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Green IT and BYOD: Driving Sustainability, Job Performance, and Well-being in Remote Work

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Abstract

Purpose – This study explores the impact of Bring Your Own Device (BYOD) practices on teleworkers' job performance, work-life conflict, and their implications for environmental sustainability, with a particular focus on Green IT in the post-pandemic remote work context. Drawing on the Job Demands–Resources (JD-R) model, it examines the relationships between private technology adoption, job demands, job resources, job performance, and work-life conflict, while also assessing how BYOD impacts environmental outcomes such as electronic waste reduction and carbon emissions.

Design/methodology/approach – The study utilised Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM) using AMOS version 22 to evaluate seven hypotheses among 424 full-time teleworkers from various occupational sectors in Mauritius, a developing country.

Findings – SEM results confirm that BYOD enhances job performance and work-life conflict through increased job autonomy, workload, and work pressure. BYOD and teleworking also contribute to Green IT and environmental sustainability by reducing energy consumption and electronic waste, indirectly supporting broader sustainability goals through reduced corporate device demand and lower commuting-related emissions.

Practical implications – Organisations should leverage BYOD policies to advance Green IT practices and improve work performance in remote settings, focusing on balancing job demands with resources like work autonomy to enhance productivity and well-being.

Originality – The findings strongly support the JD-R model in the context of remote work and BYOD, particularly in developing economies with limited infrastructure, offering insights for policies that enhance both employee well-being, Green IT, and environmental sustainability.

1   Introduction

Organisations had to adopt intense telework for many of their employees overnight due to the pandemic. This scenario was entirely novel, and the COVID-19 emergency opened the door to trying out innovative working methods with uncertain and questionable effects on workers well-being. Prior to COVID-19, telework was considered a viable mode of operation, with organisations selecting qualified workers based on their HR policies and organisational culture (Hill et al., 2022; Kähkönen, 2023). The ubiquitous presence and accessibility of Information Technology tools, coupled with the growth of mobile technology, have reshaped new work practices and dynamics as the new work mode following the pandemic. This shift has led to a surge in the use of personal technologies, such as smartphones and tablets, along with a range of software applications for both work and non-work tasks, giving rise to the Bring Your Own Device (BYOD) trend amid the teleworking shift (Doargajudhur *et al.*, 2024; Jarrahi *et al.,* 2017). Incorporating personal devices into the workplace is not merely a trend; it also contributes to Green IT and mirrors a broader shift toward sustainability and efficiency in the professional realm. Literature has reported that BYOD policies can promote both operational efficiency and environmental sustainability (Druffel and Wulf, 2018; Jusoh *et al.*, 2017; Ndunge, 2017).

This study focuses on Mauritius, a small island economy where teleworking was transitioned from the infancy stage to a common practice following the pandemic. BYOD has emerged as a cornerstone of the remote work era in this evolving work landscape, in particular in developing countries. As Mauritius advances in its digital transformation, the BYOD trend illustrates the convergence of technology advancement and environmental sustainability, providing a distinct perspective on the future of work (Ministry of Technology Communication and Innovation, 2018). In order to fully leverage the potential of BYOD for sustainability in the island, it is crucial to conduct localised research that takes into account the unique opportunities and challenges specific to the Mauritian context.

In Mauritius, the embrace of BYOD aligns with the worldwide trend toward Green IT, which aims to reduce the environmental impact of technology. In an economy focused on resource conservation (Hardin-Ramanan, 2020), BYOD offers a sustainable alternative by minimising the reliance on company-provided hardware and fostering a culture of reuse and efficiency. This strategy not only preserves material resources but also supports the country's overarching sustainability objectives, as detailed in the Digital Mauritius 2030 strategic plan (Hardin-

Ramanan, 2020; Ministry of Technology Communication and Innovation, 2018), while balancing economic growth with environmental conservation. Likewise, the reduction in electronic waste and energy consumption associated with BYOD policies aligns with global sustainability goals, rendering this trend an environmentally responsible choice (Fawole *et al.*, 2023).

Before the pandemic, the use of personal devices and remote work were selectively implemented, with perceptions varying across industries. While some employees viewed mobile technology as a tool for flexibility, others raised concerns around security, device compatibility, and work demands. The pandemic, however, triggered a fundamental shift in how these tools were perceived and utilised. Forced reliance on personal devices during the crisis highlighted their value in maintaining productivity and autonomy, changing the way workers and organisations' approached technology for work purposes (Doargajudhur *et al.*, 2024; Doargajudhur & Hosanoo, 2023).

