(RESEARCH ARTICLE)

Satisfactions regarding the hybrid working model of the supporting staff of the electricity generating authority of Thailand in the southern region

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Abstract

This study aims to

- Examine the satisfaction associated with hybrid work models,
- Investigate perceptions of hybrid work models, and
- Explore the relationship between demographic factors, perception factors, and satisfaction with hybrid work models.

This research is quantitative in nature, utilizing questionnaires for data collection. The sample group consists of 190 supporting staff from the Electricity Generating Authority of Thailand in the Southern region. Statistical analyses employed include percentage values, arithmetic mean, standard deviation, and Pearson correlation analysis. The findings reveal that

- In terms of satisfaction with the hybrid work model, most employees are primarily satisfied with their well-being and the amount of time spent working, followed by job achievement, work-life balance, and cost savings, respectively.
- Regarding perceptions, most employees perceive the greatest benefits, followed by ease of use, supportive resources and technology, and commuting between home and work.
- Different demographic factors do not impact satisfaction with the hybrid work model, and overall, perception factors are significantly statistically correlated with satisfaction with the hybrid work model at the 0.05 level.

Keywords: Supporting staff; Working from home; Hybrid work model; Satisfaction; Perception

1. Introduction

The COVID-19 pandemic has spread globally from 2019 to 2022, causing extensive damage at an international level. This outbreak has had widespread economic and social impacts, such as increased unemployment rates, business closures, and a rise in the number of infections and deaths in Thailand. In response to the COVID-19 pandemic, public health authorities have revised policies and measures, such as social distancing measures to reduce the outbreak and prevent significant damages. These include the D-M-H-T-T-A measures, which have helped reduce infections and minimize loss of life.

Social distancing measures, one of the strategies implemented by government agencies to avoid the spread of COVID-19, aimed to minimize negative impacts on businesses during the pandemic. Many organizations have adjusted their work plans from the traditional requirement of being in the office five days a week, to reducing the number of days spent in the office, or adopting "Work from Home" practices. This shift aims to reduce risk and prevent outbreaks among

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organizational personnel, minimize face-to-face encounters, with an appropriate distance of 2 meters between individuals, reduce physical contact, and decrease office closures due to infections within the office environment.

For the Electricity Generating Authority of Thailand, employees within the organization are considered a crucial element in facilitating organizational growth, encompassing aspects of safety and health. Moreover, to mitigate the losses arising from the COVID-19 pandemic among the personnel, the executive board has implemented work-from-home (WFH) strategies. These strategies allow organizational operations to continue achieving their objectives and goals since the onset of the COVID-19 outbreak in 2020. From 2021 onwards, the pandemic has led to a shift in organizational work patterns. The researcher aims to investigate the satisfaction levels of support staff employees at the Electricity Generating Authority of Thailand in the Southern region. Additionally, the study seeks to explore the perception factors related to the hybrid working model (Hybrid Working) among employees who have had to adapt and transition from traditional office work to remote or home-based work. This research intends to examine whether the majority of support staff employees in the Electricity Generating Authority of Thailand in the Southern region feel satisfied or express concerns regarding this shift. The researcher hopes to analyze the findings within the organization as a guideline for improving organizational policies for maximized future outcomes. The objectives of the study are

- To examine the satisfaction levels regarding the hybrid working model among support staff employees of the Electricity Generating Authority of Thailand in the Southern region.
- To investigate the perceptions related to the hybrid working model among support staff employees of the Electricity Generating Authority of Thailand in the Southern region.
- To study the relationship between demographic factors, perception factors about the hybrid working model, and satisfaction with the hybrid working model among these employees.

2. Literature Review

The researcher has studied the concept of Hybrid Working, which is a contemporary work model. This model shifts from traditional office-based work to allowing employees the flexibility to work both in-office and remotely, including Work from Home (WFH) or Work from Anywhere (WFA). The following theories and concepts are related to this research:

2.1. Theories on Perception

Perception refers to the process by which humans take in raw data from the five senses—sight, hearing, smell, taste, and touch—and organize, select, analyze, and interpret this information in the brain to make it meaningful for further learning (Saengduean Taweesin, 2002).

