# M-Government and Saudi Women's Empowerment: A Capability Approach Perspective

**ABSTRACT**

At a time when Saudi women are no longer legally required to obtain permission from their male guardians to take actions about their own and their children's lives, this study examines how m-government contributes toward women's empowerment. We use Sen's Capability Approach (CA) to understand how Saudi m-government services provide empowerment opportunities for women. Interview data from 30 women suggest that the independent use of m-government empowers them by allowing them to obtain a driving licence, passport and national identity documents for themselves and their children. This in turn enabled them to work, study, travel and make decisions about their children's health and education, without having to seek permission from their male guardians. Nevertheless, personal, social and environmental factors that hinder the use of m-government services for empowerment remain; notably, traditional religious and cultural values, resistance by male guardians and other family members as well as technical issues with the m-government apps, internet connectivity and lack of digital literacy skills. To the best of our knowledge, this is the first study that addresses how Saudi women make use of the opportunities created for them by m-government and the barriers that impede their access to these opportunities. The paper concludes by highlighting some significant theoretical and practical contributions in relation to m-government and women's empowerment.

**Keywords**: Capability Approach, m-government, empowerment, women, Saudi Arabia

## INTRODUCTION

With the development of Information and Communication Technologies (ICT), electronic government (e-government) and mobile government (m-government) have been adopted by countries to provide services to citizens in more efficient ways. The use of ICT and mobile technologies in everyday life has also served as a means by which the government of a country delivers its services and distributes vital information that allows citizens to participate in political, social and economic activities and m-government is even more flexible as people can use government service 24/7 via their mobile phones. (Ahmad & Khalid, 2017).

In spite of the large amount of literature on e-government (e.g., Hsieh et al., 2013; Lee et al., 2011), and m-government (e.g., Xiong et al., 2022), far fewer focus specifically on the Middle East and North Africa region (MENA) (Alharbi et al., 2020). The majority of these studies relate to the acceptance and adoption of m-government, while ignoring women's perspectives and how their wellbeing is affected by such initiatives (Abubakar & Dasuki, 2018; Alonazi et al., 2020). Scholars have suggested that m-government use by women differs from that of men. For example, it has been argued that women do not benefit from m-government as much as men (Abu Bakar et al., 2017).

In addition, in countries such as the Kingdom of Saudi Arabia (KSA), women are further disadvantaged due to the country being a traditionally conservative and patriarchal Muslim

country where male guardianship, gender segregation, female honour and male-dominated practices are highly regarded (Samargandi et al., 2019). In relation to this, today there is controversy about whether marginalised groups, like women, are empowered by m-government or not (Gaur & Avison, 2015), and scholars have argued for more research on women's experience of m-government (Almaiah et al., 2020), particularly in countries where Islamic culture strongly defines gender roles (Alotaibi et al., 2016).

Research in this field is not only relevant but also timely, particularly within the context of the KSA, where the recent relaxation of the *wilayah* (male guardianship) system has removed the requirement for women to obtain permission from their male guardian for many public activities. Saudi Arabia holds significant influence in the MENA region and has allocated substantial resources to provide its citizens with m-government services (Alssbaiheen & Love, 2015). Against this backdrop, we seek to address the research question: *"How do women empower themselves using m-government services in the KSA, and what factors enable and hinder this empowerment process following the relaxation of male guardianship?"* This question is particularly critical. Just having the right to access m-government service does not necessarily lead to empowerment, as there may be several factors that might create obstacles to this process. It is thus important to understand whether and how Saudi women do use such m-government services, and whether such independent use supports their empowerment.

To address our research question, we draw upon Sen's capability approach to explore how the use of m-government by women in the KSA has provided them with freedoms to participate in socio-economic activities and be empowered. We also explore the contextual factors that influence their abilities to utilise m-government to enhance their freedoms to be empowered. Our focus on the KSA, as a traditional Muslim country that has issues with gender equality due to its religious doctrines presents a unique and compelling case for investigation. This is especially so as the Saudi government has recently implemented reforms based on its Vision 2030 to diversify the economy and create more socio-economic opportunities for women (Vision 2030, 2020).

The paper is organised as follows. First, we provide a literature review of the relationship between m-government and women's empowerment. Subsequently, we provide an overview of the concept of women's empowerment. This is followed by a discussion on the notion of *wilayah*, the male guardianship system. We then introduce our theoretical lens, Sen's capability approach. This is followed by a presentation of our methods, our analysis and findings. We then present our discussion section. We then conclude our study and provide recommendations for future research.

## LITERATURE REVIEW

### M-Government and Women's Empowerment

Research on the relationship between mobile phones and women's empowerment has seen significant growth. Several studies have highlighted how mobile phones serve as instruments for women's empowerment. For instance, Nguyen and Chib (2017) emphasised the role of mobile phones in empowering Vietnamese brides by facilitating self-improvement in education and work. Similarly, Svensson and Wamala Larsson (2016) found that mobile phone usage helped reduce women's dependence on men, and others highlight that mobile phones facilitate women's economic capabilities (e.g., Abubakar & Dasuki, 2018) and that they can be used to improve pregnant women's maternal health literacy and information capabilities (Dasuki &

Zamani, 2019). Other studies have expanded their focus beyond just mobile phones to explore m-government. M-government enables women to voice their concerns regarding government services and find income-generating opportunities through online government portals (Lwoga & Chigona, 2020). Thus, m-government can potentially empower women by providing access to health, financial, and educational information, thereby enhancing their income, health literacy, and education (Abubakar & Dasuki, 2018; Nguyen & Chib, 2017; Svensson & Wamala Larsson, 2016).

However, mobile phones and m-government alone may not fully address women's empowerment needs, as various obstacles such as age, literacy, lack of resources, religious beliefs, poor infrastructure, and societal position hinder their potential (Nyemba-Mudenda & Chigona, 2018). This necessitates further studies on the notion of agency and empowerment in women's lives to advance our understanding of the role of ICTs in women's lives (Masika & Bailur, 2015; Trauth, 2013). Within the MENA context, there is a scarcity of gender studies on women using m-government, particularly in the KSA. Existing studies often overlook gender-based differences and empowerment, focusing more broadly on adoption and implementation issues  (e.g., Alonazi et al., 2020; Alotaibi & Roussinov, 2017).

Furthermore, studies that acknowledge a gender gap in m-government adoption in the KSA predominantly utilise quantitative methods, which may not fully explain how and why Saudi women use m-government and its impact on their empowerment in a society characterised by significant social limitations (Moussa & Seraphim, 2017). Thus, this study aims to extend the conceptualization of m-government beyond design, access and implementation issues, and toward understanding how m-government can enhance the social, economic and political participation of Saudi women, ultimately leading to their empowerment. To do this, we first need to conceptualise the notion of women's empowerment. This is addressed in the following section.

**Women's Empowerment**

Empowerment for women entails having the opportunity to freely make decisions without external pressures and to contribute to social change (Tasnima & Syed, 2024). One of the United Nations' primary Sustainable Development Goals is women's empowerment (UN Women, 2021). However, achieving this goal does not have a single clear pathway, partly due to the lack of a clear conceptualization of what "*women's empowerment*" encompasses (Nguyen & Chib, 2017).

For instance, the European Institute for Gender Equality (n.d.) defines it as the *"process by which women gain power and control over their own lives and acquire the ability to make strategic choices,"* while Janghorban et al. (2014, p. 226) describe it as "*a change in the circumstances of a woman's life, which enables her to raise her capacity to manage a more enriched and rewarding life."* Some scholars argue for focusing on access to education, healthcare and employment opportunities when striving for women's empowerment (Stavrou et al., 2015). Thus, despite continuous redefinition, emphasis has persisted on non-economic aspects, particularly women's agency (Donald et al., 2017). This approach to women's empowerment aligns with Sen's Capability Approach (CA), which conceptualises agency as the freedom to responsibly achieve what someone has good reason to value, such as the ability to apply for ID on a par with men, and sees it as central to the process of empowerment (Sen, 1999).

Sen argues that the *"extensive reach of women's agency is one of the more neglected areas of development studies, and most urgently in need of correction"*; he further noted that "*an adequate recognition of political, economic and social participation and leadership of women*" to be a critical element of the capability approach (Sen, 1999, p. 203). Kumar et al. (2020) argue that examining women's empowerment in the global South necessitates moving beyond economic factors to examine how women utilise the opportunities available to them and how this contributes to their social welfare. They suggest utilising the concept of agency and capabilities from the capabilities approach to understand extreme gender inequalities in those countries and explore the women's perspectives on the restrictions they face in freely expressing themselves (Kumar et al., 2020).

In line with this, we use Sen's conceptualization of empowerment as the theoretical foundation to explore women's empowerment in a patriarchal and traditional Islamic society. We focus on the capabilities available to women to be empowered and live a valuable life as a result of their increased use of m-government services in the KSA following the relaxation of *wilayah*, the male guardianship system, which is discussed in the following section.

**The Concept of *Wilayah* – The Male Guardianship System**

In Saudi Arabia the male guardianship system (*wilayah*) has become the subject of significant international attention in recent years with the focus on how this system inhibits women's basic rights (Alsharani, 2018). Traditionally *wilayah* has been seen as upholding the injunction from the Holy Quran (4:34) *Allah created men to be the protectors and supporters of women who should obey Allah and their husbands devoutly and preserve their chastity (which is their husband's property) in their husband's absence.* However, *wilayah* is an interpretation of what it means to support and protect women and allowing women agency over their own affairs is not necessarily in contravention of Islam (Ghafornia, 2017).

