THE EFFECTIVENESS OF FLEXIBLE WORKING ARRANGEMENTS AS A FORM OF DIGITAL TRANSFORMATION FROM THE PERSPECTIVE OF INDONESIAN GOVERNMENT EMPLOYEES

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Abstract-- During the COVID-19 pandemic, flexible working arrangements (FWA) in Indonesia become necessary. In the Indonesian government, the opportunities and technical concepts of FWA are still being formulated. The survey answered by 745 respondents or 18.6% of the total employees in the Ministry of Communications and Informatics (MCI) indicates employees' perception from various groups of ages, fields of work, and occupations. The results show that more than 80% thought FWA had positive impacts on individual performance and at the same time maintained organizational performance. Some challenges remained are related to the availability of internet access, household affairs, and coordination difficulties.

Keywords: Digital Transformation; Flexible Working Arrangements; Government Employees.

I. INTRODUCTION

The issue of flexible working arrangements (FWA) has become one of the most discussed research topics recently mainly due to COVID-19 pandemic that occurred in all over the world since early 2020. The current condition has compelled FWA implementation to become a trend and a need in various working environments. However, the conception of flexible working was not new at all; it has risen up far before the pandemic. As [1] has discussed about the implementation of flexi time in working hours. And with the rapid diffusion of information tools driven both by organizational demand and technology supply, by the end of 20th century, 50 million US office employees had been doing computer-mediated work [2]. Thus, many experts have analyzed and investigated flexible working in the organization, its adoption model and the impacts since three decades ago [3],[4],[5],[6],[7],[8] even to date with adjustments to digitalization era [9],[10],[11],[12].

Advance computer and communication technologies have allowed for changes in the standard workplace by equipping the employees to accomplish their works remotely to communicate and collaborate distantly. Many terms are used to refer to this new working system; some of them are flexible working, telework, work at home, remote working and others. If employees have the knowledge needed, as well as all the equipment in their home why would they need to commute elsewhere to perform their job? Instead traveling to primary workplace, workers can use technologies to avoid traffic, long commutes, and workplace distraction. [3] in their study has started investigation of selected variables affecting telecommuting productivity and satisfaction.

The implementation of flexible working is applied not only in private companies but also in government offices. The fundamental background for that is mainly the spirit of bureaucratic reform and digital transformation. In the Indonesian government, the discourse of flexible working system had emerged to the public since 2019 even before COVID-19 pandemic occurred. The main goal is to increase productivity and performance both employees individually and the organization inclusively.

When reflecting the effectiveness of FWA in government, many factors should be taking into
account as the influenced factors, including social factors and technological factors [13]. Social factors in the government environment are related to the working and organizational culture which are slightly different from private companies. Meanwhile, technological factors are related to the use of ICT. In working remotely, the use of ICT while working is essential, communication and collaboration through ICT must be adequate so it can enhance the teamwork.

Many debates and discussion remain whether FWA is effective to be implemented as a new working culture. Some believe that the implementation of FWA worldwide has proved to have more benefits than drawbacks, while some others argue that there are many challenges to implement FWA which can maintain mental health and work-life balance. Therefore, the studies to recognize the effectiveness of FWA are still needed including ones based on empirical evidence. The experience of working from home during the COVID-19 pandemic in almost all Indonesian government agencies for approximately three months (March-May 2020) is valuable to analyze and measure the opportunity and effectiveness of implementing FWA in the future. This study aims to: 1. Identify the effectiveness of FWA on individual and organizational performance from the perspective of government officials, a case study in the Ministry of Communication and Informatics (MCI) 2. Identify the challenges and constraints of implementing FWA in future government environments.

There are many definitions about flexible working. Some simply say that telework or telecommuting is about work no matter where it is done, while others say it is related to information society and can be analyzed with the same dimensions as the information society, which are technological, economic, occupational, spatial and cultural [13]. Classification of telework uses some dimensions to characterize its situations which are the spatial structure (location of the telework), the co-ordination structure (employees vs. self-employed teleworkers) and the temporal structure (part-time vs. full-time teleworkers). Therefore, it’s a label for a wide range of working practices, including part-time, flexi-time, compressed hours, and working from home.

Talking about flexible working, its relevance has been both on the individual, the organizational as well as the societal level. But the final decision on whether to implement telework or not is taken in the organizations. Some advantages of flexible working for employer include increased productivity, reduced office costs, recruitment and retention of employees, closer customer contact, and lower absenteeism. While the disadvantages are weakened organizational identification and communication, weakened organizational learning, and managerial resistance [13]. On the other hand, the advantages of flexible working for the employee such as increased autonomy, reduced stress, and better work/private life balance. While the disadvantages are worsened work/private life balance, social isolation, reduced visibility, and difficult self-management [13].