Schermerhorn et al. (2005: 72-74) discussed the perception process, which they divided into four stages:

- The stage of Attention and Selection: Given the multitude of stimuli in one's environment, an individual needs to choose which stimuli to perceive by selecting specific information or ignoring others.
- The stage of Organization: After selecting the information, individuals organize this data in a systematic way, aiding in understanding and interpreting the perceived information.
- The stage of Interpretation: Once the information has been selected and organized, individuals may interpret the same stimuli differently based on their unique perceptions.
- The stage of Retrieval: This involves individuals retrieving previously perceived information from their memory to use or exhibit in various situations as behavior.

2.2. Theories of Job Satisfaction

Maslow's Hierarchy of Needs Theory (1943), referenced by Phawinee Petchsawang (2009), focuses on the work of individuals, their achievements, and what they expect in life. This theory divides needs into five levels: (1) Physiological needs, which are the basic human needs for survival, (2) Safety needs, referring to the desire for security from dangers, including crime and accidents, (3) Belonging and Love Needs, the need for love, acceptance by society, and to be a part of a community without feeling alienated, (4) Esteem needs, which involve the desire for societal recognition and respect from others, leading to feelings of strength, confidence, and self-esteem, and (5) Self-Actualization, the realization of one's potential and the desire to develop oneself to achieve set or expected goals.

2.3. Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) was developed by Davis, F. in 1985. This theory is used to predict the acceptance and use of technology for work purposes. According to TAM, the acceptance of technology by employees is influenced by two factors: perceived usefulness and perceived ease of use. Both factors are related to the acceptance of technology for home-based work, as well as influencing thoughts and attitudes towards using technology for convenience in working from a residence.

2.4. Conceptual Framework for the Study

The variables used in studying satisfaction with the hybrid work model include two independent variables: demographic factors and perception factors related to hybrid working. The dependent variable is the satisfaction with the hybrid work model (Figure 1).
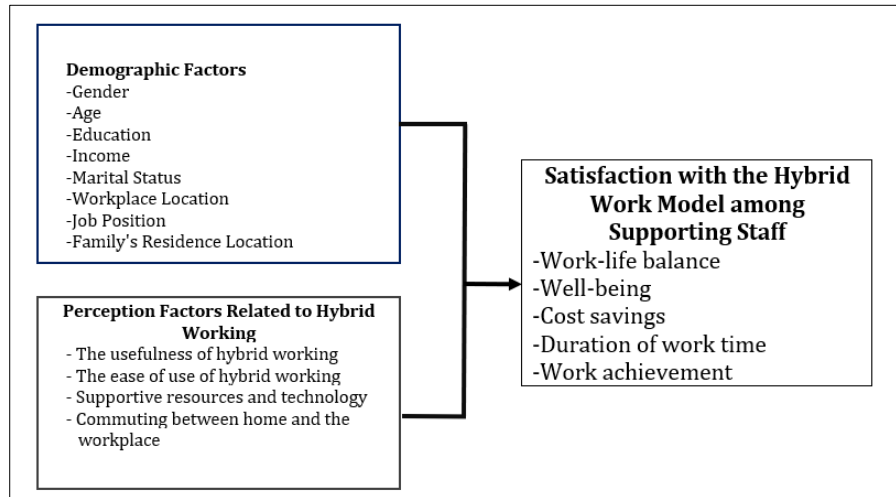

Figure 1 Research Conceptual Framework

3. Material and method

3.1. Population and Sample

The population for this study consists of supporting staff at the Electricity Generating Authority of Thailand in the Southern region, totaling 310 individuals. The sample size was determined using the G*Power program, utilizing Correlation with a medium effect size of 0.30, a margin of error of 0.05, and a power of 0.95, resulting in a sample size of 134 individuals. To account for potential errors in questionnaire responses, the researcher added an additional 56 individuals to the sample, making a total of 190 participants for this study.

3.2. Research Instruments

The instrument used in this study is a questionnaire, designed to collect the necessary data to comprehensively cover all objectives of the study. The questionnaire is divided into four sections: Section 1 aims to inquire about general personal information, Section 2 is for assessing perceptions regarding the hybrid work model, Section 3 seeks to understand satisfaction levels with the hybrid work model, and Section 4 gathers opinions on other matters, including the proportion of hybrid working, problems encountered with hybrid working, and other comments.