Besides, organisations across the globe are increasingly embracing remote work, fuelling BYOD adoption and constant connectivity for work practices. Research indicates that American companies saw BYOD adoption rise from 63% to 78.48% between 2011 and 2018, peaking at 58.3% during the Covid-19 pandemic. The BYOD trend persists with the rise of work-life integration. Despite initial security concerns, enterprises have recognised BYOD's significance, especially since the Covid-19 shift to remote work. Consequently, BYOD adoption has surged, with market growth from $94 billion in 2014 to $157.3 billion by 2026 (Howarth, 2024).

Literature shows divergent views of constant connectivity's impact on organisational and employees' outcomes and well-being (Doargajudhur *et al.*, 2024; Gewald *et al.,* 2017; Peretz, 2023; Weeger *et al.,* 2016). While technology use enhances flexibility and productivity, it also blurs work-life boundaries, reducing time for non-work tasks and leading to pervasive work (McDaniel *et al.,* 2021). While some report increased work-life conflict (WLC), others find it easier to balance work and family responsibilities (Doargajudhur and Hosanoo, 2023). Some perceive improved job satisfaction and productivity with personal devices, while others experience heightened stress and workload (McDaniel *et al.,* 2021).

Additionally, previous literature lacks empirical evidence on employees' constant connectivity via personal technologies' impact on work outcomes. Scholars called for future research in this

area: the exploration of BYOD's effects on work-life balance, performance, and workload (Doargajudhur and Dell, 2019, 2020; Doargajudhur and Hosanoo, 2023), assessing its dual-edge consequences on organisational duties (Carlson *et al.,* 2000), and investigating its impact on additional resources (Carlson *et al.*, 2024). Other researchers invite scholars to examine theories of remote work (Kähkönen, 2023), its effect on well-being in other economies (Hill *et al.*, 2024). Literature has also reported that research on sustainability in developing markets still lags behind and needs to catch up as compared to advanced economies (Falcone, 2023; N'dri *et al.*, 2021; Torres-Baumgarten and Rakotobe-Joel, 2023), beyond the traditional focus on Europe and North America (Chandrashekeran *et al.*, 2017). Scholars recommend further empirical studies to curb the scarcity of empirical evidence on the relationship between technology and the environment (N'dri *et al.*, 2021; Houssam *et al.*, 2023).

This study aims to clarify these incongruent findings, particularly in Mauritian remote work setting and adds to the limited body of research on Green IT and environmental sustainability in developing economies. The authors argue that BYOD can lead to diverse employee responses and various job-related outcomes in light of the global pandemic's transformative effects on company operations. Using the Job Demands-Resources (JD-R) theory (Schaufeli and Bakker, 2004), the study investigates the effect of BYOD, as a job resource, on work-related outcomes, as well as the consequences of being constantly connected. Prior research highlights how the proliferation of new devices has reshaped employees' work attitudes, fostering an "always available work culture" by granting autonomy over work locations and schedules (Barlette *et al.,* 2021). This blending of work and personal life can lead to heightened stress levels and a diminished ability to disconnect. Furthermore, the current and future perspective on teleworking hold considerable potential in advancing the sustainability objectives outlined in the 2030 agenda, "A blueprint to achieve a better and more sustainable future for all people and the world by 2030" (Zanten and Tulder, 2021). Therefore, the primary research question to be addressed in this study is examining how BYOD influences job performance and well-being, and how these outcomes are linked to Green IT and environmental sustainability.

2   Theoretical Framework

The Job Demands-Resources (JD-R) model (Demerouti *et al.,* 2001) is a flexible and parsimonious framework that explains occupational stress as a discrepancy between the demands imposed on a person and the resources they possess in their work environment. Job

demands are those aspects of the job that require sustained mental or physical effort, and are associated with physical, organisational, social or psychological costs. Conversely, job resources are those features that assist in accomplishing work objectives, encourage personal development, learning and growth; and reduce job demands and their associated consequences.

Numerous studies have utilised the JD-R theory and provided support for the dual pathways to employee well-being, and how these impact on essential organisational outcomes. The adoption of the JD-R as a theoretical basis for this research is appropriate since it is contextualised within a developing economy, and provides insights into how the use private tools (BYOD) serves as resource buffering against the demands of remote work. This model also demonstrates the interaction impacts between the resources provided to employees and the demands placed on them which were overlooked by the previous lenses.

By leveraging the JD-R model to explore how BYOD practices impact job performance and well-being, this study aims to uncover the mechanisms through which BYOD can promote Green IT and contribute to a sustainable and productive future in developing economies. We therefore propose the following conceptual model comprising of seven hypotheses as presented in Figure 1.