Several studies discussed about FWA have spilled out the pro and contra. On the contra side, the research by [14] identified advantages and disadvantages of FWA on health. In his thesis it is stated that there are three factors in FWA that affect health, such as stress, the conflict between work and family. Based on a survey conducted to English speaking persons 18 years of age and over, the results show that marital status and gender influence the significance of family-to-work conflict experiences. Therefore, it challenges the opinion of flexible working as a way to balance work and family responsibilities. Another study conducted with a qualitative approach [15] states that ICT helps many things in work. Easier communication makes work more efficient. But from the perspective of telecommuters, ICT also causes problems related to personal and family life. Some aspects like space, time, and personal roles become blurred when working from home. The use of ICT to work from home makes telecommuters need to apply approaches/strategies to achieve work-life balance.

While on the pro side, the study [16] states that the implementation of FWA worldwide has proved to have more benefits than drawbacks. Organizations take advantage of having increased
job satisfaction, loyalty, social responsibility, productivity, and reduced stress levels. As more organizations and employees benefit from it, these options will continue to grow in popularity. However, some complexities connected with FWA may arise while managing users of FWA. It depends on supervisors/managers to apply particular approaches to manage people and address the challenges that may bring inconveniences to employers and employees. The study [17] about the implementation of teleworking in Romania states that flexibility in work is one of the aspects that can increase employees’ motivation. Employees who have flexibility in their work report that they can get better sleep quality and a healthier lifestyle than those who do not. This study shows that flexibility on a job also significantly influences job satisfaction and performance (employee productivity). Another study [18] also give similar results; there is a positive relationship between organizational attractiveness with flexibility and telecommuting. Flexible working policies can attract job seekers and retain existing employees in the company, especially talented employees. It is also stated that implementing a flexible working environment can reduce turnover rates, which in turn can save costs for recruitment and training. In the end, the flexible working policy requires the support and readiness of the organization itself regarding its implementation.

Looking at other aspects, the study [19] states that there has been an increase in anywhere working in Melbourne related to congestion problems. Approximately 64% of Melbourne workers are already allowed to work anywhere, an increase of about three times from the previous study in 2014. The anywhere working trend is also supported by the millennial generation that entered the workforce. They use technology to communicate and collaborate easily. These factors can increase the implementation of flexible working arrangements policy, especially in Melbourne. However, a different result is found in Vietnam. A similar study conducted in Vietnam [20] shows that young people in Ho Chi Minh City show aversion to anywhere working; the cause of this finding is not yet known (requires further research).

Based on the study [21], ten factors need to be considered in the implementation of telework, such as: time planning skills, reduced time for communication with co-workers, possibility to work from home in case of sickness, supervisor's trust, possibility to save expenses for travel, possibility to take care of family members, suitability of a working place at home, supervisor's support, possibility to access work documents from home, and possibility to work during the most productive time.

The implementation of flexible working specifically in public sector has also been considered since decades ago in various countries. [1] has discussed the benefits, problems, and main issues that are involved in the use of flexi time by American government agencies. The paper says that implementation of flexi time implemented resulted in positive impacts as employees found greater job satisfaction and more time available for outside activities. A comprehensive study in Europe reported that FWA can be found frequently in the public administration sector in Europe. Even rights for teleworking and for flexible working hours are part of central or federal policies in over 15 countries [22]. According to the European Company Survey from 2013 more than 83% of establishments in the public sector in the European Union offer their employees flexible working time [23]. Even in New South Wales government, the Premier Mike Baird in 2016 said that 100 per cent of public service jobs will be flexible by 2019 [24]. Further, strong municipal or governmental commitments to protect the environment have also been shown to be associated with a higher availability of flexible work arrangements for example in Finland and California [25]. In these cases, work practices such as teleworking are seen as utile and viable ways to reduce commuting and carbon emission. While in Irish, research by [26] indicated that significant organizational and cultural barriers remain to be overcome before innovative and flexible working full potential can be realized in the Irish public service.

The discussion about FWA in public sector in earlier studies has deliberated drivers to public organizations implementing flexible working, and
also some working cultures that may hinder its implementation. [22] says that the implementation of FWA in the public sector is often driven by pro-social motives. In fact, the public sector is often the biggest employer in the country, so it is often seen as a “model employer” and prone to public pressure. Strong public support for combining work and family life was associated with a higher availability of flexible work arrangement. Similar effects have been found in the U.S. showing that state legislation contributes strongly to local government’s decision to allow teleworking.

