

## Smartphone Technology for Household Management

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### Article Info

#### Keywords:

Smartphone;  
Household;  
Management

#### JEL Classification:

O30, O32, O39

#### DOI:

10.33830/jom.v19i1.2022.2023

#### Article History

Received : August 31, 2021

Accepted : January 27, 2023

Publish : March 21, 2023

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### Abstract

**Purpose** – Technology adoption is commonplace in household management to, among others, save time and effort in completing household chores today. This is marked by the burgeoning use of various household tools for cooking, washing, and the use of cell phones. This study aimed to analyze the behavior of household technology users and its effect on household management productivity.

**Methodology** – In this study, the method used was qualitative, with a survey-descriptive approach. Data were collected through interviews with 19 purposively selected informants, observation, and documentation study and then analyzed in stages, i.e., reduction, display, analysis, and conclusion drawing.

**Findings** – The results showed that the use of technology in household management boosted housewives' productivity, which in turn affected the roles of other family members. Furthermore, it was also confirmed that most housewives could use technology to form happy, peaceful, and prosperous families. Based on these findings, the use of technology has a favorable influence on how housewives execute their duties in managing households, particularly with regard to the object under investigation.

**Originality** – This research develops the role of women in household management supported by the use of technology.

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## 1. Introduction

The Industrial Revolution 4.0 is a time marked by artificial intelligence, genetic engineering, and other technological innovations with macro impacts on the economy, industry, government, and politics. Despite the macro-level effects, technology has very much infiltrated and influenced micro institutions such as households (Maulidina et al., 2021; Foerster-Metz et al., 2018). It is manifested in the myriad sources of information accessed by family members through social media and the adoption of technology in household management (Suwana & Lily, 2017). Embracing technology ultimately leads to changes in lifestyle, mindset, and behavior of families in various household institutions across the world, which result from social changes, and inevitably modifies the culture of a society (Prasetyaningtyas et al., 2021; Allegretti, 2018).

Badan Pusat Statistik has conducted a National Socio-Economic Survey and released the results in the 2018 Indonesian Telecommunications Statistics Book on the percentage of the population aged 5 years and over who accessed the internet in the last 3 months according to the purpose of internet use. The survey results show that 79.13% of the purpose of accessing the internet is to access social media. A similar survey was also conducted by the Katadata Insight Center (KIC) in collaboration with the Ministry of Communication and Information of the Republic of Indonesia regarding media/channels to access information. This survey recruited 1,670 respondents in 34 provinces. The survey results showed that social media is the most accessible source of information, with a total voter of 76%, while the rest choose other media such as television, print media, radio (katadata.co.id).

Various studies have shown that the problem of disparities in technology adoption is not only caused by low access to technical infrastructure (eg cellular telephone coverage in certain areas) but also due to other factors, such as socioeconomic factors (eg income or GDP per capita), geographic location, level of education, skills in technology adoption, and age (Forenbacher et al., 2019). Other research conducted by Correa et al. (2017) showed that young people are more likely to be able to adapt and be exposed to digital media through their network of friends at school, than parents; limitations in the use of technology also occur in gender cases such as differences between boys and girls, where boys tend to be more socialized by playing video games than girls. Martínez-Domínguez & Mora-Rivera (2020) presented the results of their research which shows that the digital divide is present and can be identified through group and individual analysis. This research concludes that public policies should be implemented to promote Internet access and use among the most marginalized individuals, such as women. This study also states that the barriers to adopting the Internet are mostly due to high costs, limited service availability, and a lack of digital skills. Research conducted by Apergis (2019) suggested that several things can influence a person in adopting technology, including social influence and technological innovation itself. In general, this study suggests that there are differences between men and women in their decision-making processes regarding the adoption and use of technology. Men showed a higher level of confidence in using new technology than women. Furthermore, the research results also show that the younger generation, also known as Y Generation (millennial), is the first generation to grow up in a digital environment compared to more mature users. This generation is the generation that is more exposed to new technology and is easier to absorb new technological advances with less effort.