Figure 1. Conceptual model

2.1 BYOD and Perceived Job Autonomy

Job autonomy is the degree to which workers perceive that they are independent and can control their decisions regarding when, where and how to fulfil their tasks (Hackman, 1980; Vui-Vee and Yen-Hwa, 2020). Orth and Volmer (2017) shared their views that employees deliver more innovative outcomes depending on the extent of their latitude of decisions and degree of autonomy while performing a specific task. In the burgeoning literature, various studies have converged towards similar conclusions inferring that the prevalence of job autonomy rises when an employee (Akin-Adetoro and Kabanda, 2021; Bal and Izak, 2021) has control over his work with his choice of devices.

The current study theorised that when employees perceive freedom in choosing their own devices to perform a specific job, the impact of BYOD on job autonomy will be significant as they will feel more independent over when, where and how they complete their jobs. BYOD can increase the job resource of job autonomy creating a more efficient and resilient workforce capable of promoting environmental sustainability.

Thus, we hypothesize:

H1: BYOD has a positive and direct influence on perceived job autonomy.

2.2 BYOD and Perceived Workload

Workload refers to the perceived level of pressure that workers feel due to the number of tasks that they must undertake (Lee and Ashforth, 1996), and involves a sense of being extremely busy, without necessarily having a clear goal or objective in mind. The levels of workload can affect an employee's feeling of work pressure, both of which fall under job demands. Despite BYOD promotes a sense of flexibility that stimulates and drives employees, employers expect workers to be available outside their working hours from any location and at any time (Saridakis *et al.*, 2023; Shabazi *et al.*, 2020). Son and Chen (2018) also found that work overload using smartphone for working purposes intensifies work-leisure conflicts and has significant impact on life satisfaction. The intrusive aspect of mobile technology allows employees to be permanently reachable which is perceived as a cause of workload.

In this study, we propose that employees using their private devices for work-related tasks feel that they have more work to do. Therefore, we hypothesize:

H2: BYOD has a positive and direct influence on perceived workload.

2.3 Perceived Job Autonomy and Perceived Workload

According to the JD-R model, job resources can impact job demands. A key principle is the significant relationship between perceived workload and autonomy. Autonomy allows employees to be flexible with when, where and how they fulfil their work, irrespective of the locations and times they otherwise would not (Doargajudhur *et al.*, 2024; Saridakis *et al.,* 2023; Shabazi *et al.,* 2020). The increased flexibility of enabling employees to continue working beyond office hours, whether at home or while travelling, may heighten their perception of their workload and potentially increase the actual amount of work they accomplish, and this reasoning aligns with the broader literature, confirming that greater autonomy is linked to a lower perception of being overburdened (Doargajudhur and Hosanoo, 2023, Doargajudhur and Dell, 2019, 2020; Moore, 2000). We propose that autonomous employees are given more flexibility, thereby allowing them to accomplish a higher volume of work which in turn leads to positive effect on their perceived workload. Therefore, we hypothesize:

H3: Perceived job autonomy has a positive and direct impact on perceived workload.

2.4   Perceived Job Autonomy and Perceived Job Performance

Employees who are highly autonomous are likely to enjoy greater performance, while those benefiting from less flexibility experience poorer performance (Hackman and Oldham, 1980). Studies by DeVaro *et al.* (2007) and Doargajudhur *et al.* (2024) testified that flexibility in the workplace leads to higher levels of self-perceived work performance. This is congruent with the JD-R theory which postulates that a rise in resources enables higher job demands. As a consequence of the increase in the job resource, job autonomy, employees enjoy improved performance. This leads to them commuting less daily contributing to lower greenhouse emission, and less carbon footprints.

Therefore, in this research we suggest that an increase in a worker's sense of autonomy leads to an increased level in their performance:

H4: Perceived job autonomy has a positive and direct influence on perceived job performance.

2.5   Perceived Workload and Perceived Job Performance

Job demands triggers exhaustion, work-family conflict and job insecurity. Nevertheless, while previous studies contended that job demands lead to greater job performance, this relationship still demands further attention, despite that some qualitative studies such as those undertaken by Doargajudhur and Hosanoo (2023) provided evidence for this relationship. Besides, Kim and Lee (2010) purported that perceived workload is inversely related to perceived performance; however, this proposition was not supported. Workload is also found to be significantly related with perceived job performance in a few studies (Doargajudhur and Dell, 2020; Doargajudhur and Dell, 2019). This can be explained by the fact that employees feel that they are productive despite having a lot of work to accomplish. Thus, we hypothesize:

H5: Perceived workload has a positive and direct influence on perceived job performance.