*Wilayah* is part of the traditional norms and values of Saudi society where a man acts as the protector and guardian (*Walia al'amr*) of his daughter, sister, wife and in some cases his mother. In line with this customary practice, guardians provide women with approval to interact in the public sphere, and, until recently, a guardian's permission was legally required for a range of activities, such as accessing government services, obtaining work, opening a bank account, enrolling for higher education, accessing health care services, travelling and enrolling children in school (Alshahrani, 2018). However, Saudi law emphasizes that the concept of *wilayah* should not be seen by men as an excuse to dominate women (Human Rights Watch, 2016) and *wilayah* has been experienced by many Saudi women as an institution that limited their freedom (Bunch, 2022).

Following the introduction of new regulations and modernising reforms forged by King Salman to advocate for the freedom of Saudi women, the male guardianship system has been relaxed. The regulation, Supreme Order No. 33322, issued in 2019, announced that government organisations were obliged to provide services to women and men on an equal basis, and that government officials should not ask for proof of the guardian's permission, except when expressly stipulated by state regulations. This regulation is considered to be a historical landmark that heralds empowerment for Saudi women, and has the potential to transform restrictive social customs and practices (Alshahrani, 2018).

In light of this regulation, government agencies have made efforts to review procedures related to obtaining guardian approval and have either amended their procedures or abolished approval

requirements. These agencies have also been instructed by the government to provide transportation to women seeking services as an indication of their commitment to gender equality (HRCSA, 2021). Resolution No. 684 of 2019 eliminated the necessity of obtaining the permission of a guardian to travel abroad, and Royal Decree No. M/134 (30 July 2019) gives women and men equality regarding the requirements for obtaining passports (UNDP, 2019).

Empowering women by eliminating the need for approval by their male guardians is a positive move toward equal rights for women in the KSA. It suffices as proof that such reforms can contribute toward gender equality following the provisions of international law and Shari'ah (Alshahrani, 2018). However, these changes are very recent, and little research as regards whether the reforms are functioning properly in empowering Saudi women has been conducted (Alnufaie & Beghum, 2021). In our study, we utilise Saudi women's voices as a means of examining how their use of m-government services contributes to their empowerment within this period of reforms. Next, we explore how Sen's Capability Approach acts as a framework for understanding the empowering opportunities afforded by m-government services.

**Sen's Capability Approach**

The Capability Approach (CA) framework focuses explicitly on the social changes that improve individual wellbeing as well as their agency (Sen, 1999); we thus consider it suitable for the context of our study. The CA emphasises the opportunities that people have to improve their wellbeing over those opportunities to acquire wealth, as being central to their happiness and supportive of development. There are two central constructs in the CA framework: capabilities which are the freedoms that someone has to achieve their goals (opportunities); and functionings, which are the actual *"beings and doings"* that the person values (achievements) (Sen, 1999, p. 18). In relation to this, Alkire (2005) argues that it is more important to focus on the opportunities (capabilities) people have rather than their achievements (functionings), because having choices is more valuable for their wellbeing and development.

Commodities, like goods and services, are means for a person to improve their wellbeing and they are thus central to the CA. There are three types of conversion factors (conditions that allow someone to use the commodities to achieve their goals): environmental conversion factors, like climate and infrastructure; social conversion factors, like social norms, public policies and power relations; and personal conversion factors, such as age, gender and level of education (Robeyns, 2005). Therefore, a person's achievements are based on their choices from among a number of capabilities, which are influenced by the above conversion factors (Zamani, 2017). Another central aspect of the CA is that it emphasises the difference between agency and wellbeing; the former being the freedom someone has to set and pursue their own interests and goals, while the latter relates to their quality of life (Robeyns, 2005).

The contribution of ICT to human development has been examined using the CA as an evaluative framework (Zheng & Walsham, 2008). The CA has also been applied within the e-government context. Adaba and Rusu (2014), for instance, investigated how an e-government initiative impacted the facilitation of e-trade in Ghana and demonstrated that it gave businesses and individuals the opportunity to make import and export declarations electronically, which in turn positively impacted the freedom of job creation. McGrath and Maiye (2010) also applied CA concepts to evaluate the Nigerian government's implementation of an electronic voter registration system to facilitate citizens' participation in elections. Their results revealed that the system enhanced citizens' freedom to participate, but the sustainability of the

developmental potential was impeded by conversion factors such as lack of trust and insufficient knowledge-building activities.

To date, not many studies have used the CA framework to assess m-government initiatives, especially from a gender perspective. One of the few studies in this area focuses on women's use of telecentres in rural Tanzania, and findings indicate that telecentres may well facilitate women building their socio-economic and political capabilities, but equally may prevent others due to conversion factors and individual decisions made, thus resulting in different development outcomes (Lwoga & Chigona, 2020). Building on such studies, we employ the CA approach to investigate the use of m-government services by Saudi women.

## METHODS

The aim of the study was to explore and understand how Saudi women use m-government services post the relation of the male guardianship system and the relationship between such use and their empowerment. Our objective therefore, following Gregor's classification of theories (Gregor, 2006) is to provide a thick description of the phenomenon of interest (women's empowerment), and identify the conditions under which (boundary conditions) this is achieved (conversion factors, contextual conditions). We thus adopted an inductive research approach, following the constructivist paradigm that conceptualises phenomena like women's empowerment, as constructed by women through a range of experiences and interactions (Allen, 2011). This includes becoming aware of government services available to them, negotiating the use of the services and experiencing positive changes to their lives as a result. We carried out interviews in January 2021 with 30 Saudi women to explore their experiences of using m-government services and these services' contribution to their empowerment. As a Saudi citizen, the lead author was able to use snowball sampling by asking her contacts to participate and then recruit others. Potential interviewees were contacted by email and asked simply whether they used, intended to use, or did not intend to use, m-government, and an equal number from each of these groups was asked if they would consider being interviewed. via Zoom. We took care to recruit women of a range of ages, educational level, marital and employment statuses, and ensured that all interviewees were mobile phone owners, users of m-government, and over 18 (see Table 1). The demographic details for each participant are shown in Appendix 2.

Each interview lasted approximately 45 minutes and was conducted online owing to COVID-19 restrictions. The authors appreciate that sampling may be biased towards more technologically literate individuals as it was performed online. Participants gave informed consent and had the purpose of the research explained to them before the interview. Confidentiality and anonymity were preserved, by replacing interviewees' names with pseudonyms and removing any identifying information. The interviews were all conducted in Arabic and then translated to English, and the transcribed data were uploaded to the Nvivo12 software package for further analysis. The interview guide (cf. interview protocol in Appendix 1) was informed by the CA framework and divided into three sections: demographic details; perceptions about the opportunities and empowerment afforded by using m-government services; and the factors influencing their use of m-government services.

The interview guide was explicitly created to address the research questions and also to encourage the women to speak freely through the use of prompts, the perceived impact these m-government applications had on their lives, and their relevance to their lived experience, all of which are elements of the CA (i.e., what they are capable to do and be, and how these

capabilities were or were not achieved). At 30 interviews, no more new insights were emerging from the data and we were able to fully describe the resulting concepts, so no further interviews were conducted (Hennink et al., 2017).

We conducted thematic analysis following the method of Braun and Clarke (2006) and being sensitive to the CA concepts. This entailed reading the interview transcripts carefully to identify any ambiguities and to list all the topics discussed by the women as codes. We then merged these codes into wider categories, searching out themes that identified uses of m-government services by the women, the opportunities afforded by the use of these services, and the factors influencing their use. Lastly, the authors reviewed and agreed on the themes to ensure that the analysis accurately reflected the focus of the study and to address any conflicts. Table 1 provides a description of our participants' characteristics, while Table 2 offers an overview of our data analysis.

*Table 1. Participants' Demographic Information*

| Demographics | Frequency (n = 30) | Percentage (%) |
|---|---|---|
| **Age** | | |
| 19 – 25 | 3 | 10% |
| 26 – 35 | 9 | 30% |
| 36 – 45 | 12 | 40% |
| 46 – 55 | 4 | 13% |
| 56 – 65 | 1 | 3% |
| 66 + | 1 | 3% |
| **Education** | | |
| Bachelor | 18 | 27% |
| Masters | 2 | 7% |
| PhD | 2 | 7% |
| No education | 2 | 7% |
| Secondary education | 5 | 17% |
| Post-doctoral | 1 | 3% |
| **Marital Status** | | |
| Single | 9 | 30% |
| Divorced | 8 | 27% |
| Married | 10 | 33% |
| Widowed | 3 | 10% |
| **Employment** | | |
| Unemployed | 12 | 38% |
| Employed | 18 | 60% |

*Table 2. Overview of data analysis - adapted from Polyviou & Zamani (2023).*

| Stage | Description of activities |
|---|---|
| 1. Familiarisation | Review of interview transcripts, reading line-by-line, anonymisation of transcripts, theoretical memoing (to identify initial codes and themes). |
| 2. Coding | Preliminary coding to identify m-government use cases, opportunities and barriers. Coding remained within cases (i.e., each transcript was coded separately). |
| 3. Themes | Cross-case analysis (i.e., examined same/similar codes across transcripts) to identify potential patterns, similarities, differences across participants, whether any new themes emerge and saturation check. |
| 4. Review and Definition of Themes | The three authors reviewed the identified themes, to achieve a consensus in terms of interpretations, and against the relevant literature to identify similarities/differences. Themes were then merged together where needed (e.g., not substantially different from each other, overlapping), or split (e.g., low meaning cohesiveness). |

| 5. Write up | Representative quotes were extracted to compile the chain of evidence for the study (tables, vignettes), theoretical memoing (from stage 1) were used to build up interpretations and descriptions of findings. |
|---|---|

Note: While Stages 1-5 appear as linear, in reality the analysis process was iterative (moving continuously between and across Stages 2-5) until the final findings stabilised.