Gradually the adoption of technology is becoming more evenly distributed with the fourth industrial revolution moving towards the digital economy and Science, Technology, Engineering, and Mathematics (STEM). At this time, technology is well utilized and managed not only by industry in a macro context but also by women in a micro context. Among women, technology adoption substantially encourages them to position themselves as part of the world civilization (Ishii, 2004). Also, it enables them to play a greater role both within and outside the domestic environment of their household because technology simplifies work, increasing their work outcomes at home. This is in line with the research by Adams et al. (2017), which stated that using certain technologies in organizational settings influences the ease with which users can carry out tasks and achieve optimal results.

Generally, it is known that the family institution will function properly if each family member can play a role properly and responsibly. That is, there are different duties, functions, and roles between each family member that must be completed. The role of the wife as well as the mother in the household, for example, is in managing the household such as providing food, cleaning the house, washing clothes, managing finances, and other jobs. This work is carried out routinely almost every day, as long as her status is as a wife as well as a housewife. This work is

sometimes considered boring and tiring for some housewives. However, as technological developments began to spread to household appliances, in the end, it had an impact on helping housewives in managing their tasks. This is evidenced by the results of research conducted by Wong et al. (2020) which stated that there is an effect of technological developments applied to household appliances on the productivity of housewives, especially in accelerating household routine work.

The phenomenon described in several studies above implies that there has been exposure to technology in all aspects of life as well as in various dimensions, including women and their roles in household management. However, several questions should be pondered, such as: whether a housewife can use high-tech household appliances, according to the instructions in her manual; and whether the use of technology (eg cell phones) can help increase the productivity of housewives in managing their household management. This question is in line with the opinion of Wajcman (2000) who stated that the use of household appliances that adopt technology does not necessarily build women's confidence in using technology.

There have been several previous studies investigating the use of cell phones to simplify work and increase productivity. Wantchekon & Riaz (2019), examining cell phone usage and ease of access to food, found that the former is significantly and positively correlated with the latter. Correa et al. (2017) suggested that an Internet connection will benefit rural areas because it can help overcome geographic distance, open up access and opportunities, and encourage social interaction and community engagement, which in turn decreases the likelihood of out-migration and stimulates rural economic development. Furthermore, through a study in Taiwan, Li (2013) found that lifestyle orientation is a strong predictor of information and entertainment-oriented technology adoption, but not interpersonal-oriented technology adoption. Working with students at two vocational schools (SMK) in Bogor, West Java, Indonesia, Rahmawati et al. (2014) discovered that the more often adolescents access social media, the less developed their characters are, especially responsibility, respect, and courtesy. In Petrovčič et al. (2015), it has been observed that adults, particularly parents, used face-to-face and home phones to privately communicate with communities in their social networks more often than cell phones. In other studies, socio-demographic characteristics, such as age and socioeconomic status, significantly determine cellular communication frequency within social networks.

In a more relevant review of technology adoption by housewives in household management, Ngafifi (2014) confirmed that technology continues to grow very fast and produces a digital society, which induces changes in the patterns of human life like creating an instant generation culture and promoting efficiency in cost and effort. In other studies, it was revealed that technology adoption must be able to overcome negative challenges while synergizing the roles of family, education, society, and the state. For instance, M. Rahmawati & Latifah (2020) researched the influence of child characteristics, family characteristics, cell phone use, and mother-child interactions on children's socio-emotional development in 122 families. The results showed that children's high dependence on cell phones is responsible for the decline in their emotional-social development; still, an improvement in the latter due to increased mother-child interaction was observed. In addition, Brown et al. (2006) stated that in a household, technology integrates different parts of the household life cycle, which depends on viewpoints and attitudes toward personal computers.

Based on three relevant studies mentioned above (Advancement of Technology and Human Lifestyle in a Socio-Cultural Perspective (Ngafifi, 2014), specific discussion on the effect of cell phone usage on the emotional-social level of mother-child interaction (M. Rahmawati & Latifah, 2020), the human need for Personal Computers in the household (Brown et al., 2006), the current

research is focused on "The Use of Technology in Household Management". It differs from prior studies in that it concentrates on using cellular telephone technology to boost household management productivity. In addition, the research recognizes how smartphone data usage increases with internet usage (see paragraph 2). As stated by Adams et al. (2017), in organizational settings, particular technologies facilitate their users in completing tasks and achieving optimal results; therefore, the current research investigated the widespread use and impact of smartphones on household management. In brief, it was designed to (1) analyze the benefits of cell phones in household management, (2) identify the informants' understanding of using household technology tools, and (3) analyze the effect of technology use on household management productivity.