Some barriers in traditional working culture that could be challenge to flexible working are way of communication, bureaucratic control system, loyalty and commitment. Managers, employers and employees often fear that teleworking might lead to negative changes in communication. However, the long-term evaluation of a telecommuting initiative in two Canadian federal government departments found little changes in intra-organizational communication and no negative effects on the relationship between supervisor and subordinate have been found. The effective management of flexible working employees is a challenge for their supervisors because usually organizations trying to control their flexible working employees through traditional means (e.g., bureaucratic or output-based control) thus will face substantial difficulties. The willingness of firms to adopt such work arrangements may have shaped to a significant extent by their pre-existing control systems. The research by [27] investigated whether control structures, specifically bureaucracy in organizations, could affect organizational attitudes towards the adoption of new way of working. Therefore, managers have to shift their focus and leadership styles from physical presence towards their employees’ actual work achievements [22]. A study by [28] examined the relationship between telework and employee turnover intention and the roles of institutional and managerial support in moderating the relationship. Managerial and institutional support for telework decreased the intention of teleworkers to leave the agency further.

In the Indonesian government, the concepts and technical mechanisms of flexible working for Government Officials use the term of Flexible Working Arrangement (FWA) that are still being formulated, especially by relevant Ministries such as the Ministry of State Apparatus Empowerment and Bureaucratic Reform, Ministry of National Development Planning, Ministry of Finance, and several other institutions.

However, yet there is a research based on empirical studies or case studies looking at the effectiveness of FWA in Indonesian public sector available. Therefore, this research would like to show the condition that occurred in the MCI on the practice of FWA, and to identify its effectiveness from the perspective of government employees based on survey. This study will not discuss about the effectiveness of computer mediated communication and collaboration (CMCC) though it tightly related to the success of FWA since this matter is deliberately discussed in a separate paper.

II. METHOD

This research uses quantitative approach where data is collected through a survey to government employees in the MCI in June 2020. Accordingly, the effectiveness of FWA assessed in this study is based on respondents' perceptions about their experience implementing working from home for three months (March-May 2020) during the Covid-19 pandemic. The survey is filled out by 745 employees (18.6%) of total of 4,006 employees at the Headquarters and Regional Offices.

III. RESULTS AND DISCUSSION

From the profiles of respondents consisted of the working unit, age, field of work, and occupation (see Appendix), the survey can represent MCI employees from across working units, range of ages, various occupations and field of work.

A. Respondents’ Perception

Respondents' perception to FWA effectiveness is considered from 2 elements: the impact on individual performance, and the impact on organizational performance as shown in Table 1.

| TABLE I |
| Respondents' perceptions of WFH on individual and organizational performance |
The impact of working from home (WFH) on individuals is indicated by the opinion of increasing productivity and decreasing stress levels at work. The result shows that majority of respondents (>80%) felt the positive impact of WFH on individual performance. However, there are also near to 20% respondents who do not feel this positive impact.

While the impact of WFH on organizational performance is indicated by the opinion that the organizational performance is still achieved and the work rhythm of the organization remains smooth during WFH. The survey shows the same statement that majority of respondents (>80%) consider that WFH does not harm the organizational performance, and the work rhythm of the organization continues to run smoothly. There are only less than 15% of respondents who feel that the WFH has reduced organizational performance.

Another impact felt from WFH is that majority of respondents (>65%) felt the increasing of working hours. This can be both positive and negative statement; positive in terms of the time normally spent travelling to and from the office can be diverted to increase the working hours. In another case, it can also be a negative impact on respondents when there is no clear boundary about the working hours. However, in general majority (>85%) of respondents are interested in FWA.

By conducting the cross-tabulation analysis between the respondents' interest about FWA with their age, field of work, and occupations, some insights are taken. Based on age, a rather prominent resistance indicating disagreement with FWA was seen among respondents aged over 46 years at 16-22%, while based on field of work, the opposition to FWA is from other field of work exclude policy formulation, public services and administration which is around 14%. Moreover, based on occupations, there are around 11-12% respondents from certain functional job position and non-government who disagree with FWA.

### B. Challenges and Obstacles

Some challenges and obstacles encountered by respondents during FWA are shown in Table 2. The main obstacles are limited internet access which is expressed by more than 50% of respondents, followed with obstacle of household problems (37.4%), and coordination problems among colleagues (31.8%).