## Ethical Considerations

The researcher informed the participants about the research aims, objectives and any risks or benefits that might be incurred by participation. The consent form was provided to the participants via email, they were asked to read, sign and return it before conducting the online interviews.

All personal data such as names were anonymized for all participants. To deal with the issue of harm, prior to the interviews taking place, the researcher confirmed that the participant had the full right to withdraw from the interview if she felt unsafe or unwilling to continue and all her data would be immediately destroyed. Potential interviewees were informed that there would be questions regarding male guardianship in relation to using government services. The researcher also ensured that the interviews were conducted at a time that was suitable for the participants. Efforts were made to ensure there was no undue pressure put on the participants to conform to the researchers' needs. Application 036816 was submitted to the University Ethics Review Board who reviewed the project and gave approval. On the Saudi side, the PNU Institutional Review Board [IRB Log Number: 20-0503] judged the project 'exempt' from the need for special ethical approval.

# FINDINGS AND ANALYSIS

To examine the contribution of m-government services to Saudi women's empowerment, we applied the CA concepts of commodities, capabilities and conversion factors. Yesser, the IT programme during which government services were developed, and Absher, the mobile application that acts as a gateway to government services, can be considered as the commodities that potentially provide opportunities to women, which in turn can lead to their empowerment. A summary of our findings can be found in (Alotaibi et al., 2016).

## Commodities

In Saudi Arabia, *Yesser* (which means *'make it easy'* in Arabic) was launched in 2005 as an IT programme to develop e-services that could link different ministries and make certain that all Saudi government agencies had their own websites. Many ministries have since launched websites, such as the Ministry of Education, the Ministry of Labour and the Ministry of Health. A key aim of Yesser is to lessen the digital divide in the KSA and transform it into a digital society by providing information electronically, thus improving government services' response times and providing ease access to services and information (Yesser, 2016). The Absher app, the official mobile application that provides access to government services to all citizens was introduced in 2015 and is available in Arabic and English. It was designed with the security and privacy of user data in mind, so that users can safely transact online, like updating and renewing visas for their employees, looking for a job, reporting cybercrime or applying to attend the annual Hajj Muslim pilgrimage. Absher is also a gateway to 160 services, such as renewing passports, applying for residency, obtaining driving licences and ID documents. More than 11 million Saudi citizens were using Absher in 2020 (Ministry of Interiors, 2020).

Thus, Yesser and Absher App are two key commodities women in KSA utilise to enhance their capabilities which in turn leads to their empowerment.

## Capabilities

Many Saudi women welcomed the new changes around *wilayah* and the government's acknowledgement of Saudi women having full rights to participate in society. One participant expressed her feelings at being able to act independently: *"I can manage my affairs, open a bank account or have a SIM card in my name. It is a step in the right direction. Now Saudi women can walk with their heads held high as a result of this landmark decision".*

The practical application of the relaxation of *wilayah* came together with the launch of the aforementioned applications, Absher and Yesser (commodities), supporting the government's m-government initiative. Our analysis revealed that women identified four key opportunities (capabilities) provided by m-government that led to their empowerment that were previously unavailable to them. These are discussed next.

## Freedom to enhance education

Some participants discussed how they had previously been prevented from traveling abroad to further their education because their male guardians refused to grant them permission. In the past, the strict guardianship system gave male relatives the authority over a woman's ability to study abroad, often using this power to impose conditions or deny opportunities altogether. However, the lifting of these restrictions, combined with the introduction of m-government services, has opened new freedoms for Saudi women. The Absher mobile platform provided access to educational services and resources that were once gatekept by male guardians, allowing women to independently manage their academic aspirations without external interference.

For example, one participant shared her experience of securing a scholarship through Absher: *"To get promoted as a lecturer in the university, I wanted to obtain a PhD. However, my uncle kept refusing to give consent and said that I must marry first. With the new system, I simply applied via the app, where I was able to upload all my documents and track my application on my own without any family member's approval. Recently, the scholarship was awarded, and I will start my PhD in October. It has always been my dream to be called 'doctor.'"*

Another participant recounted how her male guardian used his authority to extort money from her, demanding payment in exchange for permission to attend university - permission that was never granted. This exploitation left her feeling trapped and unable to pursue her education. However, with the relaxation of guardianship rules and the introduction of the Absher app, she was able to secure university admission independently:

*"Two years ago, my uncle, who is against women having a formal education, asked me for a large sum of money as a condition of allowing me to enrol in a degree program, but he never approved or signed my documents. But now, with the new system, I could easily apply for university admission without anybody's knowledge. Recently, I got my admission and started my programme in nursing and will be finishing in 2024, God willing."*

In sum, m-government services and the relaxation of male guardianship laws have significantly empowered Saudi women to pursue their education independently. These has provided them with the opportunities to secure scholarships and university admissions on their own terms. As

a result, many women are now able to achieve their educational goals and advance their careers, fulfilling long-held aspirations that were difficult to attain.

**Freedom to self-identify**

Before the introduction of Absher, Saudi women faced significant challenges in managing their personal affairs independently, particularly when it came to obtaining crucial identification documents like passports and national ID cards. Historically, in the case of national ID cards, women were not permitted to register independently. Instead, they were often listed under their male guardian's national ID, effectively tying their identity to that of a male relative. This system not only limited their autonomy but also reinforced the notion that a woman's identity was secondary to that of her guardian.

However, the relaxation of the *wilayah* (guardianship) system and the introduction of Absher, have dramatically have significant impact on women's ability to identify themselves. Women can now independently apply for their national ID cards and access a wide range of government services without requiring male guardian approval. As one participant noted: *"This is definitely a step in the right direction. I can now manage my own affairs online on my mobile. With my new digital ID card, which I applied for recently, I have been able to open my own bank account and also order a new SIM card in my own name."* This enabled the women to be financial independent where they not only save and managed their finances but also engage more actively in social and economic activities.

Also, the ability to independently acquire an e-passport has further expanded women's freedoms, granting them the ability to travel, conduct business, or pursue educational opportunities both within and outside the country. For instance, another participant shared: *"I was never able to travel abroad with my kids because my male guardian was completely against it and refused to sign the documents. Now, I applied and obtained a new passport for myself and the children using the app with no stress. As soon as the lockdown is eased, we're taking a holiday in Dubai."*

Some participants expressed a sense of satisfaction in their ability to now manage their own lives as showed in the quote: *"Being able to access services through my mobile phone has allowed me to keep my affairs strictly private and confidential, as no one else can open my phone. This is what true independence feels like. I feel independent, comfortable, and safe, with everything I need close at hand."*

Some women also mentioned that they were now able to register independently to attend Islamic pilgrimages such as the Hajj in Makkah and do not need permission or to be escorted by a man. As Islam requires such an attendance once in a lifetime, this is a significant empowerment for Saudi women.

The ability to independently obtain identification and manage personal affairs using their mobile phones has marked a significant shift in the lives of Saudi women. No longer reliant on male guardians to validate their identity or grant permission, women are now empowered to take control of their own lives. This change has not only expanded their freedom of movement and access to essential services but has also resulted in sense of pride and self-reliance.

**Freedom to engage in economic activities:**

Saudi women have also gained significant advantages using Absher, which now allows them to independently apply for a driving license—a change that has provided economic freedoms to them. Before these regulatory changes and introduction of Absher, women were often dependent on their male guardians or foreign male chauffeurs for mobility, which came with significant financial burdens. The cost of hiring a driver was expensive for many, forcing women to lose out on many economic opportunities outside their homes.

For instance, one participant shared her experience on the impact of these changes on her business as shown in the quote: *"I sell traditional beauty products. Before, I could not always get to my clients due to the high cost of transportation and had to seek permission every time from my male guardian. However, now I have officially registered my business on the Ministry of Commerce website, without needing anybody's permission, obtained a driving license, and bought a car. So now I can save money and easily visit customers and attend business conferences."*

Another participant highlighted the economic freedoms that comes with having a driver's license. She mentioned that the ability to drive allowed her to register as a taxi driver through a government website, offering her services specifically to female clients. This opportunity enabled her to generate income independently, without relying on others: *"Thank God for Absher. I am a divorcee with no source of income and depended on my male guardian. Sometimes he did not provide the financial support I needed. With Absher, I was able to get a driving license and secured a car loan. Now I work as a taxi driver and earn money to support myself."*

In addition to these driving-related opportunities, Absher also provides a platform for women to further their professional goals. The app includes features that allow women to upload their CVs and search for employment through the m-government service. This functionality provides them access to the job market, thus helping them to secure employment and build careers independently. In addition, women made use of apps such as *Jaddarah* (a platform provided by a Saudi company specialising in providing manpower and endorde by the Saudi Ministry of Labour). One widow commented that she had obtained work this way "*in order to get a job that would increase my income for the sake of my children.*"


**Freedom to independently manage, care for family and voice concerns for their safety**

Applying and having a national ID card has impacted the lives of Saudi women, enabling them to engage in various essential family activities independently, such as registering births and deaths, and enrolling their children in schools. One participant shared how having a national ID card and accessing it via her mobile phone resolved several issues linked to male guardianship: *"Before, there was nothing to prove that they were my children, but now there is a new family record attached to my ID card, so I can change my children's school easily. Back then, registration was in the name of their father [a male guardian], and only he could apply to schools for them. That has changed now."*

