship with employees' work-life conflict?—the findings confirmed a significant positive relationship. This confirms that increased levels of after-hours ICT usage are associated with an increase in work-life conflict. This is particularly relevant for Gen Z employees who value technology, but also strongly prioritize work-life balance. By being digital natives they then reinforce a constant state of connectivity which adds to the blurring of boundaries between personal and work lives. These findings are consistent with previous research, which indicates that while ICT use can be beneficial, it can interfere with detachment and recovery from work, leading to work-life conflict.

The second research question—Does organizational identification moderate the relationship between after-hours ICT usage and work-life conflict?—was not supported, as the results revealed no significant relationship between organizational identification and work-life conflict. This suggests that despite employees' strong sense of belonging and alignment with the organization, it does not mitigate the negative impact of after-hours ICT usage. These findings challenge the assumption that identification serves as a protective factor which would make employees view after-hours ICT usage as meaningful or aligned with their organizational commitment. However, as a result of Gen Z's limited early work experience, they may have unrealistic expectations relating to work-life balance. When these expectations are not met, especially in environments with constant connectivity, it can increase their already high levels of anxiety and depression, thus contributing to work-life conflict.

Overall, these findings highlight the significant work-life challenges created by constant digital connectivity, particularly for the younger working population in countries or regions like Taiwan, where there are higher expectations for availability. While strong organizational identification might increase willingness to engage in after-hours connectivity, it is not sufficient enough to protect them from the resulting work-life conflict. This suggests that simply having a sense of belonging is not enough to solve the challenge posed by after-hours ICT use. To address this issue, organizations must then create substantial structural and policy changes, accompanied by clear guidelines, which are likely necessary to effectively address and reduce this phenomenon.

### **Implications of the Study**

The findings of this study highlight the need for organizations in Taiwan to pay keen attention to how evolving work practices, particularly digital communication, affect the well-being of their employees. As work-life boundaries become increasingly blurred, it is essential for organizations implement practical measures that can help to address these challenges to promote a sustainable and supportive work environment.

#### **Address Gen Z's After-Hours Connectivity**

The significant positive relationship between after-hours ICT usage and work-life conflict among Gen Z employees in Taiwan highlights the urgent need for organizations to limit these digital intrusions. While Gen Z may be digital natives, they are not immune to the strain of constant connectivity. Although there are legal safeguards such as Taiwan's Labor Standards Act—which mandates overtime compensation—and growing discourse around the “right to disconnect” (Lee, 2024; Ting, 2023), these are not consistently enforced or culturally supported. In Taiwan's work culture, willingness to work overtime and constant availability are often viewed as signs of career ambition. As a result, added pressure is placed on young employees to remain connected, even if it affects them. Moreover, the study found that strong organizational identification does not lessen these negative effects. Committed employees may willingly accept after-hours work demands, but they are not protected from stress. In fact, their commitment may potentially increase work-life conflict rather than decrease it.

Therefore, organizations, particularly human resource (HR) departments, should develop and implement clear digital communication policies that set boundaries for after-hours communication. These policies would highlight specific communications windows and define which types of messages are acceptable based on urgency and importance. Doing so

would support employees' psychological detachment, thus reinforcing the boundary between the two domains. While these policies will be employee-centered, they will also be beneficial to the organizational. Employees with greater work-life balance are likely to remain productive and committed. In return, this can contribute to lower turnover rates, thus creating higher levels of talent retention

### **Create a Healthier Organizational Culture**

Implementing change in a culture where overworking and constant availability are normalized will come with challenges. However, organizations that invest in making this change would stand to experience long-term benefits, including improved employee well-being, productivity, and retention. As previously mentioned, the HR departments would be responsible to clearly develop the policies and guidelines as the foundation for change. However, policy alone is insufficient. To create meaningful transformation, HR should implement adequate training sessions and workshops aimed at promoting the right to disconnect, which helps to reduce the stigma surrounding being unavailable outside of working hours. It would not only serve to educate, but to create a shift in expectations across the organization.

While HR can create these policies and different workshops, leadership plays a key role in making this shift possible. Managers must be trained to respect employees' personal time and recognize that working extra hours and constant availability does not always equate to higher performance. In fact, such behaviors can lead to burnout, disengagement, and higher turnover rates. When managers are held accountable for promoting work-life balance and respecting boundaries within their teams, it creates a stronger and more consistent message throughout the organization. A work culture that prioritizes healthy boundaries not only supports the well-being of their employees, but also creates a reputation for being an organization that values its people.

### **Limitations**

This study examined how after-hours ICT usage and organizational identification impacted work-life conflict among Gen Z employees in Taiwan. While the findings offered practical implications, several limitations should be acknowledged. The data collection used a convenience and snowballing approach, using social media networks, friends, and former colleagues. Consequently, the sample may not fully capture the diversity of the broader Gen Z workforce in Taiwan, particularly those in the underrepresented sectors such as hospitality and tourism and healthcare. Most participants were from industries like technology and

media, production and commerce, and education, being in those respective industries may have influenced their experiences with after-hours digital connectivity. Additionally, the cultural and organizational context of Taiwan may influence how after-hours communication and organizational identification are viewed, which could limit the generalizability of the findings to other regions.