2.6   Perceived Workload, Perceived Work Pressure and Perceived Work-Life Conflict

A higher workload associated with BYOD can trigger strain, exhaustion and burnout (Nair *et al.,* 2020). People undergoing excessive work pressure are more likely to be overwhelmed by the workload to be completed and perceive that their job demands exceed the time and energy available to do the work, thus leading to the use of personal devices in personal time and space to complete work related tasks. However, Roe and Zijlstra (2000) found that a high workload does not necessarily increase the work pressure.

Owing to the job characteristics (job demands and resources), employees are drifted to use their personal devices to undertake their work-related tasks beyond working hours and premises. Hence, BYOD has the tendency to increase the work interference with leisure, and other personal tasks, thus escalating the perception of work pressure. Prior literature has also reported that BYOD boosts the flexibility, but also the permeability of the boundary between work and personal spheres, thereby augmenting the conflict between these realms of the workers' life (Derks *et al.,* 2015; Doargajudhur *et al.*, 2024; Köffer *et al.,* 2015).

Thus, we hypothesize:

H6: Perceived workload has a positive and direct influence on perceived work pressure.
H7: Perceived work pressure has a positive and direct influence on perceived work-life conflict.

3 Methodology

3.1 Procedures and Sample

To evaluate our conceptual model, we employed a quantitative research methodology and distributed an online questionnaire to full-time teleworkers based in Mauritius. The participants were invited to complete an anonymous and voluntary survey questionnaire. The survey comprised a concise overview of the research objectives, and the average time taken by each participant to complete the questionnaire was approximately 15 minutes.

A convenience sample of 427 Mauritian teleworkers across various occupational sectors was surveyed to fulfil the objectives of this research. The participants had to meet the inclusion criterion of teleworking post-pandemic. The final sample consisted of 424 valid survey responses after eliminating 3 incomplete questionnaires, which met the minimum sample requirement of 200 for effective use of structural equation modelling, as recommended by Anderson and Gerbing (1988). Of the respondents, 220 (51.9%) were male, and 204 (48.1%) were female. Their ages ranged from 15 to above 65 years old. The age group with the highest representation consisted of workers aged 25-34, accounting for 39.9% of the total sample, followed by 35-44 (26.7%), 15-24 (19.1%), 45-54 (7.3%), 55-64 (6.1%) and finally 65+ (0.9%). Medium-sized enterprises accounted for the largest proportion of the sample (47.2%), followed by small organisations (35.3%), and finally by large firms (16.5%).

3.2   Measures

To measure the constructs associated with the conceptual model, a five-point Likert scale was used, ranging from "strongly agree" at the highest point to "strongly disagree" at the lowest point. Our primary construct, BYOD was assessed using three items employed from Köffer *et al.* (2015), which required participants to assess the degree to which they integrate their personal technologies into their work routines. Three items were used to measure perceived job autonomy based on the works of Tripp *et al.* (2016). Three items validated by Bakker and Demerouti (2014) were employed to evaluate perceived workload, while perceived work pressure was measured by borrowing four items from Lin and Huang (2020). To gauge perceived work performance, three items were adopted from Lin and Huang (2008), whereas five items obtained from Carlson *et al.* (2000) were used to evaluate perceived WLC.

Lastly, respondents were asked to what extent they agree that teleworking contributed to the sustainable development goals. Examples of questions asked were 1) Through BYOD, my company minimises electronic wastage and energy use, 2) Through BYOD, I rarely use company devices, 3) Teleworking has allowed me to contribute to a reduction in carbon emission due to less travel demand, 4) Teleworking has allowed me to boost my labour productivity due to less commute time, and 5) My personal devices/BYOD in the remote work context allow me to contribute to environmental sustainability.

4   Results

The six constructs containing the 21 items as shown in Table I were subjected to a reliability analysis one by one. The Cronbach alphas for all factors were above 0.7 (BYOD 0.784, JA = 0.758, W = 0.759, WP = 0.874, JP = 0.809 and WLC = 0.873), as recommended by Hair *et al.* (2014). Therefore, all constructs were reliable.

Table 1: Measurement model properties (*N* = 424)

The constructs were subsequently applied to AMOS for the confirmatory factory analysis (CFA) to assess the structural model validity and reliability (Hair *et al.,* 2014), which is recommended to be 0.50 or greater. The results presented in Table I are indicative of a reliable measurement model.

Both convergent and discriminant validity were evaluated. Table I also presents the standardised loadings for each item as part of the results of the CFA, with the AVE scores for

each construct being greater than 0.50, thereby confirming that convergent validity has been achieved. At last, discriminant validity was established by making sure that for every construct, the square root of its AVE transcended all correlations between that factor and any other construct. This implies that the AVE was above the maximum shared variance (MSV) as demonstrated in Table II.

