



## Motivational Factors Influencing Telework during the COVID-19 Pandemic

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### Abstract

During the COVID-19 pandemic, teleworking has proven to be an effective countermeasure to overcome the spread of this disease while enabling businesses to continue. However, little is known about the extent of their adjustment to daily life routine, interaction among self-control, assignments, family life matters, and coordination with colleagues. This study explores the impact of motivational factors on the performance of teleworkers. An exploratory study was conducted using an in-depth interview with 27 interviewees who work in Thailand and have more than a year of experience switching between being a teleworker and working on-site. The NVivo and SPSS software were performed to reveal deeper data insights and apply non-parametric tests in order to compare findings with various demographic profiles. The findings revealed that environment, time management, and reward are the strongest motivational factors, whereas labour intensity and job security present the weakest relationships with teleworkers' performance. Numerous implications and strategies to enhance their performance for both organizations and workers are provided. Firms can support a well-prepared environment and manage the flexibility of working time to increase employees' effectiveness. Moreover, the result-oriented approach can be one of the tools in evaluating their performance rather than attending to their full working time at home.

### Keywords:

COVID-19; Telework;  
Employee Performance; Environment;  
Job Security; Labor Intensity;  
Time Management; Reward;  
Working from Home; Thailand.

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## 1- Introduction

In 2022, telework has been described as work that is achieved with the help of information and communication technologies (ICTs) such as smartphones, tablets, laptops, and desktop computers while conducting assignments outside an employer's locations, along with a voluntary-based agreement between an employer and an employee [1]. However, there is a knowledge gap needed to understand the motivational effects of telework via new ICTs on both working life and productivity [2]. To achieve a successful teleworking process, both public and private organizations have slowly created and started teleworking through well-prepared training sessions [3-5]. Nevertheless, few empirical studies on teleworking practices have been conducted within organizations, whereas fewer studies have been conducted on how on-site employees are forced to become teleworkers during the COVID-19 pandemic in such a short period without having well-equipped ICTs. Instead, the traditional thinking of an organization about teleworking is changed to support remote workers, work at clients' sites projects [6], and unexpected events like the oil crisis in 1979 [7, 8], or earthquakes that happened in Japan [9].

As a matter of fact, teleworking, along with advanced versions of ICTs, helps employees to have a better work-life balance [1] and increase their productivity [10, 11]. According to the Telework Behavioral Model (TBM) developed by Hunton and Ken Harmon [12], the motivational factors of teleworkers address the interaction of various psychological effects, individual consequences, and organizational outcomes. It was developed for practitioners to find ways to optimize the effectiveness of alternative telework policies under various working conditions.

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Furthermore, western studies argued that general motivational factors of teleworkers were commonly established under the notion of being self-starters [11], i.e., those who are able to work with minimal supervision [13] and mostly rely on technological-enabled communications for professional interactions [14]. Their researches also present positive relationships among telework and organizational outcomes [15], positive health effects [16], and trust and openness culture [17]. However, little is known about specific motivational factors that motivate teleworking activities during a long-term crisis like the COVID-19 era in an emerging country. Given the sudden increasing rate of teleworkers with limited knowledge of ICTs, knowledge of self-motivated factors and durations required for teleworkers to adjust themselves to accept such a new norm in a crisis are important.

To begin filling this gap in the literature, the current research examines the profound levels of motivational factors such as intrinsic and extrinsic job security, positive and negative time management, physical and non-physical work environments at home, as well as intrinsic and extrinsic workload. Furthermore, this research aims to gain an in-depth understanding of how different genders adjust themselves to achieving work-life balance without disrupting family traditional culture, which may assist employers in creating more flexibility in re-organizing their structure. This analysis examines motivational factors reported by sudden-to-become teleworkers with their highly self-motivated efforts in learning ICTs in order to identify motivational themes that emerge in their daily life. Since learning ICTs skills takes time and employees may experience stress while working on a timely basis, motivational factors are important to be examined. This population is well suited to this type of analysis as they are able to recall specific messages more accurately due to their deliberate nature.

Despite the fact that research has shown that sudden-to-become teleworkers reported a need to be immediately isolated and suddenly excluded from colleagues, this population of sudden-to-become teleworkers is understudied [18, 19]. Inclusive types of self-control strategies and organizational measures adopted have been empirically linked with teleworkers' performance [19]. To add to further findings, this research examines different genders and transition periods of sudden-to-become teleworkers in adjusting themselves to maintain and improve their performance.

Normally, teleworkers fulfil high productivity and efficiency in developed countries with 28% to 30% from working time while there are only 12% to 16% in emerging countries [20]. During the pandemic, the scale of teleworking increases; however, the emergence of sudden-to-become teleworkers with the requirement to be skillful with technology transpires, especially in emerging nations. Few research exposed their self-motivational factors based on the theory of workload and self-determination theory (SDT) [21, 22] to reach their performance on time, especially in Thailand during the first wave until the third wave of COVID-19. Furthermore, this study also presents such factors which are classified by two genders and three periods of their performance on and off teleworking experiences.

Table 1 shows that the selected literature review during 2004-2021 found more negative perceptions towards telework. This is because teleworking is still new to most Asian, South American and Middle-Eastern employees. Pajaree [20] claimed that approximately 12-16% had experienced teleworking, which constitutes 6% of the world population. The highest negative issue related to teleworking is that there are other people at home, whereas workload and insufficient IT support became other most negative issues. These results reflected a lack of preparation for teleworking, increased IT costs and the shortage of software skills.

**Table 1. Literature review related to self-motivation factors' positive and negative results**

Authors/ Self-Motivation Factors	Motivation	Loyalty	Retain staffs	Efficient productivity	Environment	Working hour/ Workload	Other persons at home	Skillful with technology	Insufficient IT support	Reduction in commute trips	Distraction	Insufficient experience	Little coordination	Insurmountable challenge	Cost of setup	Emotional exhaustion	Flexibility
Criscuolo et al. [23]	+	+	+	+		-											
Solis [24]					+		-										
Irawanto et al. [25]								+	-								
Nguyen [26]							-			+	-						
Pordelan et al. [27]				+		-						-					+
Morgan [28]												-	-	-	-		
Chong et al. [29]							-		-								-
Tavares et al. [30]							-		-			-					
Hosoda [31]	+		+	+		-											
Setyawan and Lestari [32]								+									
Filardi et al. [33]									-		-		-				-
Buomprisco et al. [34]				+		-	-			+							
<b>Total +</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>
<b>Total -</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>5</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>0</b>

Note: “+” means positive reactions to teleworking while “-” means negative reactions to teleworking.