## **2. Research Methods**

This research used a qualitative approach with descriptive survey techniques (Sugiyono, 2018). The approach was employed because statistical calculations were not performed in this investigation. In addition, this study is more exploratory in nature as it scrutinized informants' perspectives on smartphone usage in household management. Accordingly, the analysis relied on primary data from interviews with informants, i.e., housewives who did not work at formal institutions or worked in the informal sector and resided in Kahuripan Clusters Bumi Tarogong, Garut Regency, West Java, Indonesia. The housing estate Bumi Tarogong was chosen as the research site because data from the Population Service indicated that the majority of the housewives there did not work or engaged in the informal sector. This inclusion criterion was based on the assumption that: while housewives in the formal sector, both government and private agencies, have adopted and used smartphones for their work, those who do not work (and most likely unable to use smartphones) are the opposite.

### **2.1 Measurement**

Data collection techniques were carried out through observation and in-depth interviews for primary data, and secondary data were obtained from documentation studies in the mass media. Data analysis was carried out by qualitative-verbalizes analysis through stages such as data reduction, display, analysis, and conclusions. The validity of the data in this study was carried out through triangulation. The triangulation of sources is carried out, which begins with carefully selecting informants and taking into account numerous factors such as honesty. Source triangulation is accomplished by analyzing the responses of all informants on each research topic and then interpreting the keywords that cross between one source and another.

### **2.2 Analysis**

The interviews were taped with a voice recorder and transcribed. Then, the data were interpreted and sorted to only include those relevant to the use of cellphone technology to increase household management productivity. During the data reduction process, the appropriate data were also summarized. Then, they were verified to be used as research findings on the problems at hand. The data obtained from the interview transcripts were analyzed and presented in tables to efficiently determine any incomplete or in-depth data. At this stage, if any incomplete data are identified, the following plan to obtain thorough data that answer the formulated research problems can be prepared.

### 3. Results and Discussions

#### 3.1 Informant Profiles

Based on the predetermined criteria, 19 housewives were selected as the research informants. Table 1 describes their demographic profiles.

**Table 1.** Profiles of the Research Informants

Criteria	Sub Criteria	Frequency
Age	25–35 years	9
	36–45 years	6
	> 45–50 years	4
Number of Children	1–2	6
	3–5	11
	> 5	2
Formal Educational Attainment	Elementary School	-
	Junior High School	3
	Senior High School	10
	Diploma/Bachelor's Degree	6
	Others	-

Source: processed data

The results showed that most informants were in the productive age, 25 to 34 years, and had an average of three children. These demographic characteristics mean that the selected housewives were adults and could act maturely, were adequately trained in managing their household, and were considered capable of overcoming problems arising in their families. Based on the latest education attained, most were senior high school graduates, but some had a diploma/bachelor's degree. A small proportion of the informants had graduated from junior high school. In other words, the informants had primary education and were thereby deemed sufficient to understand the use of technology in general and its application in household management.

#### 3.2 Data Validity Using Triangulation

The data were checked for validity using a source triangulation method, which was also the initial stage of the data analysis. In this process, the respondents' responses were cross-examined and evaluated. Table 2 compares the responses of three informants and their interpretations.

**Table 2.** Response Provided by Three Informants During the Interviews

<b>First question:</b> <i>What are the benefits of using smartphones for household management?</i>
<b>1st Informant:</b> <i>I frequently use my smartphone to make purchases for my family, such as vegetables. I don't go to the market because I'm inclined to indolence. I can quickly buy home supplies just by using WhatsApp.</i>
<b>2nd Informant:</b> <i>When children are not home, I can utilize cell phones to communicate with them. Furthermore, cell phones can be used for online shopping, which helps my job as a housewife as they eliminate the need to go to the store. I can also pay for utilities like energy and water without having to visit the office.</i>
<b>3rd Informant:</b> <i>I frequently order food using an app on my phone. I also often use my cellphone to watch cooking tutorials on YouTube. My child's teacher at school uses the smartphone to update parents about their children's progress at school on occasion.</i>