Table II. Discriminant validity results

The results of the CFA are reported in Table III, and these provide evidence for a good model fit for the measurement model since our measures showed good psychometric properties.

Table III. Fit indices for the measurement and structural model

Given that the dependent and independent constructs were measured in one survey at a single point in time, common method variance (CMV) is possibly a concern which may affect the empirical results (Podsakoff *et al.,* 2003). Therefore, for ensuring that our model does not suffer from CMV, we applied the common latent approach by running the measurement model with all the items presented in Table I, loading on a single common factor. Next, we performed a $\chi 2$ difference test to compare the measurement model presented in Table III with the common factor model. The findings demonstrated that the data was a much better fit for the measurement model, confirming that our study was not affected by CMV.

Once the reliability and validity of the measurement model was confirmed, we proceeded to assess and test the structural model depicted in Figure 1. The results for the structural model, shown in Figure 2, were similar to those for the measurement model and indicated a satisfactory fit for the data. Moreover, the findings provided support for all the hypotheses presented in Figure 2.

Figure 2. Structural equation model with *β* coefficients and R² values

The study proposed a model containing 7 hypotheses and the findings provided evidence that all standardised path coefficients were significant as indicated in Figure 2. First, the significant impact of BYOD on job autonomy ($\beta = 0.42$, $P < 0.001$) and workload ($\beta = 0.35$, $P < 0.001$) were observed. Therefore, H1 and H2 were supported. Second, the results confirmed that job autonomy was an important predictor of perceived job performance ($\beta = 0.47$, $P < 0.001$) and workload ($\beta = 0.40$, $P < 0.001$), hence supporting H3 and H4. It was also observed that perceived workload had significant influence on perceived job performance ($\beta = 0.24$, $P <$

0.001) and perceived work pressure ($\beta = 0.16$, $P < 0.01$), thus supporting H5 and H6. Finally, H7 is supported as work pressure was found to be a fundamental predictor of perceived WLC ($\beta = 0.70$, $P < 0.001$). All these factors together explained 53% of the variance in perceived WLC and 40% of the variance in perceived job performance.

Furthermore, the findings align with the broader literature (Elldér, 2020; Kazekami, 2020) and indicated that 82% of the respondents agreed to a greater extent that teleworking was contributing to reducing carbon emissions and traffic congestions due to less commuting demands and also increasing their labour productivity.

5   Discussion

5.1   Main Findings

There is no doubt that BYOD has implications for teleworkers' well-being including its effects on work outcomes. The study further sheds light on the respondents' perceptions of how teleworking and BYOD reduce carbon emissions, supporting the broader goals of Green IT practices. Our sample is mostly dominated by a millennial workforce who are known to be highly tech-savvy and value creativity, mobility, sustainability and work-life balance. Millennials, continue to become more conscious of the trend towards sustainability and green citizenship, now account for around 50% of the world population. They expect organisations to act sustainably in diverse ways, ranging from sustainable investment to human resource practices such as remote working (Valente and Atkinson, 2019; Kaur *et al.,* 2024). The study's participants reported on their perceptions of how teleworking and BYOD contributed in enhancing their work performance, and environmental sustainability while increasing work-life boundaries.

Although this study did not specifically focus on gender-related differences, the balanced participation of men and women suggests that gender could still play a role in shaping the experiences of workers adopting BYOD policies. Our findings indicated that respondents, irrespective of gender, benefitted from BYOD adoption in the teleworking context, due to the flexibility associated with this practice.

All hypotheses found strong support or at least marginal support. Our results suggest that BYOD is a strong predictor of job autonomy and perceived workload. These findings are congruent with prior BYOD research which confirmed that BYOD helps workers afford more

flexibility (Akin-Adetoro and Kabanda, 2021; Bal and Izak, 2021; Doargajudhur *et al.*, 2024). BYOD can increase the job resource of job autonomy creating a more efficient and resilient workforce capable of promoting environmental sustainability. Flexible work practices such as the pandemic driven remote working offers clear green benefit, significantly decreasing the level of carbon footprint resulting from commuting (Paulet et *al.,* 2021). Embracing BYOD further reduces level of greenhouse emissions as well as hardware/electronic waste (Tao et *al.,* 2024).

In the same vein, BYOD leads to higher perceptions of workload, and this could be explained by the fact that teleworkers are now exposed to numerous work tasks such as email notifications, message reminders and endless stream task reminders and that they remain tethered to work issues that transcend the location and time constraints which corroborates prior literature (Saridakis *et al.,* 2023; Shabazi *et al.,* 2020).