#### TABLE II
Obstacles Encountered during FWA (multiple choices)

<table>
<thead>
<tr>
<th>Obstacles</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited internet access</td>
<td>390</td>
<td>52.3</td>
</tr>
<tr>
<td>Household problems</td>
<td>279</td>
<td>37.4</td>
</tr>
<tr>
<td>Coordination problems among colleagues</td>
<td>237</td>
<td>31.8</td>
</tr>
<tr>
<td>Limited ICT devices</td>
<td>221</td>
<td>29.7</td>
</tr>
<tr>
<td>Working hours issue</td>
<td>177</td>
<td>23.8</td>
</tr>
<tr>
<td>Inconvenient environment</td>
<td>89</td>
<td>11.9</td>
</tr>
<tr>
<td>Did not get any assignment</td>
<td>62</td>
<td>8.3</td>
</tr>
<tr>
<td>Others</td>
<td>85</td>
<td>11.4</td>
</tr>
</tbody>
</table>

SD=Strongly Disagree; D=Disagree; A=Agree; SA=Strongly Agree

The impact of working from home (WFH) on individuals is indicated by the opinion of increasing productivity and decreasing stress levels at work. The result shows that majority of respondents (>80%) felt the positive impact of WFH on individual performance. However, there are also near to 20% respondents who do not feel this positive impact.
When the respondents were asked the urgency to physically present at the office, then the reasons are shown in Table 3. Two dominant factors identified are to complete the tasks from the Heads (57.3%) and the need for better coordination (55.4%).

<table>
<thead>
<tr>
<th>Work Related Factor</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completing the task from the Heads</td>
<td>427</td>
<td>57.3</td>
</tr>
<tr>
<td>Better coordination</td>
<td>413</td>
<td>55.4</td>
</tr>
<tr>
<td>Lessen team miscommunication</td>
<td>245</td>
<td>32.9</td>
</tr>
<tr>
<td>Doing public service task</td>
<td>215</td>
<td>28.9</td>
</tr>
<tr>
<td>Convenient environment</td>
<td>146</td>
<td>19.6</td>
</tr>
<tr>
<td>Others</td>
<td>62</td>
<td>8.3</td>
</tr>
</tbody>
</table>

The respondents were also asked about essential factors to support the implementation of FWA as shown in Table 4. There are four factors identified by mostly respondents: supporting facilities (75.6%), clear and adaptive regulation (74.5%), commitment and responsibility among colleagues (58.8%), and work-life balance (58.5%).

<table>
<thead>
<tr>
<th>Factors</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supporting facilities (internet access, online meeting channel, and others.)</td>
<td>563</td>
<td>75.6</td>
</tr>
<tr>
<td>Regulation</td>
<td>555</td>
<td>74.5</td>
</tr>
<tr>
<td>Commitment and responsibility</td>
<td>438</td>
<td>58.8</td>
</tr>
<tr>
<td>Work-life balance</td>
<td>436</td>
<td>58.5</td>
</tr>
<tr>
<td>Communication ethics</td>
<td>324</td>
<td>43.5</td>
</tr>
<tr>
<td>Project management tools</td>
<td>232</td>
<td>31.1</td>
</tr>
<tr>
<td>Others</td>
<td>25</td>
<td>3.4</td>
</tr>
</tbody>
</table>

Beside the survey conducted in the MCI, several Ministries also conduct evaluation survey about experience WFH during the pandemic, such as the Ministry of Energy and Mineral Resources, and the Ministry of Finance. The results show that at the Ministry of Finance, most employees expressed the same opinions as above from the Ministry of Communication and Informatics employees, where most employees felt the positive benefits of WFH to increase working productivity. It was reported that 51% of employees felt WFH was more effective during the pandemic, while 34% of them felt no difference in productivity between working from home or at the office, and 13% felt less effective. Meanwhile, a different opinion occurred among the Ministry of Energy and Mineral Resources employees, where there was a balanced proportion of employees who felt the increasing working productivity during WFH and those who do not. However, most (>75%) of employees felt interested in implementation of FWA.

C. Discussion

FWA refers to [13] can be classified from some dimensions which are spatial structure (location of the telework), the co-ordination structure (employees vs. self-employed teleworkers) and the temporal structure (part-time vs. full-time teleworkers). With this classification structure, FWA in this study only covers spatial structure that refers to working from home since the status of the research object is government employees which are full-time workers.