In recent years, the government has taken significant steps to ensure that women have the same rights as men in legal and family matters, including the ability to file a case and testify in court. A new statute concerning family law has been enacted, which guarantees equal gender rights in family matters. This includes giving both parents equal rights to open bank accounts, enrol children in school, make health decisions, or travel with their children. Women can now prove

their motherhood through family records, empowering them to take an active role in their children's lives. As one participant explained: *"As a mother, I can now access my children's records on the and follow up on their curricula, homework assignments, and results for the whole academic year via the Ministry of Education app using just my ID number."*

For many divorced and widowed women, the ability to acquire a national ID card with their children listed on it has been beneficial to them, preventing ex-husbands from using school enrolment as a means of control. One widowed participant shared her experience: *"Under the old system, the children's uncle would be their wali [guardian] and be responsible for them. I could not interfere with this. Even school registration, applying for their papers, opening their bank accounts, and registering them for university had to be done by their uncle. With the new change, I am now solely responsible for my children. Before my husband died, he was in a coma. At that time, a woman could not act without a guardian. When I tried to deposit money in my older son's account, the bank told me that I was forbidden to do so without the written consent of their father. Imagine how it would have been after their father died? It feels better now because I am responsible for them—not their uncle."*

Participants also noted that they now feel empowered as mothers because they can easily change their children's school and enrol them in other activities, such as gyms via the absher app—tasks that were previously the sole responsibility of the father. They emphasized that: *"Registration for school, health care services, and all kinds of services are accessible through mobile apps from the comfort of your home."*

The empowerment of women through these changes also provides them with the opportunity of accessing medical care as well. Since women can now use Absher independently from their male guardian, they are able to book hospital appointments for themselves and their children, access medical records, and provide consent for treatment when necessary. Moreover, they can easily consult doctors through health apps, a particularly valuable service during the COVID-19 pandemic. One participant mentioned:

*"The Ministry of Health has just announced a 24/7 hotline to answer questions about various diseases, which is an excellent step and was very helpful to me personally because I cannot leave my home for prolonged periods. So, viewing medical instruction videos and having online consultations comes in handy."*

Absher also enables women to report inappropriate or abusive behaviour. For instance, one interviewee explained how she had used Absher to report a man who insulted her while she was driving. She explained that she had been able to have the matter resolved through her mobile phone
*"When a male driver insulted me and called me names because I was driving, I immediately took a video and copied his number plate, then I reported the case. The case was dealt with and he was fined and asked to make a formal apology to me".*

Being able to voice these concerns have empowered women by making them feel safer as there is redress from violations. Other women mentioned that the Absher system could also be used to report instances of institutions. as well as individuals, being discriminatory towards them thus enabling them to voice their concerns about how they had been treated as women.


**Conversion Factors**

This section addresses how women's ability to generate capabilities from their independent use of m-government is influenced by conversion factors. The analysis of the interview data revealed that the relaxation of laws relating to male guardianship (a social conversion factor) allowed women to build capabilities using m-government services, but the lack of other conversion factors (social, environmental, personal) appear to inhibit their abilities to generate capabilities that will lead to their empowerment.

**Social Factors**

While the introduction of m-government services in Saudi Arabia has empowered many women to take charge of their own lives and affairs, social and cultural factors continue to shape how these technologies are perceived and used. Some participants in our study reported that the use of these services conflicted with their religious beliefs and traditional values, which in turn influenced their willingness or ability to use the m-government services. For some of the women, the use of m-government services is seen as contrary to their religious values, particularly when it involves activities that they believe are inappropriate for women. One participant expressed her concerns about the requirements of these services, such as revealing her face for identification purposes:

*"Using the system is not only against Saudi customs and traditions, but it isn't permissible from a religious perspective as it involves mingling with men, not to mention the fact that you have to show your face for the photo. Women like me believe that a woman exposing her face is against the rules. I cannot take off my niqab (veil) for the photo and expose my face for men to see."*

This sentiment underscores the ongoing tension between modernizing reforms and deeply rooted cultural and religious norms. For some of the women who adhere to conservative interpretations of Islamic principles, the act of revealing one's face to strangers, particularly men, can be a significant barrier to using digital services, even if these services are designed to facilitate their independence and access to resources. Additionally, there is a segment of Saudi women who continue to uphold traditional views regarding male guardianship, believing that respect for their male guardians is an essential part of their identity. These women feel that it is necessary to seek their guardian's permission before engaging in activities such as using m-government applications. This perspective highlights the importance of cultural continuity and the deep-seated belief in maintaining traditional gender roles, even in the face of government reforms that aim to empower women. As one participant explained:

*"Respect for her male guardian and asking for his permission is certainly an integral part of every Saudi woman's identity. The first thing is to respect our customs and traditions, and the second is we were brought up to respect our men. In the era of new applications, many things have become easy and made our lives easier, but I still need to ask permission, especially for a passport and traveling."*

This statement illustrates how the shift towards greater autonomy for women through digital services is met with resistance from those who view these changes as potentially undermining established social norms. For some, the convenience offered by m-government services does not outweigh the perceived need to maintain the traditional structures of authority within the family. In other cases, the opposition to using m-government services comes not from the women themselves but from their male guardians. Some women expressed their frustration with the limitations imposed on them by their guardians, who refuse to grant permission for activities such as applying for a passport or traveling abroad. This resistance often stems from the belief that managing interactions with government entities is a man's responsibility, while

a woman's role is to focus on homemaking and taking care of the children. One participant shared her experience:

*"My husband feels that women should only concentrate on their duties as homemakers and views this decision (to allow women to conduct their transactions) as an encroachment upon his male authority, but I'm all for it because I support anything that empowers women."*

This quote reflects the broader societal expectation that men are the primary decision-makers in matters involving public or official affairs, while women's roles are confined to the private sphere. For women who wish to take advantage of the new opportunities presented by m-government services, this mindset can be a significant hurdle. In some situations, the opposition from male guardians is not just about maintaining authority but also about jealousy and control. Some men fear that if their wives or daughters gain more independence through education or the ability to travel, it might lead to situations where other men could interact with them or make advances. This possessive attitude can result in women being denied access to opportunities that could enhance their personal and professional lives. One participant detailed her struggle with this situation:

*"My husband refuses to let me take up a scholarship as it means traveling while he is at work and he would not let me go out alone because of jealousy. He feels other men might see me or make advances to me. He still believes in the male guardianship law and despite the law reform, he made it clear I could not go. I cannot apply for a scholarship or request a driver's license. My husband is very jealous."*

This narrative demonstrates how the intersection of traditional beliefs and personal insecurities can restrict women's access to the very tools designed to empower them. Despite legal reforms and the availability of m-government services, some women remain trapped by the cultural norms.

**Environmental Factors**

While m-government services in Saudi Arabia have opened new avenues for women to access important government resources independently, environmental factors such as technical issues and poor internet connectivity have posed significant challenges. These factors can hinder the effectiveness of these services, making it difficult for women to generate the desired capabilities that can lead to their empowerment.

A common issue reported by participants was the tendency of m-government apps to *"freeze"* during peak usage times. This problem often requires users to repeatedly log in and out, consuming valuable time and creating frustration. For many women, this technical barrier reduces the efficiency of using these services, as they must wait for the apps to function properly in order to complete their tasks. One participant shared her experience with these technical difficulties: *"I often experience technical problems with the Absher app, probably because of the heavy traffic and technical problems like a slow internet speed and frequent hangs, you can't do what you want within the allocated time limit."* This quote illustrates how technical glitches can become a significant barrier, especially when they occur during high-demand periods when many users are trying to access the service simultaneously. For women who are already balancing multiple responsibilities, these delays can be particularly disruptive.

Another factor compounding these issues is poor internet connectivity, which further exacerbates the problem of app freezes. Many participants noted that their experience with m-

government services was negatively affected by slow connection speeds, which caused them to frequently restart the app in order to complete their transactions before the session timed out. This situation was particularly frustrating for those in areas with unreliable or slow internet. As one participant explained: *"I think it depends on the speed of the internet at your home. Most complaints are about the internet being so slow that the app wouldn't open or that there are frequent down times."*

Participants also mentioned that slow internet speeds made it difficult to download or open files within the app, which added to their frustration. One woman explained how these technical problems reduced the convenience of using the service *"The details in the Absher application need to be clearer and more concise. The internet connection is sometimes slow; this can interrupt downloading files. Although these applications are very efficient and convenient, I face some difficulties, such as slow download speed and navigating through pages."* Additionally, some participants attributed the frequent freezes and glitches to the continuous updating and enhancement of the apps itself. One participant remarked:

*"The continuous updating of the app, that is, the process of adding features makes the application freeze a lot."* The delays in accessing government documents or completing applications due to technical difficulties on Absher has resulted in missed capabilities for education or employment.