## 2- Literature Review

### 2-1- Self-Determination Theory

Self-determination theory (SDT) links personality, human motivation and optimal functioning. This research focuses on an “autonomous motivation”, which posits the rigid dichotomy between intrinsic and extrinsic motivation factors. Both factors shape the identity of people and how they behave [21, 22]. People, which include teleworkers, will experience volition or self-endorsement of their actions. Extrinsic motivation drives people to behave in certain ways based on external sources, resulting in external rewards [21]. Such sources include grading systems, employee’s evaluations, awards and accolades as well as the respect and admiration of others. On the other hand, intrinsic motivation comes from self-determination. Internal drives inspire people to behave in specific ways, including core values, interests and a sense of morality. Several theories about work motivation and engagement have been raised; however, SDT has a unique focus on the “relative strength of autonomous versus controlled motivation, rather than focusing on the total amount of motivation” [35]. This study has classified self-determinant factors into intrinsic and extrinsic rewards, positive and negative job security, positive and negative work environments at home, positive and negative time management as well as the positives and negatives of the labour intensity or workload.

Since the outbreak of COVID-19, there have been limited applications of this theory in research under the context of industry other than in the context of education. Brunelle and Fortin [36] conducted research to understand the dynamics that underlie the impact of teleworking on employees’ job satisfaction in Canada. According to their structural equation model results, teleworking meets workers’ psychological needs for autonomy, competence and relatedness. Their results indicated a moderating effect on the relationship between these three types of psychological needs and employees’ job satisfaction, thus supporting the idea that satisfying psychological requirements does not operate in the same way for teleworkers and office workers.

Research results suggest that using a game-based training method facilitates the training process by raising users’ intrinsic motivation, thus resulting in increased intention to use the relevant technology. This can be particularly crucial in enhancing the elective completion of the team and individual teleworking while providing a mechanism to minimize teleworkers’ social isolation [37].

This research has classified five variables in the form of extrinsic and intrinsic factors based on the self-determination theory [21]. The details are discussed in Section 2.2 – 2.6.

### 2-2- Reward

One of the most crucial motivating factors that affect employees’ performance is incentive or reward. Akerlof and Kranton [38] reported that companies succeed in gaining expected performance levels when they understand how the economy works. Companies have rewarded their employees using salaries, promotions, bonuses and other non-financial rewards to keep their employees financially sustainable, motivated, and being able to keep up their high-level performance. Lemieux et al. [39] provided evidence that rewards can improve the employees’ performance levels and work quality by using performance evaluation. However, in the context of working from home, it would make employees to feel invisible toward their supervisors, which may decrease chances for any promotion, reward and positive performance review [40]. Additionally, the reduction in profit due to the pandemic may cause the company to reduce employees’ wages and bonuses, thus leading to demotivation and decrease in employees’ performance.

### 2-3- Job Security

The COVID-19 pandemic has led to the challenge of job security [41, 42]. Job security refers to an “employee’s expectations about the stability and longevity of his or her job in an organization” [43]. Research has indicated that the behavior of an employee declines as soon as job security comes into question [44, 45] and job insecurity can lead to a high turnover rate. Alongside the increasing chances of wage reduction due to the decline in financial positions of companies, working from home means that employees need to bear the increased cost of electricity and the Internet [46-49]. Even though they may be able to save on transportation costs, working from home may be less sustainable for lower-income employees. When the current wage is unable to sustain their living conditions, job insecurity may come into their mind.

### 2-4- Time Management

One of the most influential factors over the preference of working from home for employees is the authority to manage their schedule. Lupu [50] stated that flexible time management enables employees to manage their own time and adjust their personal and professional lives. Goldsby et al. [51] mentioned the benefits of time management on employees’ performance such as making a personal appointment during working hours and finishing work later in the evening without taking leave from the company. Additionally, working from home enables employees to spend the time that they usually spend on the road on other valuable activities and reduce stress from their commute, which can help to increase employees’ performance [52]. According to Thorstensson [53], flexible time management leads to a positive influence on employees’ performance.

### 2-5- Work Environment

Regarding time management, the working environment at home was shown to be positive since employees could customize their workspace [54, 55]. However, Ahmed and Farooqi [56] showed that working from home during the COVID-19 produced negative results in terms of self-discipline. The studies showed that some employees tend to be lazy at home, especially when working in the bedroom. Interviews also revealed that employees who worked from home did not socialize with their co-workers and working with people would lead to better job performance compared to working in isolation. Collins and Moschler [57] found that employees who isolated from their colleagues tend to exhibit lower productivity while working at home. Employees might be lack in the ability to focus on their work while their children were around them [10, 58] and were unable to manage the work-life balance, which might lead to overwork [59].

### 2-6- Work Environment

The workload, in this case, refers to time and effort spent on the job as expected by the company. Although working from home can provide the opportunity for employees to manage their schedule, research reported difficulties of disconnecting from the communication circle of a corporate. Employees work for longer hours, have longer meeting sessions and spend more time on communication channels. 70 percent of employees stated that they now work on the weekend and 45 percent of them work for longer hours during weekdays [60].

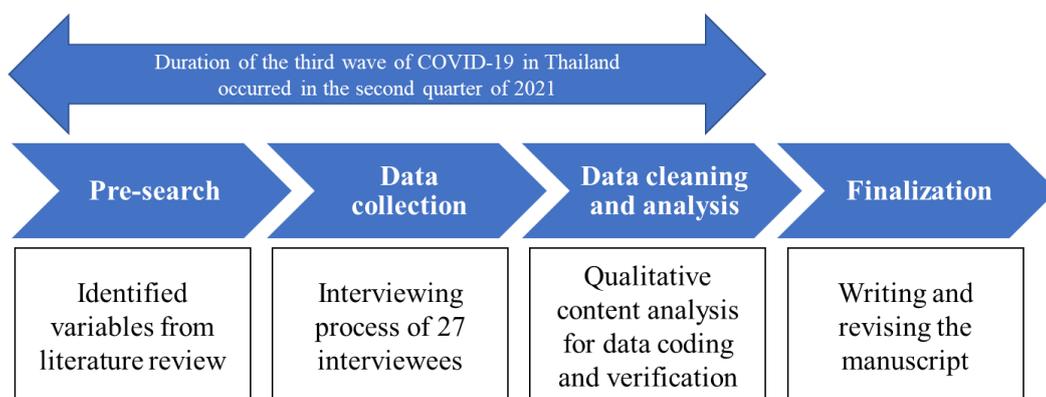
According to previous studies, workloads have negatively affected employees in terms of health issues, stress, work-life balance [61, 62], burnout and turnover [63], which may result in lower job satisfaction [64], especially within non-rewarding circumstances [63].