Further limitations relate to the study design and data collection method. The study was based entirely on self-reported survey data, which raises concerns about response bias, specifically the tendency to respond in ways that are socially desirable. As a result, some participants may have answered in a way that they believe would be aligned with perceived norms. Additionally, the structure of the survey may have also influenced that respondents to altered earlier responses after reading later items, thus affecting the internal consistency of the responses. Moreover, the cross-sectional design restricted the study's ability to draw conclusions about the variables' relationships over time, as it only represented the employees' opinions at a single point in time. Finally, the purely quantitative design limited the detailed understanding of participants' experiences. While close-ended questions allowed for efficient data collection and statistical analysis, it restricted the ability to gain more nuanced insights.

### **Suggestions for Future Research**

According to the limitations of this study several adjustments should be considered in order to enhance future research. First, future studies should look beyond Gen Z employees and take into consideration how older generations respond to after-hours ICT usage. Additionally, while Taiwan provided meaningful context for this research, it is important to consider cross-cultural studies to explore whether similar patterns exist in other countries where digital connectivity, labor regulations, and cultural norms are different. By comparing results across regions, it could help determine whether the issues are culturally related or universally applicable. Second, adapting a longitudinal approach would help to capture how work-life conflict changes over a specific period of time. Moreover, this study only focused on one moderating variable—organizational identification—which had no significant effect on the relationship between after-hours ICT usage and work-life conflict. As a result, future research would benefit from exploring a wider range of factors that could potentially influence how after-hours connectivity affects employees. Lastly, due to the purely quantitative approach of this study, there was limited insight into participants' experiences.

Adapting a more open-ended qualitative approach would prove to be beneficial as it could help to uncover valuable context and underlying reason behind employees' experiences.





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## APPENDIX A QUESTIONNAIRE (ENGLISH VERSION)

Dear Participants,

My name is Joshua Vernon, and I am a Master's student at the Graduate Institute of International Human Resource Development, National Taiwan Normal University. I am conducting a research study to explore the impact of after-hours information communication tools (ICT) usage and organizational identification on work-life conflict among employees in Taiwan.

Would you please spend just 5-7 minutes to complete the following questionnaire. This survey will remain strictly confidential and will be used solely for academic purposes. Participation is entirely voluntary, and you may withdraw at any time.

Your participation would be invaluable in shedding light on how ICT usage and organizational identification play a role in work-life conflict. If you have any questions or require further information about this study, please feel free to reach out to me at [61286024i@ntnu.edu.tw](mailto:61286024i@ntnu.edu.tw). Thank you for your time and support. I truly appreciate your contribution to the practical field.

Warm regards,

Joshua Vernon

Graduate Institute of International Human Resource Development

National Taiwan Normal University

Advisor: Chih-Chien Lai, Ph.D.

**FILTER QUESTION:**

	Yes	No
Do you meet the following criteria: currently working in Taiwan for at least 6 months, and a member of Generation Z (born between 1997 and 2012)?		

**PART A: Work-Life Conflict**

This part has 5 questions.

	<b>(1) Strong Disagree (2) Disagree (3) Neutral (4) Agree (5) Strongly Agree</b>				
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
The demands of my work interfere with my home and personal/family life					
The amount of time my job takes up makes it difficult to fulfill my personal/family responsibilities					
Things I want to do at home do not get done because of the demands my job puts on me					
My job produces strain that makes it difficult to fulfill personal/family duties					
Due to work-related duties, I have to make changes to my plans for personal/family activities					



**PART B: After-Hours ICT Usage**

This part has 8 questions.

<b>(1) Never (2) Rarely (3) Sometimes (4) Often (5) Always</b>						
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	
How often do leaders use communication tools to contact me during non-work time?						
How often do I view various work-related messages (such as group messages, news, emails, online notifications) during non-work time?						
How often do I communicate with the relevant people through communication tools due to work-related matters during non-work time?						
How often do I need to view and edit relevant work materials due to task requirements during non-work time?						
<b>(0) None (1) 1-30mins (2) 31-60 mins (3) 61-90 mins (4) 91-120 mins (5) 121-150mins</b>						
	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
For how long have I been contact with relevant people through communication tools for work-related matters during non-work time?						
For how long do leaders use communication tools to contact me during non-work time?						
For how long do I view various work-related messages (such as group messages, news, emails, online notifications) during non-work time?						
For how long do I need to view and edit relevant work material for tasks during non-work time?						

**PART C: Organizational Identification**

This part has 6 questions.