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**Second question:** *How and where did you learn to use a smartphone?*

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**1st Informant:** *I only use my cellphone for communication and shopping, with occasional images and movies thrown in for good measure. As a result, I'm not clear on all of the advantages of cell phones. I never even looked at the user handbook. I ask my kids for help when I'm unsure how to utilize it.*

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**2nd Informant:** *My son showed me how to operate a cellphone. However, it's only about the most vital aspects, such as utilizing the WhatsApp application. I frequently tell my youngsters to shop using e-commerce programs.*

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**3rd Informant:** *After some practice, I was able to operate my cellphone without consulting the handbook. After all, I solely use my cellphone for domestic and communication purposes. As a result, the WhatsApp program is often used. Other applications are only utilized infrequently.*

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**Third question:** *Do you find that using a smartphone speeds up your work? Is it possible to save money by using your phone?*

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**1st Informant:** *Using a cellphone to shop, in my opinion, can save time. I don't have to scour the market for necessities for my family. All of the family's needs can be met with a cellphone. However, I believe I have gotten more excessive (in purchasing goods) due to my frequent shopping (because of the convenience provided).*

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**2nd Informant:** *Using a cell phone allows you to save time. I can use my cellphone to order transportation for my child to school. I can save time while keeping an eye on the kids until they arrive at school. In terms of money, it is more wasteful than if I drove them myself.*

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**3rd Informant:** *I frequently use a smartphone application to place food orders. Instead of cooking (by myself), I believe it can save time. While waiting for the dinner, I can do other things. So, I believe that's why people use cell phones: to save time. In addition to usability, there is a flaw that causes me to be more extravagant than usual.*

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Source: processed data

The three informants answered similarly to the remaining sixteen; thus, their responses were selected to represent the research population. In response to the first question, the three informants stated that smartphones had numerous benefits in household management, including purchasing household necessities such as food, monitoring family members' activities outside the home, and finding information on cooking menus, among others. In addition, cellphone usage for household administration covered three key activities: communication tools, information provider media, and transaction media.

The second question tested informants' knowledge of using smartphones per the manual books. The three informants' responses indicated a less than complete understanding of how to use smartphones and that most never read the user manual. To use cell phones, they relied on the "learning by doing" method from close relatives such as children or partners, which leads to the less-than-ideal use of smartphones for household management. Only a small percentage of housewives used their smartphones for business purposes, such as selling their wares through online marketplaces or utilizing the WhatsApp messaging program. When smartphones are used for business, users can learn more about making the most of their devices.

From responses to the third question, it can be inferred that smartphones can help with household management by saving housewives' working time. Housewives can reduce the time they spend for shopping for family essentials and driving their children to school, among others. As a result, they can complete other tasks, increasing their productivity. However, the boost in productivity brought on by smartphone usage is not without drawbacks. An example includes

increased expenditures because some activities that were previously carried out alone have now been transferred to third parties, potentially raising service fees.

### 3.3 Benefit of Cell Phones in Household Management

Cell phones are generally rated as the most vital digital technology which is just as important as landlines. Today, cellular telephones have transformed from a means of communication into a device with various purposes and functions. Cell phones are no longer just tools for sending and receiving phone calls; but beyond that, nowadays cell phones have developed into a different communication technology called smartphones or smartphones which have many functions. Therefore, cellular telephony has become the most widely adopted communication and information technology worldwide, with the ever-expanding range of cellular phone functions that has driven the level of cellular phone ownership beyond the level of landline ownership (Hardill & Olphert, 2012).

People in the digital era, including housewives, can of course use smartphones optimally in managing their household chores. The results showed that there are three main benefits of smartphones related to household management, namely as a medium of communication, information media, and transaction media. As a communication medium, smartphones have three main features, namely voice, text, and video; as an information medium, smartphones can provide information by displaying the website and social media features; whereas in the context of being a medium of transactions, smartphones place informants as producers and consumers.

