e-Government Public Services Channel Migration: Government Strategies vs Citizens' Expectation

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Abstract. The provision of e-Government public services is not automatically accepted by the citizen. The consequences of implementing e-services are unequal service quality and lead to serving those who already have the ICT competencies. This study aims to summarize citizens' expectations of e-services channel migration and the government's strategy for e-services channel migration from existing literature. This study used a literature review using the Google Scholar database and applied exclusion and inclusion criteria to filter selected articles. The results showed that the government's strategies in channel migration are government policies, multichannel management, government promotion, and e-services evaluation. Meanwhile, citizens expected the government to provide multichannel services, both electronically and traditionally, because citizens have their own channel choice. In addition, citizen involvement in decision-making will encourage increased use of electronic services.

Keywords: e-Government, e-Services, Channel Choice, Channel Migration

1 Introduction

E-Government implementation forces government to transform the delivery of public services in a digital/electronic way. This transformation will affect involved parties, such as the government, citizens, and other end users. The government as an e-government service provider must add electronic channels to the available services or change all service channels into electronic channels. Meanwhile, the end users as the target of providing electronic services are expected to be aware, have intentions, accept and use existing electronic services. In fact, the provision of electronic services does not lead to the greater usage of e-services [1]. Nonetheless, the success of this implementation depends on the end user's acceptance and usage of e-government services. To increase the use of e-services, the government needs the appropriate public services channel migration strategy.

Public service channel migration has been widely studied at the organizational level. Generally, research related to this service channel migration focuses more on the use of a multichannel service strategy. A multichannel strategy is defined as a strategy to integrate channels and migrate traditional channels toward electronic channels to deliver public services. Studies on the multichannel strategy discuss about public multichannel model[2],[3], multichannel implementation[4]–[6], and multichannel preference[7],[8]. Other studies related to the migration of public service channels are generally related to government policies in the

provision of electronic services. Teerling and Pieterson found that communication, price, and promotion can increase e-services use[9]. However, it should be noted that the successful migration to e-services is not only due to an increase in the use of electronic services but also due to a decrease in traffic on traditional channels[5] . Whereas, the use of multichannel services can lead to an increase in the use of traditional channels, especially to overcome problems that occur during the use of electronic channels[5] . Therefore, it is necessary to summarize various government strategies for migrating to electronic services.

On the other hand, citizens as end users have their own choice in choosing the service channel to be used. Research related to the migration of service channels among citizens is generally related to channel choice[10]–[12] and channel use[13]–[15] . These studies generally discuss the factors that influence channel choice[16],[17] and the trend of service channel usage by citizens[7],[18] . However, channel choice and channel usage are two different topics[19] . The shift in channel preference from traditional to electronic does not change the use of channels in electronic services[10] . These two topics discuss the service channels that are chosen or used when multichannel services are implemented. Thus far, no research specifically addresses citizens' expectations during the migration process to e-services.

Fakhoury and Aubert found that an understanding of citizen wants and need is required to provide appropriate e-services[1] . Therefore, the government migration strategy must consider the citizens as the end user. This study will conclude the government's migration strategy and citizens' expectations in electronic public service migration. This study will make an important contribution to the field of migration of service channels because it is not only focused on the use of a multichannel strategy but also pays attention to other important aspects of channel migration. In addition, this study provides a new perspective on service channel migration to meet user expectations.

2 Method

A systematic literature review (SLR) was conducted to filter the appropriate previous research related to this study. We used Kitchenham and Chartes's guidelines to conduct the review. According to the guideline, there are three stages, namely planning the review, conducting the review, and reporting the review[20] .

In the first stage, planning the review, the research questions are defined to drive the entire systematic review methodology. Two research questions will be answered through this review. The first question is "What strategies have been proposed to the government or have been implemented by the government for migration to e-service channels based on previous research?". The second question is "What are citizens' expectations for the government during the migration process to electronic services based on previous research?".

After defining the research question, the second stage, primary studies related to this study were searched and filtered. We used GoogleScholar as the primary database to search for appropriate articles because it contains articles from various journals. In this stage, we have done some steps. In the first step, we used keywords to find articles related to this study. The keywords are "delivery service channel" or "channel choice" and "e-government" or "e-services" or "government services" or "digital services" AND "channel management" or "channel migration" or "multichannel management" and "e-government" or "e-services" or "government services" or "digital services".

In the second step, we filtered articles using inclusion and exclusion criteria. These criteria will be the initial filter in the selection of articles, which can be seen in Table 1.