## 3- Research Methodology

This research used qualitative methodology throughout the thematic analysis. Denzin and Lincoln [65] defined qualitative research as “a situated activity that locates the observer in the world.” Such activity comprises a set of interpretive, material practices that makes the world visible through a series of representations which involve field notes, interviews, conversations, photographs, recordings and memos to the self. Qualitative research involves data triangulation to interpret the naturalistic approach to the changing world after the third wave of COVID-19 in Thailand. Data collection involved primary, secondary and tertiary sources of information.

This study focuses on thematic analysis as shown in grounded theory and the development of cultural models, which require more involvement and interpretation from the researcher [66]. The thematic analysis focuses on identifying and describing implicit and explicit ideas related to teleworkers in Thailand. Codes of variables based on SDT are then typically developed to represent the identified themes and are applied or linked to raw data as summary markers for later analysis. These variables comprise extrinsic and intrinsic rewards, job security, time management, work environment and labour intensity or workload of teleworkers in Thailand. This research compares code frequencies, identifies code co-occurrence, verifies the code, and graphically displays relationships between codes within the data set. Figure 1 presents a step-by-step process throughout the time spent during the third wave of COVID-19 in Thailand in the second quarter of 2021 which was analyzed in the form of a theme.

Moreover, this study processes code through NVIVO software version 12.0. Non-parametric statistics through cross-tabulation underwent testing to determine whether the relationship classified by gender and duration period was significant. This study assesses how the specific self-determinant factors affect job performance levels during the third wave of the COVID-19 outbreak under the eyes of employees from several industries in Thailand.



Note: Created by the authors based on the COVID-19 pandemic during the third wave in Thailand [67].

**Figure 1. Stage of research methodology**

### 3-1- Participants

Interviewees in this research have the experience of being teleworkers which are switched to remote work. These groups comprise Generation Alpha who were born in the 2010s and Millennials who were born between 1980 and 1985, whose education level is at least at an undergraduate degree. This research also used the non-probability sampling method to randomly select 27 local and international teleworkers. The interviewees are Thai and foreign workers (Vietnamese, Chinese, Myanmar, and Russian) who live in Thailand. This research aims to answer questions by collecting and analyzing a sample as well as generalizing the results. Data collection was conducted face-to-face or online and was followed up with telephone interviews till the maturity stage. This method is preferable due to the implementation of social distancing policy. Interviewees were selected from private and public sectors. Interview data sources were put into Table 2. The data was collected through in-depth interviews using semi-structured questions.

**Table 2. Teleworkers' characteristics**

Interviewee code	Telework experiences (Months)	Gender	Education	Sector	Children	Nationality
IV1	3	Female	B	Private	N	Thai
IV2	12	Male	M	Private	N	Thai
IV3	6	Male	M	Private	N	Thai
IV4	4	Female	B	Private	N	Vietnamese
IV5	3	Female	M	Private	N	Thai
IV6	4	Male	M	Public	N	Thai
IV7	5	Female	B	Public	Y	Vietnamese
IV8	5	Male	B	Public	Y	Vietnamese
IV9	7	Female	M	Public	N	Thai
IV10	6	Male	M	Private	N	Thai
IV11	4	Female	D	Private	N	Thai
IV12	18	Female	D	Private	Y	Thai
IV13	7	Male	M	Public	N	Thai
IV14	24	Male	B	Public	N	Thai
IV15	4	Female	B	Private	N	Thai
IV16	4	Male	B	Private	Y	Chinese
IV17	8	Female	B	Private	Y	Thai
IV18	8	Female	B	Private	Y	Thai
IV19	7	Male	B	Private	Y	Thai
IV20	4	Male	B	Private	Y	Chinese
IV21	4	Female	B	Private	Y	Thai
IV22	9	Female	B	Private	Y	Thai
IV23	3	Male	B	Private	Y	Myanmar
IV24	84	Female	B	Private	Y	Thai
IV25	7	Female	B	Private	Y	Russian
IV26	6	Female	B	Private	Y	Thai
IV27	3	Male	B	Private	Y	Thai

Note: "B" represents Bachelor's degree, "M" represents Master's degree, "D" represents Doctoral degree, "Y" represents yes, and "N" represents no.

The researchers listed the names of people who were acknowledged by the researchers as teleworkers. Then, all the 27 requests were responded to and confirmed. The whole process was undertaken on an entirely voluntary basis. Informed consent was obtained from interviewees who involved in this study. Interview guidelines were then sent to all interviewees and appointments were made for the interviews. Each interview session took between 45 and 60 minutes, including the follow-up interviewing process. The audio recording was used only upon the consent of the interviewees, but all were short noted and put into a transcript format after the interview.

### 3-2- Interview Questions

All interview questions underwent translation to native languages and the researchers translated the answers to English. Before conducting the interviews, the researchers explained the objectives of the study and confirmed to all participants that their data would remain confidential. Appendix I presents interview questions and their excerpt categories, including variables and data set content.

### 3-3- Data Analysis

Drawing on the principles and techniques from grounded theory [66], the data were read, re-read and verified several times till reaching the maturity stage [68]. Open coding initially marked parts of the recall teleworkers' informal interaction towards their job performance. The constant comparative method determined whether data gathering would be placed in an existing SDT category (developed by Ryan and Deci [21]) or a new one. Finally, from the results of ten code units, eight were initially developed and separated from the existing ones. Fay [69] confirmed and verified the categories through logical consistency, subjective interpretation (interviewees recalled their past experiences from interaction through the informal interviewing process), and adequacy (consistency between researchers' typification and common experience) [70].

This research integrated each category using axial coding to connect them and collapse categories that overlap with SDT categories. Messages underwent analysis through NVIVO version 12.0 with cross-tabulation, followed by a non-parametric test using SPSS version 28.0 in order to gain insightful information on how each SDT category affects their job performance that are classified by gender and teleworking experience.