The informant when asked about the motivation to own a smartphone, the majority answered for communication with family members, either the nuclear family or extended family. Apart from being a means of communication, cell phones can also be used as a means of monitoring children at school and checking the friendships of family members. So that it can be concluded more specifically, the main purpose of owning a cell phone is for smooth communication. In the smartphone category as a communication medium, it is known that the highest benefit is found in smartphone functions in voice and text features. This means that in general respondents use smartphones to communicate with family members and their social networks through direct communication via voice and text messages such as Short Message Service (SMS), WhatsApp, and text messages on other applications. Eight out of nineteen respondents answered that they had used video calls in communicating with family members and their social networks. This implies that many respondents understand the use of video calls and argued that communication using video is more reliable and describes the actual conditions of the interlocutor.

The interview results also illustrated the function of smartphones as information media. For example, an informant stated that she had access to cooking recipes and other information from websites and social media. Thirteen out of nineteen informants explained that they obtained information about culinary places or tourist attractions from social media networks such as Facebook, Instagram, and Youtube. Meanwhile, five out of nineteen respondents came by information on children's schoolwork from websites through search engines such as Google.

Another function that is no less important than today's smartphones is as a medium for transactions. This can be seen from the many online applications such as e-commerce, online loans, online food ordering, online transportation, and other similar applications. In this study, the answers of the informants were categorized into two, namely consumers and producers. Most (eleven informants) were consumers and only two informants were producers. In the consumer category, informants are known to have used smartphones for online transportation ordering purposes such as Gojek and Grab, as well as e-commerce such as Shopee and Tokopedia. In the category of informants as producers, it is known that these informants have products that are sold

online using e-commerce applications. In summary, the benefits of smartphones are described in Table 3.

**Table 3.** Benefits of Smartphone Based on the Interview Results

Benefits	Communication Media			Information Media		Transaction Media	
	Voice	Text	Video	Website	Social Media	Sellers	Buyers
Number of Respondents	19	19	8	5	13	11	2

Source: processed data

### 3.4 Informants’ Understanding of Cell Phone Usage

Informants were asked about other problems like whether they understood and could take advantage of the features available on cell phones. The majority answered that they did not fully understand the various applications of their cell phones. Furthermore, an informant explained that the essential aspect of a cell phone was the ability to help communicate through the features provided, such as via Short Message Service (SMS), WhatsApp, and social media applications like Facebook and Instagram, and to take photos.

Furthermore, the interview results suggested that most informants could not comprehensively understand the user manual books for high-tech household appliances, e.g., washing clothes in a washing machine. Consequently, because the necessary knowledge was acquired only from experience, they could not distinguish the features of washing thin, medium, and thick clothes and dark- and light-colored garments. Similarly, the informants did not understand and consult the user guide book for operating and maintaining other household tools, such as blenders and vacuum cleaners, resulting in household appliances being frequently damaged or broken due to the wrong usage.

### 3.5 Technology and Increased Household Management Productivity

To understand how technology affected housewives’ productivity, informants were inquired about the relationship between using cellular phones and gains in productivity in household management. Productivity was measured by time and cost-efficiency. Table 4 summarizes the informants' responses regarding this matter.

**Table 4.** Number of Informants by Gained Productivity

Criteria	Frequency	
	Time Efficiency	Cost Efficiency
Using cell phones saves money	13	8
Using cell phones spends/wastes more money	3	5
No significant effects on productivity when using cell phones	3	6
Total	19	19

Source: processed data

Most informants admitted that using cell phones could shorten the time required to complete household chores. For example, they used food-ordering applications such as GrabFood and GoFood when they had no time for cooking. For shopping, they used e-commerce applications such as Shopee and Tokopedia to significantly reduce shopping time and spend it on other, more



useful things. Likewise, to pay electricity and water bills, informants used similar applications installed on their cell phones. Other findings indicated that their children, who can be categorized as millennial children, installed most of the online applications.

Productivity was also measured from the cost dimension. Only eight out of nineteen informants agreed that using cell phones could reduce household expenses. On the contrary, six informants thought that the costs incurred from using and not using cell phones were normal or just the same, and five others stated that using cell phones to manage household wasted money because of increased phone credit/data plan payments. Other findings indicated that the most considerable costs incurred for phone credit/data plan payments were from watching videos on YouTube and accessing social media.