Table 1. Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Written in English	Not written in English
Published in Journal or Proceeding	Published in Book Chapter
Indexed by Scopus	Not indexed by Scopus
Publish in the period from 2012 to 2022	Published before 2012
Primary study	Review paper
Discuss Government to Citizen services	Discuss Government to Government services and Government to Business services

In the third step, to address our research question, we filtered articles that were selected by criteria in Table 1 using quality assessment criteria. The quality assessment criteria are used as the final screening to obtain selected articles. Table 2 shows our quality assessment criteria.

Table 2. Quality Assessment Criteria.

No	Quality Assessment Criteria	Criteria
1	Does the article discuss traditional channels and electronic/digital channels?	Yes: move to the next question No: article will be excluded
2	Does the article discuss migration from traditional channels to electronic channels in public service delivery?	Yes: move to the next question No: article will be excluded
3	Does the article discuss the government's strategy for migrating to the electronic channel?	Yes: move to the next question No: move to the next question
4	Does the article contain a statement of user expectations during the service channel migration process?	Yes: selected article No: If the answer to the previous question is no then the article will be excluded If the answer to the previous question is yes then the article is selected.

Table 2 shows the criteria that must be passed by articles to be selected in this study. The 3rd and 4th question criteria can replace each other. If one of the answers to the two questions is no, then the article can still be selected. However, if both answers to these questions are no, then the article will be excluded.

At the last stage, we reported the review. In this stage, we reported the last result of the second stage. We reported selected articles based on publication year, publication type, and the type of finding related to this study.

3 Result and Discussion

In the first step of conducting the review, we found 64 articles related to this study. Then we have done screening based on inclusion and exclusion criteria so that 27 articles were selected. In the final filtering of articles based on quality assessment criteria, we found 17 articles worth discussing. In this section, we report the articles we reviewed, describe the results, and discuss the results.

3.1 Reporting the Review

We reported articles by year, publication type, and subjects for this study. They will be shown in Figure 1, Figure 2, and Figure 3.
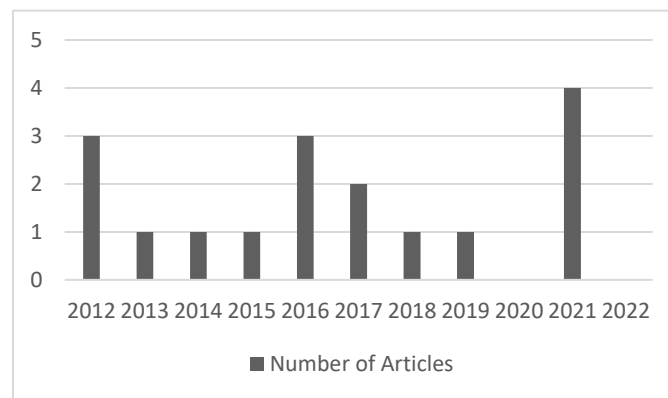

Fig 1. Publication by Year

Figure 1 shows that the articles we analyzed were the most published in 2021. Meanwhile, no articles were published in 2020 and 2022.
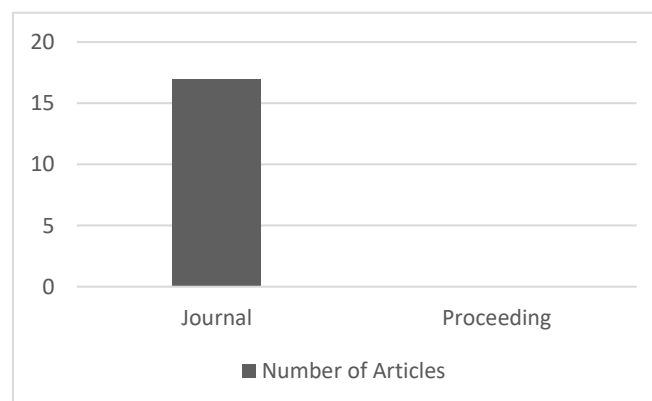

Fig 2. Publication Type

Figure 2 shows that all articles we analyzed are published in Journals. According to inclusion and exclusion criteria, all journals containing these articles are indexed on Scopus.
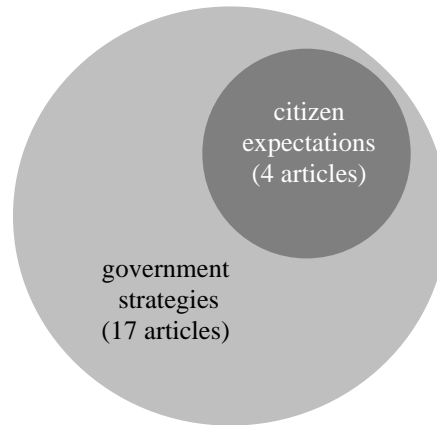

Fig 3. Number of Articles based on Research Questions

Figure 3 shows that of the 17 articles found, all of them discussed the government's strategy in migrating to electronic service channels, and there were only 4 articles that discussed citizens' expectations during the migration process.