**Personal factors**

The use of m-government services among Saudi women to enhance their capabilities are significantly shaped by personal factors, especially those related to digital literacy. Women with limited education or inadequate digital skills often find it challenging to fully engage with these services. For example, a 74-year-old participant expressed deep frustration with her inability to use m-government services due to her lack of education, stating: *"If I were younger, I certainly would have learned how to read and write, but it is too late for that now, and for this reason, I cannot use m-government."*

Like many in similar circumstances, this participant must rely on her male guardian to conduct government transactions on her behalf. This dependency is not unique to older women; those with literacy difficulties frequently depend on family members to navigate the apps for them. Despite desire by the women to access m-government services, these women are held back by their limited digital literacy. Another participant recounted her experience, *"I wouldn't know how to use m-government because I'm not good at using modern technology, and my husband does this for me."*

The issue extends beyond digital literacy to also general lack of awareness about the available services. Many participants, though confident in their ability to manage their own affairs, feel that they are hindered by their unfamiliarity with technology. One participant noted, *"I feel that women are mature and smart enough to be self-dependent and able to manage their affairs. However, I feel that this [using apps] may be a bit hard for older women because they are mostly not tech-literate like me."*

The situation is further complicated by the fact that some Saudi women are unaware of the existence of government apps and the potential benefits they offer. This gap in awareness underscores the need for comprehensive education and outreach to ensure that all women, regardless of age or educational background, can access and benefit from these services. As

one participant emphasized, *"Saudi women need to be made aware [of the apps] as well as acquiring the technical ability to easily access government services."*

The table below summarises the capabilities and consequent empowerment identified by the women in the study.

*Table 3 Summary of Findings using the Concepts of the Capabilities Approach and Empowerment*

| Commodities | Conversion Factors | Capabilities | Empowerment |
|---|---|---|---|
| Yesser Absher | *Social Factors*<br>　　Traditional beliefs<br>　　Religious belief<br>　　Cultural Values<br>*Environmental Factors*<br>　　Reliable internet connection<br>　　Reliable m-government app<br>　　Robust m-government infrastructure<br>*Personal Factors*<br>　　Digital literacy<br>　　M-government awareness | Freedom to enhance education<br><br><br><br><br>Freedom to engage in economic activities<br><br><br><br><br>Freedom to self-identify<br><br><br><br><br><br>Freedom to independently manage, care for family and voice concerns | Empowered to pursue educational goals and advance careers independently, without external interference.<br><br>Gained economic empowerment through reduced reliance on male guardians and the ability to generate income on their own.<br><br>Enabled to act independently in situations requiring identification, allowing for greater engagement in various socio-economic and religious activities.<br><br>Increased autonomy and mobility, facilitating a more independent life with redress available. |

## DISCUSSION

In this study, we investigated the use of m-government services by Saudi women who, according to the new law, now have the full right to access m-government without their guardians' permission. We adopted Sen's Capability Approach (CA) to conceptualize women's empowerment in the Saudi context. Our theoretical lens formally considers and examines the dimensions of empowerment in relation to the CA, thus putting forward an integrative approach that enables Saudi women to tell their story in their own voices and based on their own choices and values. As earlier scholars have argued, while the CA can be a robust tool for exploring and identifying the range of functionings an individual can achieve based on

available capabilities (Robeyns, 2005; Zamani, 2017), exploring such functionings from an empowerment perspective can be particularly useful. More recently, Vannini et al (2024) have stressed the importance of including the voices of people who are marginalized and reporting their lived experiences when focusing on how women used ICT4D to gain empowerment and challenge inequalities and to note the impact of their feelings and values on this process. This perspective helps in understanding how a specific socio-cultural context shapes the process by which capabilities afforded by digital resources, such as m-government services, can be supported or hindered by various conversion factors, and how the functionings achieved relate to different aspects of empowerment.

The study makes a significant contribution by shifting the focus from merely examining the adoption of m-government services to understanding how the use of these services contributes to the lives of citizens, particularly women, a group generally neglected in ICT4D studies (Lwoga & Chigona, 2020). Moreover, Vannini, et al. (2024) call for more ICT4D investigations in non-Western contexts in order to challenge "established Western paradigms" as well as addressing "deeply entrenched gender inequalities and power imbalances" (p196). Furthermore, the study makes a unique contribution that relates to the context of the study itself. This research has been conducted during a highly significant point in time for Saudi women. The Saudi government is committed to pushing toward modernization, and the digitalization of government, part of which relates to m-government, is central to this effort. At the same time, it is acknowledged that modernization requires bringing Saudi women more meaningfully into the labour market and providing them with more opportunities to be active citizens. A way to achieve this is through the relaxation (and possibly dismantling over the longer term) of the *wilayah* system. As such, our study offers a detailed description of the male guardianship system, an institution that has undergone profound changes (Alonazi et al., 2020; Alshahrani, 2018), and unpacks the concept further to illustrate the impacts of these changes for Saudi women. We consider this to be significant, as the process is bound to lead to fundamental changes over the longer term within the KSA, and our study is chronicling these changes in terms of how Saudi women see them impacting their lives.

Using Sen's CA as a theoretical lens, the findings of the study have shown that women in the KSA use m-government services to enhance four individual capabilities, thereby enhancing empowerment:

**The freedom to participate in educational activities.** Many of the women have gained educational benefits through their independent use of m-government services. These findings are similar to those of Nguyen and Chib (2017), which showed that m-government services provide educational opportunities for women. In the context of KSA, such opportunities available through m-government services and the relaxation of the *wilayah* system have potentially empowered women to pursue their career and educational aspirations without interference from external actors. However, we acknowledge that many women may feel unable to go against the wishes of their male guardian even if they are legally allowed to.

**The freedom to engage in economic activities.** The use of the m-government services provided women with opportunities to run small businesses such as taxi services, generate income, and actively engage in Saudi Arabia's digital economy. Previous research has demonstrated that when women have access to income-generating activities, it empowers them to engage in the national economy and create stable lives for themselves and their families (Lwoga & Chigona, 2020). Many of the widows and divorced women no longer had to rely on family members or friends to support themselves. These findings reflect existing literature,

which suggests that the necessity for women to take sole responsibility for themselves and their families drives them to engage in empowering practices within the local economy to earn income (Svensson & Wamala Larsson, 2016). In this context, m-government may serve as a means of empowerment, reflecting the findings of Alonazi et al. (2020) and Alotaibi and Roussinov (2017). However, a recent study of women's empowerment through education and employment showed that it is simplistic to consider women's increased involvement in the workforce as a sign of empowerment because such statistics can mask deeper cultural hindrances to their agency and inequalities (Alhawsawi & Jawhar, 2023).

**The freedom to self-identify.** By allowing women to establish their identity on their own, m-government services help them participate more fully in society, giving them a stronger sense of ownership, social status and responsibility. This capability is supported by existing research that highlights how important legal recognition is for empowering women, as it provides them with the essential tools to confidently navigate both public and private aspects of life (Fruttero et al., 2023). Furthermore, the findings of our study show that the ability to self-identify reduces women's dependence on male family members, thereby contributing to their overall sense of autonomy. This reflects the findings of previous studies that highlight the role of self-identification in promoting women's autonomy and strengthening their agency (Dahan &Hanmer, 2015).

**The freedom to independently manage and care for one's family and voice concerns about their safety.** Using m-government services, women, particularly those who are widowed or divorced, have been able to assume full responsibility for their households, and to make decisions related to their children's education, healthcare and overall well-being without needing approval from male relatives. This capability significantly alters the traditional family dynamics, where women often relied on male family members for support and decision-making. The ability to independently manage family affairs not only empowers women but also instils a sense of confidence and competence. It enables them to fulfil their roles as primary caregivers and heads of households, contributing to the stability and security of their families. The current study found that women made use of m-government to report incidents of abuse. In their study of the extent to which social media enhanced the empowerment and autonomy of Bangladeshi women, Klose and Jebin (2024) concluded that women, especially those from the Global South needed their voices to be "amplified" through. Arguably, being heard is only the first step and by providing a means to report abuse directly, Saudi m-government services give Saudi women some measure of redress.

Moreover, this empowerment aligns with existing literature that emphasizes the importance of autonomy in caregiving roles for women's overall empowerment (Svensson & Wamala Larsson, 2016). When women are free to make decisions regarding their families, they are more likely to engage in practices that benefit their household's long-term welfare. However, long-term dependence may mean that some women find it difficult to behave independently. Several women in our study identified that they had obtained support from other women (often younger relatives) to help them use m-government services. This echoes findings by Diez and Bossio (2024) whose study of interactions by Peruvian women on social media highlighted the importance of *sororidad* (women's solidarity) in providing support and care for each other and as a means of obtaining their rights.

Lastly, the findings revealed the use m-government by women in Saudi Arabia to enhance their empowerment is contingent on the personal, social and environmental conditions in which they are situated. For example, women with limited education or inadequate digital skills often struggle to engage fully with these services, resulting in a continued reliance on male guardians to conduct essential transactions. This echoes research by Pei et al, (2024) who found that age was an important factor for "marginalised elderly woman in the Global South" as they were more likely to have problems with digital literacy (p292). Age is a particularly pertinent factor in the current study as older Saudi women often struggle with reading and writing, and have issues with digital literacy, due to the late introduction of compulsory education for girls in Saudi Arabia. These authors stress the importance of filling the "critical gap left by previous studies that treat elderly populations homogeneously without drawing attention to their gender disparities" (p.303) in order to better understand how such marginalised women can be supported to use ICT4D.

However, his reliance on male guardians is not restricted to older women; even younger women with limited digital literacy face challenges in independently navigating these platforms. The issue is further exacerbated by a lack of awareness about the existence and potential benefits of m-government services. While many women possess the capability to manage their own affairs, their unfamiliarity with the technology hinders their ability to take full advantage of these digital tools. These findings align with existing literature, which underscores the importance of digital literacy in enabling effective use of ICTs for empowerment (Graf, 2020). Research indicates that tailored digital literacy programmes can significantly enhance women's ability to utilize digital services, thereby promoting greater social inclusion and economic participation (UNESCO, 2024).