<b>(1) Strong Disagree (2) Disagree (3) Neutral (4) Agree (5) Strongly Agree</b>						
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	
When someone criticizes this organization, it feels like a personal insult.						
I am very interested in what others think about the organization						
When I talk about this organization, I usually say ‘we’ rather than ‘they’						
This organization’s successes are my successes						
When someone praises this organization, it feels like a personal compliment						
If a story in the media criticized the organization, I would feel embarrassed						

## **PART D: Demographics**

This part has 5 questions

### **1. Gender**

- Male
- Female

### **2. Nationality**

(Choose a country from the dropdown box)

### **3. Marital Status**

- Single
- Married
- In a relationship

### **4. Which industry do you work in?**

- Technology
- Finance and banking
- Management and Consulting
- Marketing, Media, & Advertising
- Education
- Healthcare
- Hospitality & Tourism
- Manufacturing & Supply Chain
- Retail & E-Commerce



### **5. Which industry do you work in?**

- Less than 1 year
- 1-2 years
- 3-4 year
- 5+ years

## APPENDIX B QUESTIONNAIRE (CHINESE VERSION)

親愛的參與者，

您好！我是 Joshua Vernon，目前就讀於 國立臺灣師範大學 國際人力資源發展研究所 碩士班。我正在進行一項研究，探討 下班後使用資訊通訊工具 (ICT) 及 組織認同，對於 臺灣勞工工作與生活衝突 的影響。

我誠摯邀請您協助完成這份問卷，大約只需要花費 5 至 7 分鐘。請放心，您回答的內容將被 完全保密，且僅用於學術分析，並不會對您造成任何影響。本研究為 完全自願 性質，您可隨時選擇退出。

您的寶貴意見將有助於深入了解 資訊通訊工具的使用 及 組織認同，在 工作與生活衝突 中所扮演的角色。如有任何關於填答的問題或需要進一步了解本研究，請隨時聯絡我 ([61286024i@ntnu.edu.tw](mailto:61286024i@ntnu.edu.tw))。

感謝您的時間與支持，更誠摯感謝您的參與和協助！

祝福您平安健康，一切順心。

Joshua Vernon

國立臺灣師範大學 國際人力資源發展研究所 碩士生

指導教授：賴志樑 博士

**篩選問題：**

	是	否
您是否符合以下條件：目前在台灣工作，已工作至少 6 個月，且為 Z 世代成員（出生於 1997 年至 2012 年之間）		

**A 部分 工作-生活衝突**

這部分有五題。

<b>(1) 非常不同意 (2) 不同意 (3) 中立 (4) 同意 (5) 非常同意</b>					
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
我的工作需求，會干擾了我的家庭和個人生活					
我的工作佔據的時間，讓我難以履行個人/家庭責任					
我在家想做的事情，會因為工作的要求而無法完成					
我的工作壓力會使我難以履行個人/家庭義務					
由於工作上需要負的責任，我不得不改變個人/家庭活動的計劃					

## B 部分：下班後的 ICT 使用情況

這部分有八題。

<b>(1) 絕對不使用 (2) 很少使用 (3) 偶爾使用 (4) 經常使用 (5) 總是在使用</b>						
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	
我的主管在非工作時間使用通訊工具和我聯繫的頻率是多少？						
我在非工作時間查看各種與工作相關的訊息（例如群組訊息、新聞、電子郵件、線上通知等）的頻率是多少？						
我在非工作時間透過通訊工具與相關人員聯繫處理工作事務的頻率是多少？						
我在非工作時間中，因任務要求需要查看和編輯相關工作資料的頻率是多少？						
<b>(0) 無使用 (1) 1-30 分 (2) 31-60 分 (3) 61-90 分 (4) 91-120 分 (5) 121-150 分</b>						
	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
我在非工作時間透過通訊工具與相關人員聯繫工作事務的時間有多長？						
主管在非工作時間使用通訊工具聯繫我的時間有多長？						
我在非工作時間查看各種與工作相關的訊息（例如群組訊息、新聞、電子郵件、線上通知等）的時間有多長？						
我在非工作時間因工作任務需要查看和編輯相關工作資料的時間有多長？						

### C 部分 組織認同感

這部分有六題。

(1) 非常不同意 (2) 不同意 (3) 中立 (4) 同意 (5) 非常同意					
	1	2	3	4	5
當有人批評這個組織時，這會讓我感覺像是對我個人的侮辱					
我非常關心其他人對這個組織的看法					
當我談論這個組織時，我通常會說‘我們’而不是‘他們’					
這個組織的成功就是我的成功					
當有人稱讚這個組織時，會讓我感覺像是對我的個人稱讚					
如果有媒體的故事批評這個組織，我會感到尷尬					

### D 部分 人口統計資料

這部分有五題。

#### 1. 性別

男

女

#### 2. 國籍

(請從下拉選單中選擇一個國家)

#### 3. 婚姻狀況

單身

已婚

有伴侶

**4. 您在哪個行業工作？**

- 科技
- 金融與銀行
- 管理顧問
- 行銷、媒體與廣告
- 教育
- 醫療保健
- 住宿、餐飲與旅遊
- 製造與供應鏈
- 零售與電子商務業

**5. 您於目前公司就職至今已有多長時間？**

- 少於 1 年
- 1 至 2 年
- 3 至 4 年
- 5 年以上