## 4- Results and Discussions

The research ascertains in which self-determinant factors that affect teleworkers' performance in the third wave of COVID-19 has occurred in Thailand. Five major key themes emerged from the data: reward, job security, time management, work environment at home, and workload. This research was classified into ten sub-key themes: extrinsic/intrinsic reward, positive/negative job security, flexible/inflexible time management, physical/non-physical work environment at home, and positive/negative feeling of workload (see Table 3). With the use of constructivism theory of Kratochwill et al. [71] and self-determination theory (SDT) of Ryan and Deci [22], themes were examined in terms of teleworkers' performance to reach their goals with at least bi-dimensional accuracy among supervisors as well as their local and international colleagues. Each theme was examined separately, followed by an overall analysis of what these themes revealed about their teleworking performance.

**Table 3. Extrinsic and intrinsic themes based on SDT**

Variable	Themes	Excerpts from dataset
Reward	<i>Extrinsic Reward</i> A tangible and visible reward that is given to an employee for achieving something such as salary, bonus, additional gifts/presents, competing in sports for trophies or public recognition. They work well in the short term to motivate behaviour [72].	[...the cooking competition among my colleagues won me the voucher, money, or snack...] [...I received rice, fruit... I feel satisfied because if no COVID-19, no physical reward...] [...I do like being a teleworker as it reduces the costs of my transportation and lunch during working hours...]
	<i>Intrinsic Reward</i> An internal reward that employees receive from completing their tasks or projects successfully. It is one's own self-interest, enjoyment, inherent, and satisfaction [73].	[...Because my children are small and easy to fall sick, becoming teleworker touched my soul and motivated me a lot....] [...I don't remember that he has ever had any complaints...] [...I have more time to explore new knowledge about exercise in a variety of dimensions. There are, for example, the usefulness of exercise accessories, shoes, and shirts...]
Job Security	<i>Extrinsic Job Security</i> An employee's expectations about the stability and longevity of his or her job in an organization such as completing tasks on the due date and time. It is tangible and visible [43].	[...First of all, I have no salary deduction...] [...I still continuously receive my monthly salary in the past five months (the major city has locked down for five months) while others in the sports industry had stopped paying salaries already...]
	<i>Intrinsic Job Security</i> An employee's lack of expectation about the stability and longevity of his or her job in an organization such as completing tasks on the due date and time due to unexpected situations. It is intangible and invisible [43].	[...I felt insecure if my boss did not see me at work physically. I would like him to see me working...] [...I don't feel insecure although my salary decreased...] [...I don't like feeling disconnected from my colleagues...]
Time Management	<i>Flexible Time Management</i> Flexible time management enables employees to manage their own time and make adjustments in their personal and professional lives, whether to take care of their children or make medical appointments [50].	[...During my break time, I can have a small leave to do my laundry during the day...] [...I have one child. I can spend time with my kid at home...] [...Yes, in the morning because of no transportation time, I can clear out my work more beautifully...]
	<i>Inflexible Time Management</i> Inflexible time management results from employees' inability to manage their time and make adjustments in their personal and professional lives, whether to take care of their children or make medical appointments [50].	[...I do not have much motivation when teleworking. At least in the office, my boss and colleagues can push me by somehow...] [...I felt more relaxed at this time and got used to it. I do not have to wake up very early and travel to work. Not only that, I can take a nap during the lunch hour and watch TV when I am working...] [...as a teleworker, after finishing my work, I tend to do other personal stuff; otherwise, when working on-site, at least I can work harder like reading materials or discussing with my co-workers...]

<b>Work Environment</b>	<i>Physical Work Environment at Home</i> Employees can customize their working environment to match their taste [39]. Moreover, their work environment includes all physical forms around the workplace, which can affect work directly and indirectly [74].	[...Yes, doing my favourite things like having a teapot or watching TV when I have no task can give me more motivation...] [...Yes, it is a good thing that my house is nice. I have my private room, which is quiet for me. I am happy with it...] [...at least, I feel that I can stay safer at home while being locked down from the COVID-19 outbreak...]
	<i>Non-Physical Work Environment at Home</i> Employees cannot customize their working environment to match their self-satisfaction taste on time [39]. Moreover, the condition of the workplace environment is in the form of a harmonious work atmosphere, meaning that there is a relationship or communication between subordinates and superiors (vertical relationships) and relationships between employees (horizontal relationships) [74].	[...I don't like that there's no structure to my day and a lot of distractions from Netflix, social media, podcasts...] [...I do not like teleworking. It has affected my output efficiency. I cannot rest because I have a baby at home. Children often disturb me during my working hours...] [...I do not think it is that positive. It can be relaxing since no one is monitoring me, but I can be too relaxed...]
<b>Workload</b>	<i>Positive feeling on Workload</i> The time and effort that employees spend on the job as expected by the company, e.g., number of hours. They are happy to gain extra benefits in the form of efficient work, salary, bonus, and other awards in return [60].	[...I worked longer hours around one to two hours later than usual...] [...Being a teleworker made me stay on the job late until midnight. However, while working on-site, I can manage to get off work at 5 or 6 pm....] [...One supervisor of mine worked until 2 am continuously (not teleworking) and affected her health in the long term. That is why they quit to get a better work-life balance...]
	<i>Negative feeling on Workload</i> Employees spend too much time and too much effort on the job, as expected by the company. They are unhappy with no any benefits returned but tiresome [60].	[...I do not have a work-life balance for a long time. Sometimes at 7 am, I already have work sent to me...] [...Upon working from home, I could not get enough support from my colleagues... It is hard to make any progress at work...] [...Even working from home is hard to communicate with my colleagues...]

#### 4-1- Extrinsic and Intrinsic Rewards

Rewards play a crucial role in developing relationships among teleworkers, colleagues, and organizations. At the on-site work, employees focus more extrinsic rewards in order to gain their work commitment, innovation outcome, and creativity. Chang et al. [75] found that extrinsic reward programs in Taiwan, especially interaction with his/her teammates to reach the purposes strongly increased employees' commitment. Kanama and Nishikawa [76] found that there is a strong relationship between extrinsic rewards and new products/services development in Japan. In South Korea, Yoon et al. [77] found that both extrinsic and intrinsic rewards, especially financial incentives, recognition from supervisor and promotion decision exerted only a significant indirect effect on employees' creativity via commitment to creativity as well as promoting creativity. In China, Su et al. [78] found that intrinsic rewards, especially upon their suggestion of new task ideas to solve problems has mediated the relationship between servant leadership and service innovative behavior. However, the shift to teleworking has brought ramifications on employee reward programs, including compensation, bonuses, work-related travel and the opportunity to engage in professional learning experiences [79].