Furthermore, our findings indicate that employees tend to exhibit better job performance when granted independence and freedom in how they carry out their work tasks. This is because individuals with a lower sense of autonomy are more prone to work exhaustion and reduced performance, while those with a greater sense of autonomy typically demonstrate better performance over time. This result is consistent with those of Bakker *et al.* (2020) and Ma *et al.* (2020) whose findings advocate those employees who are granted the freedom and independence to accomplish their organisational duties enjoy from higher job performance. As a consequence of the increase in the job resource, job autonomy, employees enjoy improved performance. They reported to commuting less on a daily basis and reducing the need for companies to invest in corporate devices thus contributing to lower greenhouse emissions, and less carbon footprints. In addition, millennials penchant towards sustainability is shaping eco-friendly work environments, and green IT practices. The JD-R model also asserts that a rise in job resources may influence job demands, which in this context can be explained by the fact that perceived job autonomy is likely to have an effect on perceived workload, since the increase in work freedom assists in coping with a higher workload since workers can freely decide for themselves as to when and how to address their demands.

In a similar vein, perceived workload predicts work pressure, and can be explained by the fact that the adoption of privately owned devices can increase work interference with leisure and other personal tasks, thus escalating the perception of work pressure (Derks *et al.,* 2015).

Despite having a high workload due to the adoption of their private technologies to conduct work activities, the results of this research solidify the belief that job demands increases job performance (Bakker *et al.,* 2004). In this context, higher performance may be a consequence of an increase in perceived workload. Furthermore, perceived work pressure is seen as an antecedent of perceived WLC. The mechanism through which this can occur might be because people experiencing high work pressure are likely to be overwhelmed by their workload that this may impair their leisure time and create WLC (Roe and Zijlstra, 2000).

Our findings, align with Elldér (2020) and Fawole *et al.* (2023), underscoring the substantial impact of telework on reducing travel demand and alleviating traffic congestion. Additionally, as highlighted by Kazekami (2020) and Falcone (2023), the authors advocates that the optimisation of commute duration and avoidance of peak commute hours are recognised as factors that boost labour productivity.

5.2 Theoretical and Practical Implications

The interplay between BYOD, Green IT, environmental sustainability, and remote work in Mauritius offers a promising area for research and has important implications both in theory and practice. Notably from a theoretical perspective, the results strongly support the dual-process of the JD-R model, and offer empirical evidence on the effects of BYOD policies on sustainability in a small island economy. This research highlights the risks and benefits of BYOD practices for teleworkers. Even previously resistant organisations have adopted BYOD to ensure business continuity. Unlike prior research focusing on organisational impacts like commitment (Doargajudhur and Dell, 2018) and motivation (Doargajudhur and Dell, 2020), this study examines the dual nature of BYOD adoption in the remote work context. Our study views BYOD practice as neither inherently positive nor negative. Extending the JD-R model to encompass constructs such as WLC, autonomy, we demonstrate that the impact on WLC depends on the balance between the resources provided by BYOD and the demands it creates. The impact is positive if resources outweigh demands, and negative if demands exceed resources.

The new generation of workers view BYOD as a requirement rather than a choice (Gewald *et al.,* 2017). The teleworking context is dictated by employees using their private digital devices to define their work practices. Therefore, examining BYOD's dual effects is becoming increasingly relevant on a broader scale in this new remote work modality. The work pressure

and work-life conflict from constant connectivity can be alleviated by increased job autonomy. Therefore, it is crucial for employees to understand the relationship between BYOD and sustainability as this approach can reveal ways to enhance well-being by providing greater control over their work environment and tools. Companies should weigh the pros and cons of BYOD adoption and decide the extent of their BYOD programs by balancing resources like job autonomy with demands to reduce WLC. Additionally, Human Resources can consider including employee assistance programs and counselling to support those facing WLC. Moreover, practitioners must ensure that private technology adoption does not overly intrude on employees' personal lives by reviewing work-life balance policies and setting clear boundaries to prevent inter-role conflict.

Additionally, our research highlights the practical importance of BYOD policies that align with sustainable development goals. Understanding the interplay between BYOD, Green IT and sustainability can guide remote work policies aligning with environmental goals while enhancing performance. Teleworking serves as a dual-purpose strategy for organisations, both in minimising infrastructure costs and mitigating pollution associated with employee commuting resulting in climate change reshaping the work dynamics (Evangeline, 2017; Zanten and Tulder, 2021; Fawole *et al.*, 2023). The authors anticipate that in the near future, more businesses will embrace the importance of adopting teleworking, driven by the accelerating globalisation and digitalisation of the work context. This recognition arises from teleworking's potential to enhance employees' quality of life, alleviate traffic congestion and pollutant emissions, and lower workspace expenses, aligning closely with the sustainable development goals, thereby enhancing the long-term growth and viability. Our findings can serve as a model for other developing economies aiming to leverage Green IT in achieving sustainable goals. Organisations should encourage the adoption of sustainable work practices such as the use of energy-efficient personal devices to fulfil work activities in their remote work environments. By adopting these strategies, Mauritius can establish itself as a pioneer in sustainable remote work practices, serving as a model for other developing economies.