3.2 Result

According to 17 articles, we found government strategies for migrating toward electronic channels. We classify these strategies into four categories, namely government policies, e-services promotion, multichannel management, and e-services evaluation. These categories can be shown in Table 3.

Table 3. Government Strategy in Migrating toward Electronic/Digital Channels

Government Strategies	Description	References
Government policies	Mandatory e-government services, policies for behavioral change, development of the habit	[5],[13],[19],[21],[22]
E-services promotion	Awareness: information campaign, incentive	[12],[13],[22]–[24]
	Assistance: interactive feature, public access outlet, Street-Level Bureaucracy	[5],[24]–[26]
Multichannel Management	Isolated Channel Strategy, Combined Channel Strategy, Integrated Channel Strategy	[3]
	Complementing than replacing the existing channel	[27]
	cross-channel integration and response consistency	[28]
	Certain channels for a specific purpose	[17]
	Setting multichannel based on citizen preference	[29]
E-services evaluation	Certain channels for specific purposes, behavioral pattern	[23],[30],[31]

Government policies as referred to in Table 3 are policies that require the use of electronic channels as the main channel of public services. This policy aims to force a citizen to use electronic services regardless of their skills, their age, and even the complexity of the service[31]. This policy can also develop citizens' habits of using electronic services. Ebbers revealed that developing citizens' habits can lead to an increase in e-government usage[13] .

In addition to the policies, the government must also promote the electronic public services provided. Increasing public awareness of the existence and benefits of electronic service channels can provide better opportunities for the use of electronic channels[1] . The promotion of electronic services can be socialized online through social media and offline by utilizing interesting content in public places and spaces, for example on billboards, bus stops, parks, etc [23]. Government agencies can also initiate a role in disseminating information on social networks by taking advantage of the word-of-mouth effect[32],[33] . In addition to information campaigns, the government must also provide facilities and assistance to the community to encourage the use of e-services. Customer support integrated into e-services can boost citizens' confidence to access e-services, such as short message services (SMS), email, phone calls, and video facilities[5],[34] . Shareef et al revealed that SMS can be a sustainable interactive medium for interaction between the citizen and the government[35] . Furthermore, adding an interactive feature to e-services, such as live chat, can reduce the use of traditional and offline channels[4],[5],[36] .

Another government assistance is by providing public access outlets. Public access outlet is an intermediary facility provided by the government to encourage access to e-services, in the form of places, devices, internet connections, and caseworkers[32] . In India, Common Service Center (CSC) is public access outlet operated by private and public agencies for rural areas. CSCs deliver healthcare, education, banking, agriculture, insurance, and utility payment services to citizens[37] . In Italy, the government cooperates with tobacco shops as a national payment channel. The government also has a public library that has the same function as public outlet access. However, these libraries are not true intermediaries because they are managed directly by the local authority[24] . In San Francisco, public libraries are public access outlets. The public library can meet the needs of citizens regarding electronic services, whether seeking information, attending technology training, accessing e-services, or seeking assistance in accessing e-services[26] . Apart from public access outlets, Tangi et al also suggested involving street-level bureaucrats in migrating toward the electronic channel. Street-level bureaucrats are parties that interact with citizens and are provided with knowledge regarding e-government services procedures[24] .

Another strategy we have found is the use of multichannel management. The implementation of multichannel management uses traditional channels and electronic channels simultaneously. Traditional channels can act as support channels, main channels, or complementary to other channels. Wirtz and Langer proposed a multichannel strategy in public services, namely isolated, combined, and integrated channels[3] . Isolated channels cause users to be isolated from other channels when accessing public services. However, the main channel is still possible in isolated channels. Combined channel services are services that use multiple channels, with online channels as the main channel, and traditional channels as additional channels. Meanwhile, for integrated channels, one channel and another complement each other in service delivery. In addition, Reddick and Anthopoulos suggested that channels have certain characteristics that are only suitable for certain services[17] . On the other hand, Ray Moreno and Medina Molina suggested the government set multichannel services based on citizens' preferences [29] .