### 3.6 Discussion

The awe-inspiring and fast science and technology development brings tremendous benefits to the advancement of human civilization. Today, through internet-connected personal computers and cell phones, people can easily meet friends, relatives, and colleagues, sell their wares, order food, pay bills, and even call masseurs online. Moreover, the tools used contain many applications that reflect artificial intelligence, which has penetrated almost all aspects of human life. As a result, the global populations are now greatly helped and facilitated by technological advances emerging in the fourth industrial revolution (Hew et al., 2017).

The current research has revealed that the technology contained in cell phones is instrumental in household management, especially as a means of communication between family members. This corresponds to Petrovčič et al. (2016), which stated that social networking for the elderly is associated with the communication frequency via landlines and cell phones with members of their network. Home telephones, which are currently transformed into cellular telephones, have represented the most widely used technology for personal communication in households in the past century. Communication using the telephone is a crucial component of interaction among all age groups. Means of communication like household telephones are the most convenient and practical way to access emotional support from their loved ones, reducing the potential for loneliness and social isolation. In addition, for elderly parents, telephone communication becomes necessary while dealing with health and mobility problems or when their family members live in or have moved to different areas (geographies) after retirement (Petrovčič et al., 2016).

Regarding communication patterns, the cell phone is a potentially revolutionary device. This is due to the 'anytime, anywhere functionality' of a cell phone, which enables people to directly communicate over long distances without the limitation of space and time. In terms of mobile communication technology at work, most research results conclude that using technology outside of the usual working hours can blur work-life boundaries, simplifies work, and allows people to complete their tasks during non-working time or extra hours outside the office. In addition, for housewives, cell phones can substantially assist in contacting other family members who are not at home at any time (Hislop & Axtell, 2011).

Other research conducted by Wei & Zhang (2008) revealed that humans have at least two motivations for using the telephone: emotional needs and practical needs. In the first motivation, the telephone is used to socialize, such as chatting, maintaining closeness with family members, and seeking security. Meanwhile, the second motivation is related to practical purposes, such as making appointments, ordering products, and seeking information. The latter is in line with the current study results, i.e., that cell phones can be used as a medium of information exchange and provision.

Apart from being a means of communication, through the applications contained therein, cell phones can also be used for other purposes such as ordering food, shopping, and making other transactions related to household work. From the company's point of view, this application can assist them in reaching a broader market share. Cho et al. (2018) suggested that food-ordering applications on cell phones are recognized as an alternative strategy to increase sales revenue of their respective companies and satisfy customers' demands to shop and receive products and services easily.

For some people, using cell phones can increase self-confidence and a sense of belonging to the middle social class in society. Siregar (2007) stated that technological innovation can elevate the social class of society, chiefly through its technological sophistication. As is well known, the more sophisticated the technology a person has, the higher the social class status that person will have. Likewise, on the contrary, the lower the technology a person has or cannot have, the lower the social status of that person in a community or society. Thus, technology adoption by a person can be an indicator (a measuring tool) to determine one's social class status in society. In another study, Li (2013) showed that lifestyle significantly differentiates adopters from non-adopters. In particular, his study found that four types of lifestyle: sophisticated and fashionable, life expansionist, preference for foreign products, and media skepticism. Suppose the adoption of technology allows customers to express their lifestyle. In that case, this technology should meet at least two prerequisites: (1) it should have a certain cost threshold so that not everyone can adopt it and (2) it has not been adopted by most people in society and, as such, adoption allows customers to demonstrate their social differentiation.

Another finding in the study illustrates problems of using electronic devices without following the user manual book. This issue corresponds to Wajcman (2000), who revealed that women are successful in using new machines such as cars, microwave ovens, and dishwashers, but their mastery of using these machines does not build confidence in using technology. It means that many women use electronic objects without maximizing their function because of their low understanding of the technology.

Technology adoption in organizations is usually characterized by an emphasis on how well technology increases productivity. The adoption of technology in the organization allows the useful nature of the technology to be accompanied by the relative advantages obtained. In the household environment, technology users will look for technology that provides utilitarian and hedonic benefits, namely technology that increases household productivity, and also provides pleasure and enjoyment (Adams et al., 2017). Sutarto (2016) states that there are a series of steps to manage an organization to achieve productivity. The following is a series of steps for managing household organizations, related to the use of technology, namely: planning, organizing, coordinating, and monitoring.