From a societal perspective, the benefits of increased flexibility, enhanced job satisfaction, and improved well-being contribute to the development of a more resilient workforce, better equipped to navigate the challenges of the contemporary economy. As more organisations implement remote work, adopt green IT and Human Resource Management practices as well as BYOD policies, the potential for improved work-life balance, mental health, and long-term

well-being becomes more evident, as well as contributing to a cleaner environment. This shift supports the cultivation of a healthier, more sustainable workforce within the broader framework of sustainable development.

5.3   Limitations, Future Research and Conclusion

There are a few limitations in our research which should be considered in further studies. First, our study has a methodological limitation since respondents were asked to report their workload, autonomy, work pressure and WLC, which might differ from objective measures. Demerouti *et al.* (2001) noted variance between observer-reported and self-reported ratings based on workers' perceptions. However, following Lee and Lee (2018), we used this method due to the difficulty of obtaining impartial measures. Second, our study did not test for mediation, we therefore recommend that the model is further examined by testing the mediating variables and possibly including some moderating variables. Third, our results might be bias since we focused on only a few items to collect data on environmental sustainability. Given the prevalence of sustainability across sectors, researchers can use other dimensions to contribute to a broader picture of this phenomenon. Moreover, data was collected only in Mauritius post-pandemic, thus the model can be further tested in other economies as these may yield different results. Lastly, while our sample included an almost equal number of men and women, no assessment was made regarding potential differences in how gender may affect the impact of BYOD on job performance, work-life balance, or well-being. Future research can be done to gauge how BYOD contributes to gender roles within the household and work domains and the mediating effect of gender on work performance and work life balance. The normative gender roles and gendered expectations could further be explored. Women remain highly vulnerable to being mostly responsible to life and parental demands, which could further be explored using the JD-R lens. Examining these factors to provide a more nuanced understanding of how BYOD policies affect men and women differently.

Our research has contributed to the understanding of the growing prevalence of BYOD adoption which has heightened its significance during the global pandemic and its implications on environmental sustainability. Implementing BYOD policies in the remote work era offers a unique chance for developing economies such as Mauritius to promote Green IT initiatives and achieve broader environmental sustainability objectives. This study has shown that the JD-R model is an effective framework for comprehending the complex relationships between BYOD, job performance, work-life conflict, and employee well-being. While BYOD provides

substantial job resources like greater autonomy and flexibility, it can also increase job demands, potentially resulting in higher work pressure and work-life conflict. These findings highlight the importance of carefully balancing the advantages and challenges of BYOD to optimise its positive effects on both employee outcomes and environmental sustainability.

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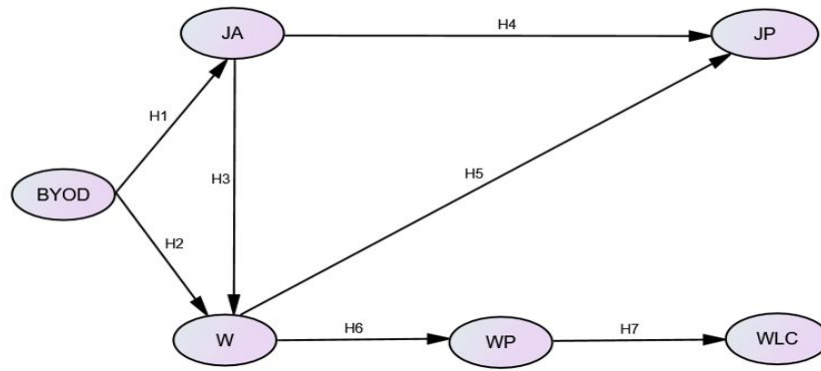
Figure 1. Conceptual model (Source: The authors)