Responses to this theme showed that sudden-to-become teleworkers seek to continuously tighten the relationships with organizations to gain intrinsic rewards rather than extrinsic rewards like a little compliment from supervisor without any proper evaluation process [40], which contradicts to the study of Lemieux et al. [39]. Besides that, the well-maintained relationship between teleworkers and their colleagues is significantly considered an intrinsic reward to achieve their assignment [75]. To be more specifically, this study found that the pressure of being ill-prepared during the outbreak means that teleworkers think more positively about the little positive and compliments received from the ones around them.

From a constructivist standpoint, these answers define the context of adjustment experienced by the inner feeling of Thai and foreign teleworkers who worked in Thailand during the pandemic. They correspond very well to the self-sufficiency economy policy since 1997 [80]. In other words, they compensate the loss of time to transportation with the family-oriented time [81, 82]. They are self-satisfied and balance their work-life. Such economy highlights the Buddhist concept of the middle path as a way to conduct the life of the individual, family, community and the nation [83]. The sufficiency economy philosophy has been adopted in the National Economic and Social Development Plan from 2002 to 2021 (<https://www.nesdc.go.th>). Rewards of any kind typically spur employees to work harder and be more productive. Although most teleworkers knew that their overall facilities expenses would increase with a base salary and bonus, they still felt satisfied and appeared to work harder to complete their tasks with few complaints.

While intrinsic benefits tend to have greater level of work-life-balance such as feeling comfortable with home facilities and enjoying family life, extrinsic rewards for the sudden-to-become teleworkers are more invisible such as cooking competitions awards and even physical objects like rice and/or fruits baskets rewarded by the organization. In terms of finance, instead of raising salary, teleworkers thought that reduction cost of transportation and luncheon helped them to save money in order to fulfill their self-sufficiency economy concept.

#### **4-2- Extrinsic and Intrinsic Job Security**

Job security is the primary source of employees' motivation in the public organization even in the economic recession [43]. Correspondingly, lower job security will bring negative impacts towards employees' physical, emotional, social, and workplace well-beings [44, 84].

According to research, on-site employees of public organization feel more secure than working in private organizations. Therefore, being sudden-to-become teleworking under the pandemic period, the survival should instantly issue out new rules and regulation to protect and secure jobs for their employees [85]. This is because they not only encounter lower penetration of high-speed internet services and other technologies needed to perform while teleworking [42], but also feel stressful from failure to achieve their assignments on time [43], especially in emerging countries.

Lu et al. [43] defined job security as "a psychological state in which workers vary in their expectations of future job continuity within an organization". From a constructivist perspective, interview results can be classified into extrinsic and intrinsic job security. This study redefines extrinsic job security as a psychological state in which teleworkers vary in their expectations for future job continuity in the form of tangible and visible within organization while intrinsic intangible and invisible job security improve teleworking performance on time [86].

Kathawala et al. [87] stated that increased job security is more important than increase in salary for the automotive industry blue collar worker while increase in salary is important to increased job security for white collar group. This results partly correspond to this research result. The interviewees claimed that extrinsic job is secured based on the same salary compared with others in the same industry. Under the third wave of the serious outbreak, the Thai government had immediately pended the whole service industries nationwide for six months (April – September 2021).

Due to little physical interaction with others as well as to survive under the outbreak period, teleworkers turn to believe in intrinsic job security as a way to trust their online communication with their boss and among themselves. Bhargava et al. [88] found that no other technology such as artificial intelligence (AI) and automation can replace the human touch and soft skills. These outcomes were contradicted to the study of Lim and Teo [89] as they found that support from supervisor and work colleagues did not emerge as a significant predictor of attitude towards teleworking.

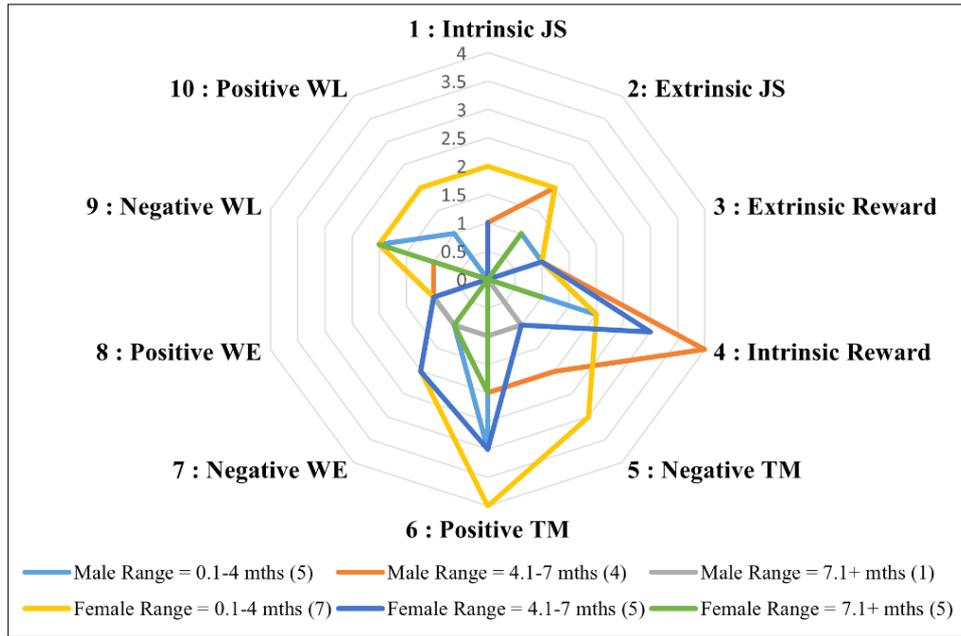
#### **4-3- Positive and Negative Time Management**

Claessens et al. [90] demonstrated that time management behaviours are positively related to perceived control of time, job satisfaction as well as health and stress. Moreover, Lupu [50] stated that flexible time management enables employees to manage their time and make adjustments in personal and professional settings, whether to take care their children or make medical appointments. However, little research has focused on how teleworkers become more flexible to manage their time in achieving their work performance on time. Therefore, this research has classified teleworkers' experiences into flexible and inflexible time management.