Also, technical issues and poor internet connectivity pose significant challenges to the effective use of m-government services by Saudi women. These technical barriers not only reduce the efficiency of m-government platforms but also contribute to a frustrating user experience, which may deter women from fully utilizing these services (Alotaibi & Roussinov, 2017). This finding is consistent with existing research, which highlights the crucial role that reliable infrastructure plays in the successful adoption and use of m-government services (Nyemba-Mudenda & Chigona, 2018; Wang and Teo, 2020). Improving internet connectivity and addressing technical issues within m-government platforms are essential steps towards enhancing the capabilities of these services to empower Saudi women. Policy makers need to ensure that prospective users (including women) are able to use m-government unobstructed so that the benefits of such provision can be maximised. This means ensuring that such services are easy to use and aligned, as far as possible, to their users' literacy levels.

The study also found that social and cultural factors significantly influence the adoption and use of m-government services among Saudi women. Despite the empowering potential of these services, some participants reported that the use of such technologies conflicted with their religious beliefs and traditional values. For instance, the requirement to reveal one's face for identification purposes was seen as incompatible with the conservative interpretations of Islamic principles held by some women. Moreover, the persistence of traditional views regarding male guardianship continues to shape how these services are perceived and used. Some women believe that seeking permission from their male guardians before using m-government applications is necessary, reflecting deep-seated cultural norms and the importance of maintaining traditional gender roles (Alnufaie & Beghum, 2021). This adherence to cultural continuity, even in the face of legal reforms, demonstrates the complex interplay between modernization and tradition in the adoption of digital services.

These findings are supported by existing literature, which emphasizes the role of cultural and social norms in influencing the adoption of new technologies (Robeyns, 2005, Zamani, 2017) and whether and to what extent these services are perceived as adding value to potential users' lives (Choudrie et al., 2021). Moussa and Seraphim (2017) argue that customs and traditions that entail male control over women can be prohibitive towards women's empowerment. In our study, we extend this discussion and show that family values and religious beliefs, functioning as conversion factors, still exert a strong influence on Saudi culture, whereby deeply rooted cultural and religious beliefs often result in women limiting their own ability to access the means of empowerment, as afforded by m-government.

In sum, we have shown in our study how m-government provides opportunities to enhance the empowerment of women in Saudi Arabia. Using the CA, we argue that m-government is a commodity that women use to generate capabilities they value. These capabilities, in turn, lead to their empowerment, enabling them to participate in the digital society. However, the generation of these capabilities is influenced by conversion factors. Additionally, our study makes a contribution to theory by arguing that the empowerment of women through m-government initiatives cannot be achieved by the implementation of m-government alone. Instead, it is the intricate interplay between various factors that truly facilitates empowerment. Our study reveals that at present, Saudi women are in between being empowered by recent changes in the law and ICT-based government initiatives, and being disempowered by tradition and culture. It is therefore of paramount importance to increase Saudi women's awareness of the potential benefits of fully utilising these services while simultaneously preparing society to accept new policies and norms. Access to commodities, plays a crucial role in this dynamic. Additionally, the removal of restrictive laws, which act as conversion factors, is essential. These legal reforms not only enable the effective use of e-government services but also serve as a significant means to women's empowerment. Therefore, it is the combination of accessible resources and supportive legal frameworks that collectively enhance the potential of e-government to empower women.


## CONCLUSIONS AND LIMITATIONS

In this study, we use Sen's Capability Approach to understand how m-government contributes to the empowerment of women in Saudi Arabia. Our study demonstrates that accessing m-government services contributes to women's participation in economic and social activities that can result in their empowerment. However, social, environmental and personal factors impede in some cases their ability to generate capabilities from m-government services and in turn achieve their desired functionings. While m-government services have enhanced the capabilities of Saudi women, the strong traditions and Islamic beliefs that continue to impact the way of life in the KSA mean that it is uncertain whether women will become fully empowered: as shown through findings, some women oppose the relaxation of the guardianship system as it contradicts their values and beliefs; others however are supportive, and yet unable to exercise their agency and take advantage of the capabilities offered via m-government. It is in these latter cases where we see the reforms not being sufficient to overcome the barriers for those who experience them as such.

Our study contributes to the literature on women's empowerment and ICT4D by providing insights into how Saudi women make use of m-government. To the authors' knowledge, this is the first study in this area that looks into women ICT-enabled empowerment in the Saudi

context. Yet, like all studies, ours too, comes with certain limitations. We conducted our study under severe constraints because of the COVID-19 pandemic. This meant that we were unable to recruit Saudi women from many different areas and additional walks of life, while our discussions with them were conducted online. Being able to approach women interviewees on a face-to-face basis would have been preferrable as it would allow to appreciate cues such as body language, while our participants were sharing their experiences. This approach also means that it is very likely that we were able to recruit only the more tech-savvy women.

In addition, our study was designed to provide a nuanced understanding of the lived experiences of Saudi women immediately following the reforms, rather than producing broadly generalisable findings or studying changes that transpired over a substantial period of time. Consequently, qualitative data was sought and the study was cross-sectional rather than longitudinal. We were careful to recruit Saudi women from a range of backgrounds, but our intention was not to make any systematic comparisons between them (e.g., between married/unmarried women, of different socioeconomic backgrounds). We consider that further probing into these elements in the future could be beneficial. For example, stratified sampling within the context of a longitudinal study could help us appreciate possible conceptual links between marital and socioeconomic statuses, m-government use and achieved functionings.

Finally, we have been specifically focused within the KSA, which is characterised by its strong traditions and religious beliefs. As such, it wouldn't be prudent to extend our findings widely, e.g., within Western societies, i.e., where contextual conditions are markedly different, to the extent that prohibit generalisations (Davison & Martinsons, 2016; Gregor, 2006). Yet, we see that our findings can be applicable within e.g., patriarchal societies, whose contextual conditions are similar to the KSA's, whereby generalisations can take place in the fashion described by Walsham (2006, p. 322), i.e., in the form of *"concepts, theories, specific implications or rich insights"* within similar contexts.

## ACKNOWLEDGEMENTS

## REFERENCES

Abu Bakar, N. S., Rahman, A. A., & HAmed, H. N. A. (2017). m-Government: Benefits and its Key Attributes for Personalized Services. *PACIS 2017*. http://aisel.aisnet.org/pacis2017/245

Abubakar, N. H., & Dasuki, S. I. (2018). Empowerment in their hands: Use of WhatsApp by women in Nigeria. *Gender, Technology and Development*, *22*(2), 164–183. https://doi.org/10.1080/09718524.2018.1509490

Adaba, G. B., & Rusu, L. (2014). E-trade Facilitation in Ghana: A Capability Approach Perspective. *The Electronic Journal of Information Systems in Developing Countries*, *63*(1), 1–13. https://doi.org/10.1002/j.1681-4835.2014.tb00450.x

Ahmad, S. Z., & Khalid, K. (2017). The adoption of M-government services from the user's perspectives: Empirical evidence from the United Arab Emirates. *International Journal of Information Management*, *37*(5), 367–379. https://doi.org/10.1016/j.ijinfomgt.2017.03.008

Alharbi, A. S., Halikias, G., Yamin, M., & Basahel, A. (2020). An overview of M-government services in Saudi Arabia. *International Journal of Information Technology*, *12*(4), 1237–1241. https://doi.org/10.1007/s41870-020-00433-9

Alhawsawi, S., & Jawhar, S. S. (2023). Education, employment, and empowerment among Saudi women. *Gender and Education*, *35*(4), 401–419. https://doi.org/10.1080/09540253.2023.2189917

Alkire, S. (2005). Why the Capability Approach? *Journal of Human Development*, *6*(1), Article 1.

Allen, M. (2011). Violence and voice: Using a feminist constructivist grounded theory to explore women's resistance to abuse. *Qualitative Research*, *11*(1), 23–45. https://doi.org/10.1177/1468794110384452

Almaiah, M. A., Al-Khasawneh, A., Althunibat, A., & Khawatreh, S. (2020). Mobile Government Adoption Model Based on Combining GAM and UTAUT to Explain Factors According to Adoption of Mobile Government Services. *International Journal of Interactive Mobile Technologies (iJIM)*, *14*(03), 199. https://doi.org/10.3991/ijim.v14i03.11264

Alnufaie, H., & Beghum, S. M. (2021). Emerging Pattern of Women Empowerment in Saudi Arabia. *Research Review, International Journal of Multidisciplinary*, *6*(5). https://doi.org/10.31305/rrijm.2021.v06.i05.002

Alonazi, M., Beloff, N., & White, M. (2020). Perceptions Towards the Adoption and Utilization of M-Government Services: A Study from the Citizens' Perspective in Saudi Arabia. In E. Ziemba (Ed.), *Information Technology for Management: Current Research and Future Directions* (Vol. 380, pp. 3–26). Springer International Publishing. https://doi.org/10.1007/978-3-030-43353-6_1

Alotaibi, R., Houghton, L., & Sandhu, K. (2016). Exploring the Potential Factors Influencing the Adoption of M-Government Services in Saudi Arabia: A Qualitative Analysis. *International Journal of Business and Management*, *11*(8), 56. https://doi.org/10.5539/ijbm.v11n8p56

Alotaibi, S., & Roussinov, D. (2017, March 21). *User acceptance of m-government services in Saudi Arabia: 17th European Conference on Digital Government*. http://www.academic-conferences.org/conferences/ecdg/

Alshahrani, B. N. S. (2018). *Male guardianship over women under Islamic Shariah, Saudi Arabia's Domestic Law and International Human Rights Law* [Thesis, Brunel University London]. http://bura.brunel.ac.uk/handle/2438/18908

Alssbaiheen, A., & Love, D. S. (2015). Exploring the Challenges Of M-Government Adoption in Saudi Arabia. *Electronic Journal of E-Government*, *13*(1), Article 1.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), Article 2. https://doi.org/10.1191/1478088706qp063oa

Bunch, R. D. (2022). Shackled by Shari'a: Saudi Women Still Controlled by Male Guardianship System despite Present (Cosmetic) Reforms Notes. *Journal of Global Justice and Public Policy*, *8*, 73–94.