4. Result

This study investigates "Satisfaction with the Hybrid Work Model among Supporting Staff at the Electricity Generating Authority of Thailand in the Southern Region." Data were collected using questionnaires from 190 respondents and analyzed using the SPSS software. The findings are as follows

4.1. Perceptions of the Hybrid Work Model

Upon examining the research results on perception factors related to hybrid working, which include the usefulness of hybrid working, ease of use of hybrid working, supportive resources and technology, and commuting between home and work, the overall average score is 4.00, indicating a high level of perception. When ranking the perception factors related to hybrid working from highest to lowest, the findings are as follows: the sample group perceived the usefulness of hybrid working the most, with an average score of 4.30. Following this is the ease of use of hybrid working, with an average score of 4.18. Next, the perception of supportive resources and technology has an average score of 4.05. Lastly, perceptions regarding commuting between home and work have the lowest average score of 3.47, respectively.

Table 1 The results regarding perceptions of the hybrid work model

Perceptions Regarding the Hybrid Work Model	Mean	Levels of Perception
The usefulness of hybrid working	4.30	Most
The ease of use of hybrid working	4.18	High
Supportive resources and technology	4.05	High
Commuting between home and the workplace	3.47	High
Overall	4.00	High

4.2. Satisfaction with the Hybrid Work Model

Upon analyzing the satisfaction factors related to the hybrid work model, which include work-life balance, well-being, cost savings, work duration, and work achievement, the overall average score is 4.30, indicating a very high level of satisfaction. Ranking these satisfaction factors related to the hybrid work model from highest to lowest, the results show that the sample group is most satisfied with well-being and the duration of work, both scoring an average of 4.33. This is closely followed by satisfaction with work achievement, with an average score of 4.31. Satisfaction with work-life balance has an average score of 4.28, and finally, satisfaction with cost savings has an average score of 4.26, respectively.

Table 2 The results regarding satisfaction with the hybrid work model

Satisfaction with the Hybrid Work Model	Mean	Levels of Satisfaction
Well-being	4.33	Most
Duration of work time	4.33	Most
Work achievement	4.31	Most
Work-life balance	4.28	Most
Cost savings	4.26	Most
Overall	4.30	Most

4.3. The Relationship between Demographic Factors, Perception Factors Related to the Hybrid Work Model, and Satisfaction with the Hybrid Work Model

4.3.1. Relationship between Demographic Factors and Satisfaction with the Hybrid Work Model

From Table 3, it was found that employees with different genders and family living situations do not significantly differ in their satisfaction with the hybrid work model, with a statistical significance of 0.05.

Table 3 The results of the relationship between demographic factors, including gender and family living situation, and satisfaction with the hybrid work model

Satisfaction with the Hybrid Work Model	Gender		Family's residence location	
	t	Sig	t	Sig
Work-life balance	-0.182	0.019*	0.598	0.504
Well-being	0.298	0.110	0.702	0.647
Cost savings	1.781	0.030*	0.422	0.437
Duration of work time	0.297	0.349	0.289	0.777
Work achievement	0.243	0.147	0.121	0.551

*Sig < 0.05 but Sig. (2-tailed) > 0.05

Table 4 The relationship between demographic factors such as age, education, income, marital status, workplace location, and job position, and satisfaction with the hybrid work model

Satisfaction with the Hybrid Work Model	Age		Education		Income		Marital status		Workplace location		Job position	
	F	Sig	F	Sig	F	Sig	t	Sig	t	Sig	t	Sig
Work-life balance	0.412	0.745	1.516	0.222	1.195	0.313	0.110	0.979	0.110	0.979	0.247	0.781
Well-being	0.357	0.784	2.067	0.129	0.575	0.632	0.627	0.644	0.627	0.644	1.385	0.253
Cost savings	2.011	0.114	2.961	0.054	0.580	0.629	1.001	0.408	1.001	0.408	1.354	0.261
Duration of work time	1.016	0.387	1.725	0.181	1.877	0.135	1.135	0.342	1.135	0.342	0.699	0.498
Work achievement	0.620	0.603	1.277	0.281	1.300	0.276	1.244	0.294	1.244	0.294	0.261	0.771

From Table 4, it was observed that employees with varying ages, educational backgrounds, incomes, marital statuses, workplace locations, and job positions do not significantly differ in their satisfaction with the hybrid work model, with statistical significance set at 0.05.

4.3.2. The Relationship between Perception Factors Related to Hybrid Working and Satisfaction with the Hybrid Work Model

Table 5 The results of the relationship between perception factors related to hybrid working and satisfaction with the hybrid work model.