This study noticed that most professionals such as medical doctors, nurses, auditors, professors and accountants shorten their time to learn and adjust to telework with customers, college students and patients while dealing with the pressure of the outbreak. Undoubtedly, it is an individual's on-the-job training ability that is crucial: some can adjust easily while others have a hard time. Mackolil and Mackolil [91] raised time management issues in their research. Even though some people create valuable time for self-care, picking up new hobbies and acquiring new skills were their responses to manage their valuable time. This study discovers that the professional career can manage their time in a more flexible manner under the high pressure of turbulent environment like the pandemic. The key is to continuously increase self-disciplinary from normal self-discipline as well as to practice well-balanced healthy life and career. Likewise, Wang et al. [92] concluded that Australian teleworkers who worked under the Covid-19 are aware of self-discipline to achieve their goals and well-beings while Indonesian teleworkers consider work discipline to be able to positively increase teleworkers' performance [93].

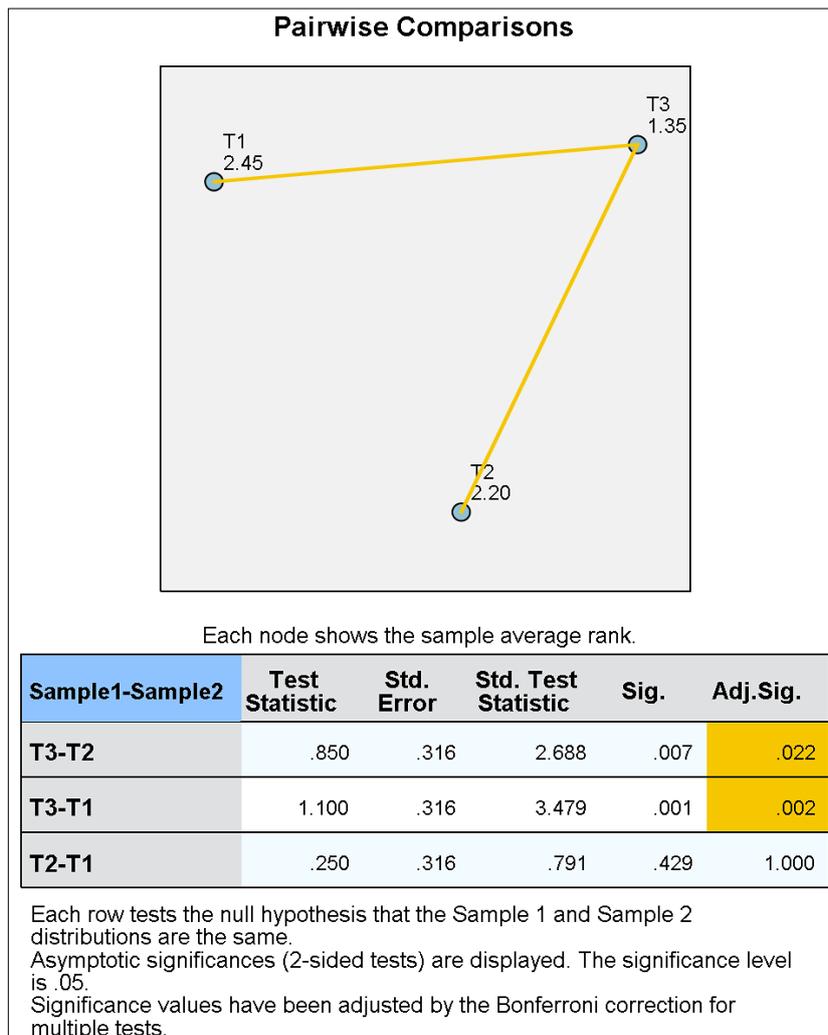
This is because they had experienced crucial situation in their career with high patience. Pyöriä [94] stated that employees should be able to choose whether they want to be teleworkers. He concluded that teleworking can create more flexible work arrangements upon individual's demand. His research accepted that teleworking was not suitable for everyone. Staying with family members at home all day and experiencing social isolation from the society are some weaknesses of becoming teleworkers.

In this study, some individuals got bored and frustrated, which led to unhealthy daily routines. These included unhealthy sleep habits, extended screen time and a lack of self-efficacy activities. This was due to difficulties in arranging a time to work and relax inflexibly in the beginning of the crisis. Goldsby et al. [51] contended that the time pressure of the professional incurs such consequences because they carry much of their units in providing quality care and meeting administrative objectives. This is because these careers need to deal with the time pressure and emotional exhaustion, which may lead to burnout. Therefore, responses from both genders statistically showed that positive time management is the most crucial factor that influence their job performance which is needed to be adjusted (see Figure 2). However, this study also noted that the flexibility of time management depends on the type of their career, duration of time to adjust oneself, and attitude towards dealing with themselves during the crisis. As for the ones who have the experience of being sudden-to-become teleworkers for more than seven months, they can be more flexible in time adjustment, especially in terms of entrepreneurship of SMEs (see Figure 3).



Note: "JS" represents job security, "TM" represents time management, "WE" represents work environment, and "WL" represents workload.

Figure 2. Cross-tabulation of ten self-motivated factors classified by gender and three periods of teleworking experience



Note: "T1" means self-determinant factors of teleworkers who have experience of between one and four months, "T2" means self-determinant factors of teleworkers who have experience of between 4.1 and seven months, and "T3" means self-determinant factors of teleworkers who have experience of more than seven months.

Figure 3. Nonparametric test results

#### ***4-4- Physical and Non-Physical Working Environment at Home***

This study classified work environment into physical and non-physical for teleworkers. The physical environment is for those who have personal working space and can maintain a quiet environment similar to the office. Badrianto and Ekhsan [95] proved that working environment and job satisfaction have a positive and significant effect on teleworkers' performance. Therefore, the sudden-to-become teleworkers who work in an appropriate physical environment tend to be more satisfied in their work performance. Grant et al. [59] reported that the more teleworkers supports their productivity and is conducted within a supportive and trustful organization, the better is teleworkers tend to have a better self-reported mental health and vitality when they support their productivity which is conducted within a supportive and trustful organization .