Choudrie, J., Zamani, E., & Obuekwe, C. (2021). Bridging the Digital Divide in Ethnic Minority Older Adults: An Organisational Qualitative Study. *Information Systems Frontiers*. https://doi.org/10.1007/s10796-021-10126-8

Dahan., M and Hanmer, L (2015) The identification for development (ID4D) agenda: Its potential for empowering women and girls. *World Bank*. https://documents1.worldbank.org/curated/en/859071468190776482/pdf/99543-WP-P156810-PUBLIC-Box393205B.

Dasuki, S. I., & Zamani, E. D. (2019). Assessing mobile phone use by pregnant women in Nigeria: A capability perspective. *The Electronic Journal of Information Systems in Developing Countries*, *85*(5), Article 5. https://doi.org/10.1002/isd2.12092

Davison, R. M., & Martinsons, M. G. (2016). Context is king! Considering particularism in research design and reporting. *Journal of Information Technology*, *31*(3), Article 3. https://doi.org/10.1057/jit.2015.19

Diez, I., & Bossio, J. (2024). Women's solidarity as feminism in action: the concept of sisterhood (sororidad) in #LasRespondonas, a Facebook group in Peru, *Information Technology for Development, 30*(2), 229-245, doi:10.1080/02681102.2023.2279310

Donald, A. A., Koolwal, G. B., Annan, J., Falb, K., & Goldstein, M. (2017). *Measuring Women's Agency*. World Bank Policy Research Working Paper No. 8148. https://papers.ssrn.com/abstract=3006222

European Institute for Gender Equality. (n.d.). *Empowerment of women*. Retrieved 30 April 2024, from https://eige.europa.eu/publications-resources/thesaurus/terms/1246

Fruttero, A., Gomes, D. B. P., & Sharma, N. (2023). Lawful Progress: Unveiling the laws that reshape women's work decisions. *IMF Working Papers*, *2023*(252), A001. https://doi.org/10.5089/9798400261039.001.A001

Gaur, A., & Avison, D. (2015). Women and ICT-enabled Well-Being: Inclusive Innovation by Micro Financial Institutions in India. *Proceedings of the 13th International Conference on Social Implications of Computers in Developing Countries*.

Ghafournia, N. (2017). Muslim women and domestic violence: Developing a framework for social work practice. *Journal of Religion & Spirituality in Social Work: Social Thought*, *36*(1–2), 146–163. https://doi.org/10.1080/15426432.2017.1313150

Graf, V. (2020). Inclusiveness in a Digitizing World – Investigating ICT and Women's Empowerment. *Proceedings of the 28th European Conference on Information Systems, paper 114*

Gregor, S. (2006). The Nature of Theory in Information Systems. *MIS Quarterly*, *30*(3), 611. https://doi.org/10.2307/25148742

Hennink, M. M., Kaiser, B. N., & Marconi, V. C. (2017). Code Saturation Versus Meaning Saturation: How Many Interviews Are Enough? *Qualitative Health Research*, *27*(4), Article 4. https://doi.org/10.1177/1049732316665344

HRCSA. (2021). *How is equality between men and women made under the Kingdom's laws?* Human Rights Commission, Saudi Arabia (HRCSA). http://www.hrc.gov.sa/ar-sa/HumanRightsInSaudi/Pages/equalityrights.aspx

Hsieh, P. H., Huang, C. S., & Yen, D. C. (2013). Assessing web services of emerging economies in an Eastern country—Taiwan's e-government. *Government Information Quarterly*, *30*(3), 267–276. https://doi.org/10.1016/j.giq.2013.02.003

Human Rights Watch. (2016). Boxed In. *Human Rights Watch*. https://www.hrw.org/report/2016/07/17/boxed/women-and-saudi-arabias-male-guardianship-system

Janghorban, R., Taghipour, A., Latifnejad Roudsari, R., & Abbasi, M. (2014). Women's Empowerment in Iran: A Review Based on the Related Legislations. *Global Journal of Health Science*, *6*(4), p226. https://doi.org/10.5539/gjhs.v6n4p226

Klose, H., & Jebin, L. (2023). 'I pretend to be an ideal woman just to keep their mouths shut': Bangladeshi women's contestation of abuse through social media platforms. *Information Technology for Development*, *30*(2), 246–263. https://doi.org/10.1080/02681102.2023.2279326

Kumar, N., Karusala, N., Ismail, A., & Tuli, A. (2020). Taking the Long, Holistic and Intersectional View to Women's Wellbeing. *ACM Transactions on Computer-Human Interaction*, *27*(4), 1–32. https://doi.org/10.1145/3397159

Lee, J., Kim, H. J., & Ahn, M. J. (2011). The willingness of e-Government service adoption by business users: The role of offline service quality and trust in technology. *Government Information Quarterly*, *28*(2), 222–230. https://doi.org/10.1016/j.giq.2010.07.007

Lwoga, E. T., & Chigona, W. (2020). Telecenters and the expansion of human capabilities among rural women. *Global Knowledge, Memory and Communication*, *69*(6/7), 501–520. https://doi.org/10.1108/GKMC-11-2019-0136

Masika, R., & Bailur, S. (2015). Negotiating Women's Agency through ICTs: A Comparative Study of Uganda and India. *Gender, Technology and Development*, *19*(1), Article 1.

McGrath, K., & Maiye, A. (2010). The role of institutions in ICT innovation: Learning from interventions in a Nigerian e-government initiative. *Information Technology for Development*, *16*(4), 260–278. https://doi.org/10.1080/02681102.2010.498408

Ministry of Interiors. (2020). *Absher app*. https://www.moi.gov.sa/

Moussa, M. B., & Seraphim, J. (2017). Digital gender divides and e-empowerment in the UAE: A critical perspective. *International Journal of Education and Development Using Information and Communication Technology*, *13*(3), 145–161.

Nguyen, H., & Chib, A. (2017). Mobile phones and gender empowerment: Negotiating the essentialist–aspirational dialectic. *Information Technologies & International Development*, *13*, 171–185.

Nyemba-Mudenda, M., & Chigona, W. (2018). mHealth outcomes for pregnant mothers in Malawi: A capability perspective. *Information Technology for Development*, *24*(2), Article 2. https://doi.org/10.1080/02681102.2017.1397594

O'Donnell, A., & Sweetman, C. (2018). Introduction: Gender, development and ICTs. *Gender & Development*, *26*(2), 217–229. https://doi.org/10.1080/13552074.2018.1489952

Pei, X., Chen, Z. T., & Zhang, L. (2024). Comprehending ICT for gender empowerment in an aging context: digitalization of marginalized female elderly in the Global South during COVID-19. *Information Technology for Development*, *30*(2), 291–307. https://doi.org/10.1080/02681102.2023.2300669

Polyviou, A., & Zamani, E. D. (2023). Are we Nearly There Yet? A Desires & Realities Framework for Europe's AI Strategy. *Information Systems Frontiers*, *25*(1), 143–159. https://doi.org/10.1007/s10796-022-10285-2

Robeyns, I. (2005). The Capability Approach: A Theoretical Survey. *Journal of Human Development*, *61*(3), Article 3.

Samargandi, N., Al Mamun, M., Sohag, K., & Alandejani, M. (2019). Women at work in Saudi Arabia: Impact of ICT diffusion and financial development. *Technology in Society*, *59*, 101187. https://doi.org/10.1016/j.techsoc.2019.101187

Samb, O. M., & Ridde, V. (2018). The impact of free healthcare on women's capability: A qualitative study in rural Burkina Faso. *Social Science & Medicine*, *197*, 9–16. https://doi.org/10.1016/j.socscimed.2017.11.045

Sen, A. (1999). *Development as freedom*. Oxford University Press.