In this regard, the last strategy we discuss is e-services evaluation. Evaluation of service channels is used to find the best use of channels in service migration to improve efficiency. Kim et al. suggested an evaluation of each channel based on the use and behavior patterns of citizens[31]. Meanwhile, Laeness, Lee, and Rao suggested evaluating the service channel according to the required form of communication[23],[30] .

In addition to the government's strategy, we also found citizens' expectations in migrating toward electronic service channels. Citizen expectations can be shown in Table 4.

Table 4. Citizen's Expectations in Migrating toward Electronic/Digital Channels

Citizen's Expectation	References
involved in the decision-making of service channel selection	[23]
the availability of search engines and the availability of filtering information via hashtags on government websites	[23]
Multichannel services	[13],[21]
Traditional channels are not eliminated, and electronic channels as alternative channels	[4]

Table 4 shows that the existence of electronic services has not been well received by the citizens. Citizens feel more comfortable when they can communicate with public service officers than using electronic channels to access the services they need. Therefore, citizens expect that traditional channels can still be used and make electronic channels as alternative channels[4]. Citizens as one of the service end users want also to be involved in making decisions regarding the use of service channels[23] . Increasing citizen contribution in the implementation and planning of e-services will help increase citizen activity in e-services[38]. Citizens also expect ease of use of electronic services provided by the government[23].

3.3 Discussion

The government's strategies for migrating to e-services still face many challenges. The strategies carried out by the government as well as those recommended for the government in migrating service channels are still not in line with citizen expectations. The government, which by default only provides electronic services, makes it difficult for its citizens to change service channels. Moreover, citizens expect electronic channels as alternative channels that do not replace traditional channels. Although this policy forces the public to access electronic services, the inconvenience of citizen-facing new services will continue to encourage the use of traditional channels, both face-to-face, and telephone, to guide access to electronic services[5]. This encourages the increase in the use of traditional channels. The difficulty of finding information will also be a problem that arises during the use of electronic service channels. Thus, e-services only serve professionals and intellectuals, which means that not all citizens get the benefits[23],[39] . This causes unequal service quality because it only increases for those who are competent to adopt electronic services[39]. Another problem is that e-services are considered inflexible because, in some cases of e-services, human considerations are still needed in decision-making[40]. Thus, it is not surprising that people expect the continued use of traditional service channels and make electronic channels alternative channels.

The government that used a multichannel service strategy will be more easily accepted by the citizens because citizens can still access services through traditional channels. This multichannel strategy is also a strategy that is expected by the citizens. It should be noted that traditional channels are not eliminated in the provision of public services. Meanwhile, the government requires a lot of resources to ensure the quality of service in each channel. The use

of an inappropriate multichannel strategy can lead to low use of e-government services. Citizens may prefer to use electronic channels over traditional channels because of the inconvenience of using traditional channels[34]. Regardless, electronic channel preference will only be chosen by people that have ICT capability [41]. The strategy of combining channels with one main service channel can be a migration strategy that encourages increased use of electronic services. In this strategy, additional channels can be slowly changed from traditional channels to customer support that is integrated with the main channel, as implemented in Danish Single Parents[5] . To help change behavior in society, this strategy should be carried out in stages.

The migration strategies to e-services, either directly or gradually, require public awareness. Citizens prefer to be involved from the initial idea in service channel migration. Meanwhile, the government considers the promotion of e-services sufficient to provide information and increase the use of e-services to the public. This finding is reinforced by the results of Madsen's research which shows that citizen needs caseworkers to assist in accessing public services[42]. In addition, evaluation is needed to ensure that the channels provided meet citizens' needs. This allows traditional channels to be maintained to serve certain services. In fact, the expected public service reform is flexible, problem-solving, and innovative public services.

4   Conclusion

The strategies implemented by the government as well as those recommended in service channel migration are mandatory to use of electronic service channels, multichannel management strategies, promotion of e-services, and evaluation of electronic services. Meanwhile, the citizens' expectations during the migration of service channels are community involvement from the beginning of service migration, the use of multi-channel services while m{Citation}aintaining traditional channels until the end, and the ease of use of electronic service channels. A multichannel service management strategy can be a strategy that can help facilitate the public service channel migration process. This strategy can reduce the use of traditional channels by requiring the use of electronic service channels in stages. Community involvement at the planning, implementation, and evaluation stages can help increase public acceptance of electronic services.

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