However, the work environment at home has frequently generated negative responses in relation to the non-physical work environment. Shaw et al. [96] found that the work environment may predispose workers to develop drug habits. Ahmed and Farooqi [56] stated employees may be less disciplined in a home environment, although there is no significant finding stated that a lack of socializing with colleagues will lead to lower performance, except for the inability to have instant communication during work. Baruch [58] and Kazekami [10] stated that they would be distracted not only by children, but also by their parents and other external environments. Interviewees in this study expressed that they had to telework at night and had a hard time in differentiating their personal and professional lives. According to Baltes et al. [54], they concluded that highly flexible schedule causes less benefit from different work schedule because they rely on others to achieve assignments. Too much teleworking not only causes work-family conflict, but also harms relationships with coworkers [55].

One of the interviewees felt that being teleworkers were positive as they could relax since there was no one monitoring them. Another interviewee stated that being with colleagues made him to be more productive, but he felt that he was left alone from his colleagues. Such reflection corresponds to the study of Komin [97] which found that task achievement value is usually inhibited by social relationship values for the Thai people. In relation to international organizations, Sriussadaporn [98] found that face-to-face communication problems can occur when both parties are lack in mutual language capabilities, mutual trust, openness in communication and intercultural sensitivity to each party's own cultural communication norms and values. Therefore, being a teleworker in an international organization in Thailand may create difficulties in reaching communication mutual norms and values.

#### ***4-5- Extrinsic and Intrinsic Workload***

Positive feeling of workload explains the willingness of teleworkers to work overtime in order to maintain their salary, gain higher paid, complete assignment on time and self-satisfaction. Asamani et al. [99] and Bruggen [100] concluded that increasing the quantitative performance (per hour) also raises the quality of output in the Netherlands and Ghana. Boxall and Macky [61] concluded that the well-being of employees in New Zealand is more likely to be improved when the scope for discretion and creativity is enhanced, which can simultaneously ensure that workloads are reasonable and workers can have balanced lives. In Asia, Srimarut and Mekhum [101] claimed that individuals gain a higher level of satisfaction towards their jobs once they perceive good support from their colleagues in Thai pharmaceutical companies. However, Burke et al. [63] and Aleksić et al. [62] explained that work intensity was unrelated to organizational values that support work-personal life imbalance.

Although teleworking provides the opportunity for employees to manage their schedule [60], they reported that it is trickier to disconnect from the corporate communication circle in the USA; they work for more hours, have longer meeting sessions and spend more time on communication channels. For example, 70 percent of employees stated that they work on the weekend while 45 percent of employees work for longer hours during the weekday. In Indonesia, Silaban et al. [102] reported that workloads decrease employees' performance and their commitment to organizations in public and private industries. They emphasized how increased workloads provided less interdepartmental coordination due to less ineffective communication and differences in employees' characteristics.

One of the respondents stated that he worked longer hours and felt that he was more productive because he worked for two positions; however, he felt difficult to balance personal and work lives. They seek a work-life balance even during the teleworking period. According to one interviewee, he did not have a work-life balance for a long time and sometimes received assignments as early as 7 am. In addition, some of them even mentioned that working from home required more help from energy drinks, tea or coffee to stay awake all the time [103].

### **5- Implications**

Based on interview results, this research further processed data for statistical testing in cross-tabulation and non-parametric tests. Figure 2 shows the degree of each self-determinant factor that was classified by male and female as well as sub-classified by three periods of teleworking experience. These periods comprised one to four months, 4.1 to

seven months, and more than seven months. There were 27 participants that were classified into 12 males (44.44%) and 15 females (55.56%). Eleven participants (40.7%) had teleworking experiences of one to four months. 12 (44.44%) had experience of 4.1 to seven months while four (14.81%) had experience of more than seven months. According to the findings, both genders focus on positive time management between one and four months; males focus on intrinsic reward while females focus on both intrinsic rewards and time management. Females also focus on time management even if they have teleworking experience of more than seven months.

Figure 3 compares ten self-motivation factors of teleworkers through the classification of gender and three periods of teleworking experience using pairwise comparisons in the non-parametric test. Consequently, there is no significant difference in self-motivated factors classified by gender. However, there is a significant difference in self-motivated factors among T1 and T3, as well as T2 and T3. Longer teleworking experience means a difference in self-motivated factors towards teleworkers' performance levels.

## 6- Conclusions

This study used an in-depth interview approach to find related self-motivational factors that could affect a teleworker's performance during the serious wave of the COVID-19 in Thailand. In terms of theory implications, this study offers a deeper reflection and broader understanding of the extent and coverage of self-motivational factors of teleworkers as well as potential outcomes regarding the adjusting period of being sudden-to-become teleworkers so that future researchers can see how to capture the selected variables in the different research contexts.

Firstly, this paper provided a new classification behind the lack of insights to explain key factors of self-motivation theory while suggesting specific sub-categories of each key factor to fit with the data of teleworkers during the turbulent environment of the pandemic. Secondly, this study suggested a way of thinking and practicing in order to achieve working performance goals and a well-balanced life and career during the serious wave of the COVID-19 era.

Thirdly, this study extended knowledge on capturing qualitative data to quantitative explanation in terms of the gap between different genders in self-motivating themselves to deal with the sudden-to-become teleworkers within three periods of time (from 0.1 to more than seven months). Findings showed a significant difference in self-motivated factors between early-to-medium and mature adjustment periods of time. This result presented at least seven months of teleworker-motivated factors in adjusting and later accepting a new normal attitude-to-behavior to successfully maintain their work-life balance.

Moreover, scholars who intend to investigate teleworkers' self-motivated factors in the upcoming year can be informed about the new perspectives of data analysis techniques, research questions, and strongly suggested qualitative methodology, especially for emerging countries, used in this research. In this way, future studies will be able to test and confirm or reject findings from this study and other previous literature. Moreover, scholars can make use of alternative methods regarding the analysis of data within telework-motivated factor areas that contribute to the variety of research on this subject.

From a theoretical perspective, this study encompassed not only positive and negative consequences of teleworker-motivated factors but also their colleagues, supervisors, and new policies issued by organizations to correspond with the pandemic era. More specifically, teleworker-motivated factors may facilitate inclusion of certain groups, such as married couples with at least one child [82] and those without single working mothers or family-oriented members [81]. Findings suggested that sudden-to-become teleworkers should consider the quality of being self-sufficient [80], self-discipline [92] and work schedule discipline [93] continuously in the severe shortage of ICTs in the pandemic period. Moreover, teleworkers demand to pay more attention towards basic intrinsic value of needs in order to balance their life, family and future career in the post-pandemic stage [88, 104]. Finally, the acceptance of true feeling to become full-time teleworkers need flexible time management and rearrange working environment to achieve daily goals [95].