Perception of employees in MCI toward FWA is in line with empirical study conducted by [11] to members of the Data Processing Management Association in the US. It was stated that an increasing number of employees are participating in telecommuting which 62.5% of the 171 respondents indicated that they took work home at least one or more days per week during the year. Reasons given for engaging in telecommuting tended to focus on personal productivity. Other advantage expressed by MCI employees is that WFH can reduce stress level at work which amplify previous studies [13], [16]. The possible contextual to this opinion is believed related to reduced commuting time. Bad traffic in Jakarta is one of main factors of stress to the workers, therefore WFH undoubtedly reduce stress level at work.

Some obstacles of applying FWA expressed in this paper confirm findings in previous studies, one of them is related to family affairs. This challenge is frequently exposed in earlier papers which say...
disadvantage of teleworking is the conflict between work and family and how to maintain work life balance [15], [14]. Another obstacle is about coordination problems among colleagues, which also confirm study from [11]. The study says that other disadvantages of teleworking for firms included lack of daily interaction and loss of face-to-face communication which lead to poor task coordination.

Yet different obstacles of FWA are found and dominant among Indonesian government employees, which are limited internet access and inadequate ICT devices. These typical problems may emerge in some developing countries that are in the progress of thorough establishment of ICT infrastructure. Hence these issues apparently have not been discussed in former paper conducted in developed countries. In other words, to get a successful FWA implementation, the availability of ICT infrastructures, devices, and applications plays important role. This point of view lead to the connection of FWA to digital transformation in which FWA is a form of digital transformation and its execution requires digital transformation within the organization.

Moreover, it is stated in [11] the positions of computer programmers and computer systems analysts would benefit most from telecommuting. This is slightly different from this study which shows that almost all jobs in government can apply flexible working. However, there is rather prominent resistance indicating disagreements with FWA from adults aged over 46 years. The possible reason for this is related to digital literacy among those ages which slightly hinders the use of digital devices and applications to get work done distantly.

Talking about digital transformation, it is closely associated with digital infrastructure, tools and applications, as well as digital literacy or skill. The practice of FWA can be a trigger for the acceleration of digital transformation in the government as it needs digital transformation to be applied effectively. The government should pay attention to the availability of individual digital infrastructure and devices for employees, pro-vide and develop essential applications such as task management and collaboration tools, and more important up-skilling digital literacy of the employees. All is to support successful FWA in the organization. When FWA is needed and considered to be a promising new way of working by majority of government officials from all levels, then all respective parties will prepare the system for that and it will inevitably trigger digital transformation for other practices.

IV. CONCLUSION

The experience of working from home during Covid-19 pandemic has proven that almost all works of government can be accomplished online. Government works that most related to formulation of policies, public services, and even administration including ones related to financial administration are can be done remotely with the support of information technology.

From the research results above, several conclusions can be taken. First, the effectiveness of FWA on individual performance and organizational performance from the perspective of government employees at the MCI, Republic of Indonesia is very positive where more than 80 percent of employees from all field of work feel the positive impact of FWA. However, some challenges and obstacles are encountered during the FWA, the dominant ones are limited internet access, family affairs, and also coordination problems. Second, several substantial factors are needed to support FWA which are supporting facilities such as stable internet access, clear regulation in the institution, commitment and responsibility among colleagues, and work-life balance.

Practical and academic recommendations are given as follows. Practically, for future implementation of FWA in the MCI even after Covid-19 pandemic, several factors should be optimized to fulfill the expectation from employees, including the availability of supporting facilities, such as the internet and ICT devices, as well as clear and supportive regulations. Respective Ministries that in charge preparing the concept of FWA for Indonesian Government, need to pay attention to the importance of providing supporting facilities for employees to implement FWA, therefore they should also prepare the legal
procurement to do so. Furthermore, supportive detailed rules important to be drawn up are related to coordination and communication ethics, working hours, and also reward and punishment to make sure working rhythm and harmony in the organization is stable and maintained.

For initial implementation of FWA, it is better to be conducted through a permitting mechanism from the Supervisor. Employees can do FWA if they meet certain criteria such as having good performance review, good communication skill, work initiative, and also good time management skill. This mechanism is important as a control tool while building culture of positive FWA within the organization.

Furthermore, it is also necessary to optimize the existing intranet applications and develop new ones to support task completion and overcome coordination problems during FWA. The availability of applications especially for performance management and team project management are essential to support FWA implementation.

Academically, some future improvement researches are needed. First is that enhancement of individual and organization performance of the government during FWA might be measured with output based, instead of perception to get more valid statement. Second, further investigation about drivers to effective FWA implementation is significant to result in approaches and strategies to achieve work-life balance.

V. ACKNOWLEDGMENT

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VI. REFERENCES