Notes:
BYOD: Bring Your Own Device; W: Perceived Workload; JA: Perceived Job Autonomy; WP: Work Pressure; JP: Perceived Job Performance; WLC: Perceived Work-Life Conflict
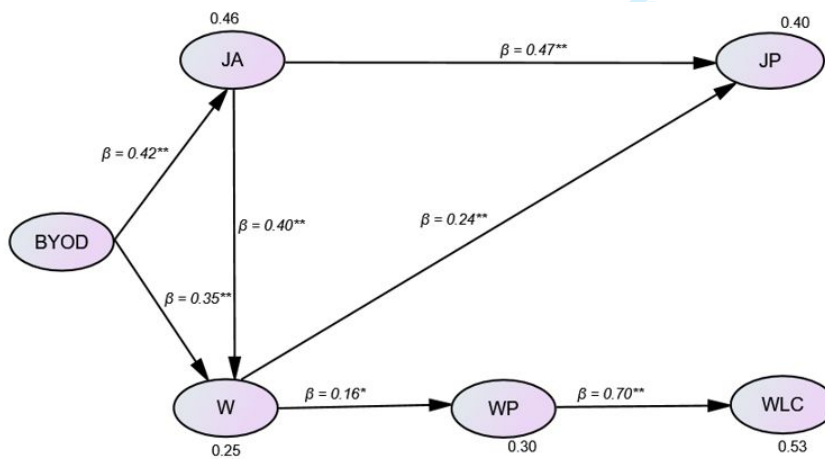

Figure 2. Structural equation model with *β* coefficients and R² values (Source: The authors)

Notes:
BYOD: Bring Your Own Device; JA: Perceived Job Autonomy; W: Perceived Workload; WP: Work Pressure; JP: Perceived Job Performance; WLC: Perceived Work-Life Conflict
*p < .01; **p < .001

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Table I. Measurement model properties ($N = 424$) (Source: The authors)

Constructs and Items	Standardized loadings	Composite Reliability	AVE
BYOD		0.78	0.55
I use my personal desktop or laptop computer for work purposes.	0.66		
I use a smartphone or tablet or any device that I personally own for work purposes.	0.82		
My personal device for work purposes reduces the overall energy consumption of my organisation.	0.81		
Perceived Job Autonomy		0.76	0.51
My job permits me to decide on my own how to go about doing my work.	0.76		
My job gives me a chance to use my personal initiative and judgment in carrying out my work.	0.76		
I have a great deal of autonomy in my job.	0.60		
Perceived Workload		0.76	0.51
I have to work very fast.	0.65		
I often work extra hard to finish my work.	0.76		
My workload is high.	0.74		
Perceived Work Pressure		0.87	0.64
I often fell pushed by deadlines.	0.77		
I often face a backlog of work.	0.86		
I often feel overwhelmed by how much I had to do at work.	0.83		
I have to work on too many tasks at the same time.	0.73		
Perceived Job Performance		0.81	0.59
I am among the best in the company in terms of the quality of my performance.	0.76		
I am among the best in the company in terms of my effectiveness.	0.86		
I am among the best in the company in terms of my overall performance.	0.67		
Perceived Work-Life Conflict		0.87	0.70
My work keeps me from my family activities more than I would like.	0.74		
I have to miss family activities due to the amount of time I must spend on work responsibilities.	0.90		
When I get home from work I am often too frazzled to participate in family activities/responsibilities.	0.81		
I am often so emotionally drained when I get home from work that it prevents me from contributing to my family.	0.82		

Due to all the pressures at work, sometimes when I come home I am too stressed to do the things I enjoy.	0.74

Table II. Discriminant validity results (Source: The authors)

	AVE	MSV	BYOD	JA	W	WP	WLC	JP
BYOD	0.553	0.311	0.743					
JA	0.514	0.354	0.558	0.717				
W	0.514	0.299	0.346	0.547	0.717			
WP	0.636	0.534	0.012	0.023	0.162	0.798		
WLC	0.698	0.534	0.039	0.014	0.086	0.731	0.835	
JP	0.588	0.354	0.374	0.595	0.497	0.031	0.021	0.767

BYOD: Bring Your Own Device; JA: Perceived Job Autonomy; W: Perceived Workload; WP: Perceived Work Pressure; WLC: Perceived Work-Life Conflict; JP: Perceived Job Performance

Table III. Fit indices for the measurement and structural model (Source: The authors)

Fit Index	Recommended value[a]	Measurement model	Structural Model
χ^2	NS at $p < 0.05$	231	231
χ^2/df	<5, more desirable <3	2.7/171	2.7/174
CFI	> 0.90	0.93	0.93
GFI	> 0.90	0.92	0.91
TLI	> 0.90	0.92	0.92
AGFI	> 0.80	0.91	0.90
NFI	> 0.90	0.90	0.90
IFI	> 0.90	0.93	0.93
RMSEA	< 0.08	0.06	0.06
SRMR	< 0.10	0.04	0.04

Sources: [a] Hair *et al.* (2014)