Satisfaction with the Hybrid Work Model	Perception Factors Related to Hybrid Working							
	Usefulness		Ease of use		Supportive resources and technology		Commuting between home and the workplace	
	r.	p	r.	p	r.	p	r.	p
Work-life balance	0.583**	<0.001	0.578**	<0.001	0.392**	<0.001	0.136	0.061
Well-being	0.627**	<0.001	0.603**	<0.001	0.386**	<0.001	0.062	0.394
Cost savings	0.548**	<0.001	0.495**	<0.001	0.269**	<0.001	0.196**	0.007
Duration of work time	0.669**	<0.001	0.572**	<0.001	0.429**	<0.001	0.113	0.119
Work achievement	0.714**	<0.001	0.558**	<0.001	0.390**	<0.001	0.148*	0.042

*Statistical significance level 0.05 **Statistical significance level 0.01

From Table 5, the analysis of the relationship between perception factors related to hybrid working and satisfaction with the hybrid work model can be summarized as follows: Overall, perception factors related to hybrid working are positively correlated with satisfaction regarding the hybrid work model.

5. Discussion

5.1. Comparison of Demographic Factors with Satisfaction Regarding the Hybrid Work Model

The majority of the sample group were male, aged between 30 to under 40 years, with a bachelor's degree or equivalent level of education, earning an income of 50,001 baht or more, single, belonging to the operational division in the Southern region, holding mid-level operational positions (level 5-7), and having families residing in the same province as their office. The satisfaction levels were categorized as follows:

- Satisfaction with work-life balance: The majority of the sample group were satisfied that hybrid working allowed for a clear division between personal time, work time, and social activities, enabling adequate time for family. This result aligns with the study by Suwani Kaewmanee (2006), which stated that a good balance between work and personal life leads to employee happiness and increased organizational commitment.
- 2. Satisfaction with well-being: The majority of the sample group were satisfied that hybrid working did not compromise physical health and, in fact, brought about numerous benefits including income, social life, good health, happiness, relaxation, and reduced stress and pressure from work. This finding is consistent with the study by Vyas and Butakhieo (2020), which mentioned that working from home allows employees to manage their time better, positively affecting their physical and mental health.
- 3. Satisfaction with cost savings: The majority of the sample group were satisfied that hybrid working reduced various work-related expenses, such as travel costs, clothing expenses, and food expenses, thereby increasing savings and financial accumulation. This is in line with the study by Methavee Ratchatawichin and Saowaratch Rattanakhamfu (2020), which indicated that working from home is beneficial for employees in terms of reduced expenditures like travel costs, fuel, and clothing expenses, leading to increased savings for employees.
- 4. Satisfaction with Work Duration: The majority of the sample group were satisfied that hybrid working allowed for a clear allocation of work time, feeling that the workday passed quickly and that tasks were completed on time. This result is in line with the study by Chulikorn Thanathiti and Nattharat Thanathiti (2021), which found that working from home enables employees to clearly allocate their work time and schedule tasks to meet set goals.
- Satisfaction with Work Achievement: The majority of the sample group were satisfied that hybrid working allowed for tasks to be done correctly and in accordance with plans. Even with an increased workload, they felt positive about their work, and any issues with tasks could be satisfactorily resolved during off-office hours/home. This finding aligns with the study by Chulikorn Thanathiti and Nattharat Thanathiti (2021), indicating that working from home does not compromise work efficiency compared to office work. Employees can allocate their work time to achieve goals and manage relaxation time to reduce stress, leading to enhanced work performance.

This research found that demographic factors are related to satisfaction with the hybrid work model, consistent with the study by Manasnan Srinakarin and Pichit Pitak Thepsombat (2010), which stated that remote and home-based work shows that demographic factors, gender, job characteristics, income, salary, remote meetings, and internet networks are related to satisfaction with working from home.

5.2. Relationship between Perception Factors Related to Hybrid Working and Satisfaction with the Hybrid Work Model

- Regarding the perception of the benefits of hybrid working, this study found that the sample group positively influenced satisfaction with the hybrid work model. The sample group believed that working from home helps reduce expenses, such as food and travel costs, which is consistent with the study by Audrone Nakrošiene et al., (2019), stating that working from home can save on commuting costs and also provide better care for family members due to increased time flexibility.
- In terms of the perception of ease of use of hybrid working, there is a positive correlation with satisfaction with the hybrid work model, aligning with the study by Charinee Thitichotiwanich (2020), which found that if employees feel that working from home is easy and not complicated, it results in increased satisfaction, positive feelings, and acceptance of working from home.
- Regarding resources and technology facilitating work, this study found that the sample group rated the perception of resources and technology facilitation highly, in line with the study by Charinee Thitichotiwanich

(2020), which indicated that resources that facilitate the use of technology are a factor influencing the ease and efficiency of home-based work.