**Planning.** It is very important to plan the use of cell phones in household management, to avoid the negative impacts of using cell phones, such as whether personal information can be accessed easily by others and the misuse of information. Planning to use cell phones must be done carefully: why to do it; when done; how to do it and who does it; are things that must be planned before the use of cell phones. The answer to this question can be recorded on the informant's cell phone. In this case, the cell phone can be used as a diary as material for evaluation at a later date. In addition, cell phones can also contain notes on monthly budget planning, so that there is no waste of family finances.

Many things need to be planned in managing a household, such as expenditure planning. Household expenses can be categorized into routine expenses such as expenses to pay contributions that are mandatory and have social or moral sanctions, for example, taxes, electricity

bills, telephone bills, plumbing bills, mandatory dues in the home environment, etc. This expenditure must be prioritized because it has social consequences and maybe even legal sanctions. Expenditures to pay debt obligations, such as house installments, motorcycle installments, clothes installments, or goods made on credit to get around limited income but the family needs the consumption of these items to support activities. Payment of various bills can be recorded on a cell phone and payment can be made through the use of features or applications such as SMS and internet banking or made online through digital wallets such as Link Aja, Ovo, Gopay, and others.

**Organizing.** Organizing is the process of preparing an organizational structure following the goals of the organization, its resources, and the surrounding environment. Two main aspects of the process of preparing the organizational structure are departmentalization and division of labor (Hani, 2014). Departmentalization is the grouping of work activities of an organization so that similar and interconnected activities can be together. The division of labor in the family can be divided based on ability, if the children are still immature, there is usually a maid at home who completes household tasks. The use of domestic servants only when the children are still small, if the child is an adult, domestic work is no longer necessary for all family members to do. This is done to reduce expenses so that the money can be used for other, more important purposes. According to the respondent, the task of doing household chores, which is usually assisted by household assistants, is simply to use electronic devices. That is, there is a replacement for the role of humans by technology. Household assistant jobs that can be replaced include: washing clothes can use an electronic washing machine, for cooking purposes you can use a blender, microwave, dispenser, and others, and to sweep the floor you can use a vacuum cleaner and many other jobs.

**Coordination.** Coordination is the process of integrating objectives and activities in separate units of an organization to achieve organizational goals efficiently (Mamduh, 2016). Without coordination, the individuals who are members of the organization will lose grip on their role. The application in the family based on the results of observations is that the father and mother as elders in the family must be able to establish effective communication with family members. This is done through effective communication, such as providing direction to children and carrying out coordination well. This third management function in the family will run effectively if there is mutual understanding among family members in assuming responsibility and being able to establish good communication. Communication for coordination is not always in oral form but can also be in writing. Messages as a form of communication in the context of coordination can be written on a piece of paper affixed to the refrigerator or a place that has been mutually agreed upon, written on the blackboard that has been provided, if you need a direct answer from those given the responsibility, cell phones can be used.

**Controlling.** The purpose of supervision is that all families supervise and remind each other in the implementation of activities. If in the family the supervision can run well and continuously, the achievement of short, medium, and long term goals can be achieved as planned. Supervision implies that communication between father, mother, child, and other family members can run well so that there is good coordination between family members. Each family member tries to understand each other's character and speaking style so that they can respect each other and control the behavior of each family member. This management activity is carried out through direct communication or using a cell phone using the video-sharing feature (video call).

#### 4. Conclusions

In household management, technology proves very helpful in implementing the role of the family in planning all its needs, organizing the functions of family members, mobilizing family members to create a happy family, and being able to oversee the responsibilities of all family members. To a lesser extent, the most innovative technology today is the cell phone. Cell phones allow people to communicate with their families and social networks and access various information, goods, services, entertainment/leisure, educational opportunities, and social networks, and can be used as a means of transaction. These benefits mean that cell phones are not only a powerful supporting technology that helps people maintain independence, social connectedness, and a sense of worth in the face of declining health or limited abilities. They also offer new opportunities and empower and improve people's quality of life. The findings of other studies show that the majority of housewives do not fully understand the various applications available on their cell phones and do not consult the manual book during usage and maintenance. Furthermore, using cell phone technology has been known to increase productivity in managing housewives' work.

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