Concerns have been raised with regard to the social isolation of single teleworkers. However, training and ICTs practical seminars can be used to reverse it [105, 106]. This study only reflected a limited number of mixed-conservative local and international teleworkers who accepted to expose teleworking practices in Thailand, especially during the high pressure in the COVID-19 era. They are daily routine workers and professionals who are working under the pressure of a crisis in an emerging country like Thailand. The authors used tight relationships to open an online interview session. A foreign teleworker who worked in Thailand stated that he was lucky to be in Thailand during that situation, whereas the other teleworker stated that he was satisfied with the immediate policy implemented by the Ministry of Public Health in Thailand. Besides, the 2021 Global COVID-19 Index (GCI) ranked third with an index score of 82.06 for its effective handling and recovery from the crisis [107]. Therefore, teleworkers need to optimistically perceive not only the safety from strict sanitation policies issued by the country but also cooperation from the governor and locals to efficiently handle the crisis as a role model in order to positively create their own working environment. Nevertheless, the findings showed that positive acceptance of working after hours among senior teleworkers can be further examined to determine whether it is based on age, educational level, or other demographic factors.

In the post-COVID era, the growth of telework careers with the fulfilment of ICTs skills are expected to proliferate. It will become a familiar norm, but a necessary new normal in teleworking life in order to improve the efficiency of work-life balance and resume a viable future. From the practical perspective, this paper can provide different perspectives to managers and practitioners regarding the necessary information to be a well-prepared teleworker and how to flip negative to become a positive teleworker.

To be more specific, this paper can raise the issue of awareness to managers and organizations regarding challenges that have stemmed from the implementation of the sudden-to-become teleworking environment. Such challenges due to insufficient ICTs affect proper evaluation criteria of new teleworkers who try to be self-motivated towards teleworking satisfaction. This paper also provides general directions to managers who intend to strategically integrate teleworking by discussing promotion, pay, and different teleworking genders that impact outcomes compared to on-site employees.

Both teleworkers and supervisors should be prepared for the risks involved, such as communication issues within teams whose cultural backgrounds are varied. The company should facilitate best telework practices and be informed of ways to overcome potential dilemmas. This paper summarizes the variance of teleworker-motivated factors that are created to improve teleworkers' performance so that they can choose to adjust and reform each appropriate teleworking environment plan based on their need for professional growth and productivity.

## **7- Declarations**

### **7-1- Author Contributions**

Conceptualization, C.N.; methodology, C.N.; software, C.N.; validation, W.K. and J.T.; formal analysis, C.N., W.K. and J.T.; investigation, C.N. and W.K.; resources, C.N. and J.T.; writing—original draft preparation, C.N., J.T. and W.K.; writing—review and editing, C.N.; visualization, C.N.; supervision, C.N. All authors have read and agreed to the published version of the manuscript.

### **7-2- Data Availability Statement**

The data presented in this study are available in article.

### **7-3- Funding**

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### **7-5-Informed Consent Statement**

Informed consent was obtained from all subjects involved in the study. The whole process was undertaken on an entirely voluntary basis.

### **7-6- Conflicts of Interest**

The authors declare that there is no conflict of interests regarding the publication of this manuscript. In addition, the ethical issues, including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, and redundancies have been completely observed by the authors.

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## Appendix I

Table A1. Interview questions and excerpt categories

Variable	Examples of interview questions	Sources	Excerpt categories
Reward	<ul style="list-style-type: none"> <li>When working from home, it should be harder for your supervisor to evaluate your performance. Do you think you have had (or will receive) a sufficient evaluative score on your work performance? Why?</li> <li>Could you give examples of rewards the company provides you that would motivate you in this current situation? Do you think it is sufficient to motivate you to continue performing the role you are given?</li> <li>Does the reward(s) given during this situation differ (or potentially differ) from when you are in the office?</li> </ul>	Lemieux et al. [39], Golden [40]	<ul style="list-style-type: none"> <li>Extrinsic Reward</li> <li>Intrinsic Reward</li> </ul>
Job Security	<ul style="list-style-type: none"> <li>Do you think your supervisor trusts you without critical supervision?</li> <li>Since the start of the COVID-19 pandemic, many people have lost their job, had wage reductions, and experienced insecurity about their job. Do you feel the same as them right now? Why?</li> <li>Are there higher or lower turnover rates within your company compared to before?</li> </ul>	Domenighetti et al. [44], Özyaman [45]	<ul style="list-style-type: none"> <li>Positive Job Security (new)</li> <li>Negative Job Security (new)</li> </ul>
Time Management	<ul style="list-style-type: none"> <li>Do you think working from home gives you more flexibility in time management between your personal and work lives? How?</li> <li>How can you balance your personal life and work when working from home?</li> <li>Do you think giving you the flexibility to manage your time when working from home will improve your work performance compared to working in an office? Why?</li> </ul>	Lupu [50], Thorstensson [53]	<ul style="list-style-type: none"> <li>Positive Time Management (new)</li> <li>Negative Time Management (new)</li> </ul>
Work Environment	<ul style="list-style-type: none"> <li>Where do you feel more productive between home and office? Why? And where would you prefer to work?</li> <li>Does the environment at home have a positive influence on your work performance? Why?</li> <li>Do you think a dedicated workspace at home can improve your performance? Do you decorate your home as a home-run office?</li> <li>Do you think you can reduce distractions when working from home, such as silencing your phone, turning off notifications, or listening to music for relaxation?</li> </ul>	Baltes et al. [54], Gajendran and Harrison [55], Ahmed and Farooqi [56], Collins and Moschler [57]	<ul style="list-style-type: none"> <li>Positive Work Environment at Home (new)</li> <li>Negative Work Environment at Home (new)</li> </ul>
Workload	<ul style="list-style-type: none"> <li>How do you manage your workload?</li> <li>Do you work long hours compared to working in the office? If yes, how do you think it could be improved?</li> <li>Do you think the current workload has a positive or negative influence on your overall work performance? Why?</li> </ul>	Maurer [60], Boxall and Macky [61], Aleksić et al. [62]	<ul style="list-style-type: none"> <li>Extrinsic Workload (new)</li> <li>Intrinsic Workload (new)</li> </ul>

Note: "(new)" means the new category(ies) according to interview results based on SDT.