Stavrou, E. T., Casper, W. J., & Ierodiakonou, C. (2015). Support for part-time work as a channel to female employment: The moderating effects of national gender empowerment and labour market conditions. *The International Journal of Human Resource Management*, *26*(6), 688–706. https://doi.org/10.1080/09585192.2014.971847

Svensson, J., & Wamala Larsson, C. (2016). Situated empowerment: Mobile phones practices among market women in Kampala. *Mobile Media & Communication*, *4*(2), 205–220. https://doi.org/10.1177/2050157915619212

Tasnima, T., & Md Syed, M. A. (2024). Smart phone usage for women's empowerment to respond against domestic violence in Bangladesh. *Information Technology for Development*, *30*(1), 114–131. https://doi.org/10.1080/02681102.2023.2288853

Trauth, E. M. (2013). The role of theory in gender and information systems research. *Information and Organization*, *23*(4), Article 4. https://doi.org/10.1016/j.infoandorg.2013.08.003

UN Women. (2021). *Progress on the Sustainable Development Goals: The gender snapshot 2021*. United Nations Entity for Gender Equality and the Empowerment of Women (UN Women) Department of Economic and Social Affairs (DESA). https://www.unwomen.org/en/digital-library/publications/2021/09/progress-on-the-sustainable-development-goals-the-gender-snapshot-2021

UNDP. (2019). *Gender Justice & Equality before the law*. UNDP. https://www.undp.org/saudi-arabia/publications/gender-justice-equality-law

UNESCO (2024) *Empowering women through digital literacy: IFAP's impact across marginalized communities* https://www.unesco.org/en/articles/empowering-women-through-digital-literacy-ifaps-impact-across-marginalized-communities

Vannini, S., Tandon, A., & Masiero. S. (2024) Feminist and queer approaches to ICT4D: imagining and enacting liberation, *Information Technology for Development, 30*(2), 195–208. https://doi.org/10.1080/02681102.2024.2360808

Vision 2030. (2020). *Strategic objectives and vision realization programs*. https://vision2030.gov.sa/en

Walsham, G. (2006). Doing interpretive research. *European Journal of Information Systems*, *15*, 320–330.

Wang, C., & Teo, T. S. H. (2020). Online service quality and perceived value in mobile government success: An empirical study of mobile police in China. *International Journal of Information Management*, *52*, 102076. https://doi.org/10.1016/j.ijinfomgt.2020.102076

Xiong, L., Wang, H., & Wang, C. (2022). Predicting mobile government service continuance: A two-stage structural equation modeling-artificial neural network approach. *Government Information Quarterly*, *39*(1), 101654. https://doi.org/10.1016/j.giq.2021.101654

Yesser. (2016). *The e-Government second action plan (2012 – 2016)*. Yesser. https://www.yesser.gov.sa/en/MechanismsandRegulations/strategy/Pages/The2ndEgovernmentActionPlan.aspx

Zamani, E. D. (2017). Social Inclusion and ICTs. A Literature Review Through the Lens of the Capability Approach. In J. Choudrie, S. Kurnia, & P. Tsatsou (Eds.), *Social Inclusion and Usability of ICT-enabled Services*. Routledge.

Zheng, Y., & Walsham, G. (2008). Inequality of what? Social exclusion in the e-society as capability deprivation. *Information Technology & People*, *21*(3), Article 3.

# APPENDICES

## 1. Interview Protocol

**Interview Number_____     Date of Interview_____**
**Code name [I will put a code name for the interviewee] _____**
**Thank you for taking part in this interview. I would like to reconfirm that the interview is being audio-recorded and that everything you say is confidential. Your name will not appear on any documents and only the research team, which includes me and my supervisors, will see the transcripts. You can ask to stop the recording at any time and also withdraw from the interview at any time should you wish to.**
**Do you have any questions before we start? ..........**

---

**Interviewee Profile**
**Age_____** *[Are you 18 or over]*
**Area_____** *[In which town do you live?]*
**Marital status _____** *[Married, Single, Divorced, Widowed]*
**Education_____** *[Basic, Bachelor, Master, PhD]*
**Employment: Employed, Unemployed, housewife**
**If employed, what is your source of income?**

---

Do you have a mobile phone? Yes/No
If yes;

- What kind of mobile phone do you have? ......................................

- How long have you been using a mobile phone? ......................................

- How often do you use it? Average hours per week: ...............................

- What do you use mobile phones for and why? ...............................

1. **Saudi women are now able to access m-government services on their own, rather than this being done by their male guardian. What are your thoughts on this?**

*Prompts: [If they don't know, remind them that it was on the information sheet] Do you believe this will change something? Do you consider this to be for better or worse?*
    **2. Prior to the interview, were you aware of this change?**
    *Prompt: [If yes] -Have you discussed this with anyone, for example family and friends? Do you mind sharing their views on this with me?*
    **3. Has this change made any difference to how you use or will be using government services?**
*Prompt questions: Have you applied or will you be applying for government services by yourself? [If yes] Can you share with me your male guardian's attitude about this with me? [IF NO GO TO Q.9]*
    **[IF THEY HAVE APPLIED]**
    4. **Have you already used any of the Saudi government services?**

*Prompt questions: Did you do this in person or online? If online, did you use e-government services (on computer) or m-government services (on a Smartphone)?*
    5. **Can you tell me about your experience of using government services online?**

*Prompt questions: Which services did you use? Would you use them again? Are there other services you would like to use? Did you find using the services online more useful than visiting government offices? Were the services you used easy to use?*

**6. Have the m-government services helped you do something you were not able to do in the past?**

*Prompt questions: What does this change mean to you? Is there a difference in how you feel? Could you give me an example please?*

**[NOW GO TO Q.12]**

**[IF THEY HAVE NOT APPLIED BUT PLAN TO APPLY]**

**7. What government services do you expect to use?**

*Prompt questions: Will you be using these in person or online? If online, will you be using them via a computer, or via a Smartphone?*

*<u>Will you now apply for a passport?</u> [If yes]*

*After getting the passport what will you use it for?*

*Will you travel outside the country? Will your family allow you to go on your own? Will you use it to apply for scholarship to study abroad?*

*<u>Will you now apply for an ID card</u> using m-government services?*

*<u>Will you now apply for a driver's license?</u> [If they have a license]*

*When did you get the driver's license? and What do you use it for?*

*Have you applied for your own house/ job?*

*<u>For applying for health services:</u> Did you apply for health services on your own?*

*<u>Trade, justice, housing and financial ministries:</u> Did you know that women can now apply for them by their own? Have you used or applied for any of their services and what did you use them for?*

**[ For employees only]** *Will you travel abroad if your employers request it?*

**[For mothers only]** *Did you register births of your children? Did you use the birth certificate to apply for passports for your children?*

**[For divorced or widow women]** *You can also now register as a co-head of household- Will you apply for an ID family card? Will you now travel with your children? Will you apply for health services?*

**8. What do you hope to achieve using these services? What things would you like to do that you weren't able to do in the past?**

*Prompt questions: What will this change mean to you?*

*Are you satisfied with what m-government services offers?*

*Availability, communication, easy to use, learning etc.*

*Can you discuss the various challenges you have encountered in using m-government services?*

*• If you have encountered any problems, have these affected your interest in using m-government services and its impact on your lives? How?*

*• Have you paid anything for using any of the services?*

**[IF THEY HAVE NOT APPLIED AND THEY DON'T PLAN TO APPLY (Answered 'No' go to Q.3)]**

9. **Have you ever needed to access government services in the past? What services were these and how did you access them? [Moved from Q.10]**

*Prompt: Who accessed the services for you? Do you know how they did that?*

10. **What would you say are the reasons for not applying to access the government services on your own?**

*Prompt: [If they find this difficult to answer] Could you apply to access government services on your own if you wanted to? [If, 'yes' ask: Is it something that you would find difficult to do? If 'no' ask: Would anyone object to you applying on your own? If this is the case ask: Can you tell me more about that?*

11. **Are you unhappy about the new ruling that allows Saudi women to access government services on their own?**

*Prompt: [If yes] can you tell me more about that?*

12. **Do you have any suggestions about how government services could be made more useful to Saudi women?**

*Prompt: [If they can't think of anything] Can you think of any services that you personally would like to see the Saudi Government providing?*

**Do you have any suggestions about how Saudi women could be encouraged to make independent use of government services on their phones?**

**Thank you so much for participating in this interview I really appreciate it.**

**Before we finish, is there anything we have discussed that you would like to make further comments about?**

**Is there anything you would like to add that has not been covered in this interview?**

**Do you have any further questions?**

1. **Participant Profiles**

| Participant | Age | Education | Marital Status | Employment |
| --- | --- | --- | --- | --- |
| P1 | 26 | Bachelor | Single | Unemployed |
| P2 | 53 | Bachelor | Divorced | Housewife |
| P3 | 49 | Secondary | Married | Housewife |
| P4 | 35 | Bachelor | Single | Employed |
| P5 | 35 | Bachelor | Married | Employed |
| P6 | 36 | Bachelor | Married | Employed |
| P7 | 34 | Bachelor | Single | Employed |
| P8 | 30 | Master | Single | Employed |
| P9 | 43 | Bachelor | Married | Employed |
| P10 | 19 | Secondary | Single | University Student |

| P11 | 60 | Bachelor | Married | Retired Teacher |
|-----|-----|----------|---------|-----------------|
| P12 | 40 | Bachelor | Widowed | Housewife |
| P13 | 42 | Secondary | Married | Housewife |
| P14 | 37 | Non-educated | Married | Housewife |
| P15 | 77 | Non-educated | Widowed | Housewife/businesswoman |
| P16 | 41 | Secondary | Divorced | Housewife |
| P17 | 45 | Master | Divorced | Employed |
| P18 | 34 | Bachelor | Married | Housewife |
| P19 | 40 | Bachelor | Divorced | Housewife |
| P20 | 30 | Bachelor | Single | Employed |
| P21 | 43 | Bachelor | Widowed | Employed |
| P22 | 25 | Bachelor | Single | Employed |
| P23 | 29 | Bachelor+ UK fellowship | Single | Employed |
| P24 | 45 | Bachelor | Divorced | Employed |
| P25 | 51 | Professor-PhD | Divorced | Employed |
| P26 | 45 | Professor-PhD | Married | Employed |
| P27 | 37 | Bachelor | Divorced | Employed |
| P28 | 26 | Bachelor | Single | Employed |
| P29 | 32 | Bachelor | Divorced | Employed |
| P30 | 41 | Secondary | Married | Housewife |