- Commuting between home and the workplace was rated from medium to high by the sample group, who believed that reduced commuting leads to more time for work, life, and family, benefiting the employees themselves. This coincides with the study by Wimolsiri Lorthong (2021), which found that less commuting allows employees more time for desired activities, freedom, and improved quality of life, reducing stress.

5.3. Other Opinions

- Regarding the proportion of hybrid working, this research found that 52.60% of the sample group prefers a future hybrid work model, which involves working outside the office/home for 2 business days per week. This matches the case study by TDRI on the impact of working from home during COVID-19 (2020), which revealed that most employees prefer working from home but also value the importance of in-office work.
- Concerning the problems encountered with hybrid working, the majority of the sample group identified coordination issues, such as the inability to contact colleagues, accounting for 36.49%. This was followed by technological usage problems, such as internet VPN connections, at 19.54%; issues with work convenience devices at 12.93%; work-related issues, such as meetings running overtime and lack of Work-Life Balance, at 11.78%; environmental issues, such as home disturbances, at 10.06%; no issues found with hybrid working at 8.91%; and other issues, specifically financial tasks requiring original documents for disbursements, at 0.29%.

6. Conclusion

6.1. Suggestions for Short-term Policies in the Present

- The research found that the sample group highly perceives the benefits of hybrid working, including its usefulness, ease of use, supportive resources, and reduced commuting. These positive opinions suggest that organizations should implement a hybrid working model (combining office work with remote work) as a standard practice for both the present and the future.
- Support for expenses related to home-based work, such as electricity costs, should be provided. Even though working from home can reduce travel expenses and increase savings, it also results in higher electricity bills. Organizations should support these additional expenses for employees working remotely.
- More team-building activities should be organized to strengthen relationships among employees, as the reduction from the traditional five office days per week could negatively affect interpersonal interactions.
- Clear working hours should be established, ensuring that employees can rest outside of work hours. This is crucial for maintaining a work-life balance, which affects both employee satisfaction and work efficiency.
- Solutions for communication issues among remote working employees should be addressed, as it is a significant problem for many. For example, requiring employees to register a contact number in the system or imposing penalties for unavailability during work hours could be considered.
- In terms of human resource management, as remote work primarily relies on technology, knowledge and skills in using technology are essential. Organizations should offer training courses on technology use for remote work to employees who lack expertise in this area. Ensuring all employees in the organization have sufficient knowledge and skills for remote work will contribute to the efficiency and success of tasks, making remote work/home-based work as effective as office-based work.

6.2. Suggestions for Long-term Future Policies

- Currently, the organization has a policy to reduce paper usage to decrease costs and help the environment. Managers and relevant employees should discuss the necessity of working with physical documents in departments that still rely heavily on paper, such as accounting and finance. If it is possible to develop a system that truly supports and accommodates paperless operations, employees could choose to work remotely without concerns about paperwork.
- The organization should design a more effective performance evaluation system that can assess the work done both in the office and remotely. This will alleviate employees' concerns about their performance efficiency. If employees feel that the evaluation is equal, fair, and appropriate to their work, they will be more relaxed and dedicated to their work.
- Given that the Electricity Generating Authority of Thailand has offices nationwide, the organization should establish a policy allowing employees not to have to go to their designated office but can instead work from a location that is convenient for them. This would help solve the problem of travel time to the office for employees.

- As the workforce will increasingly consist of younger employees in the future, the organization should prioritize flexible work policies and value employees' opinions to attract and retain the younger generation as a vital workforce for the future.
- Currently, only support staff can work remotely. If, in the future, the organization can arrange a working system using technology for technical jobs, such as maintenance of high-voltage substations, power plant maintenance, and transmission line maintenance, to allow these types of jobs, which previously could not be done remotely, to be performed outside the office, it would enable operational staff to work remotely as well. However, the organization must have a good and efficient security system to control such work, as technical jobs are crucial for energy security and have a high risk of causing danger. The organization should find ways to prevent problems and risks that may arise in the future.

Compliance with ethical standards

Acknowledgments

Disclosure of conflict of interest

The authors declare that there is no conflict of interests regarding the publication of this manuscript.

Statement of informed consent

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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