Reconsidering the Importance of Context for the Success of Digital Government: The Case of Legal Vulnerability and Extreme Poverty in the Provision of Migration Services at the Southern Mexican Border

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ABSTRACT

This case study proposes to rethink context as a determinant of digital government success and elaborate on the variables that affect these initiatives in specific contexts. When talking about contextual variables, researchers often categorize them as social, political, and economic. Regarding social conditions, the digital divide is probably the most studied concept, although the conceptualization can vary for authors from different disciplines and theoretical traditions. For instance, many authors use the digital divide to not only refer to access to the Internet and related technologies, but also the skills and capabilities of users and how they use technologies to generate value in their daily lives. This case study argues, however, that the social context goes well beyond the digital divide and includes additional important factors like extreme poverty and legal vulnerability. Using the case of immigration services in the southern border of Mexico, this paper shows how multiple variables from the social environment affect digital government success and its impact on multiple users.

CCS CONCEPTS

• **Applied computing** → E-government; • **Social and professional topics** → Geographic characteristics;

KEYWORDS

Immigration services, environmental conditions, poverty, legal vulnerability

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1 INTRODUCTION

In the study of e-government, it is necessary to consider the role of its demand, both in terms of the potential users and their capabilities. Users will only access government websites when they are able to effectively use the information and services that are available there. For this reason, social conditions are emphasized in this paper. Regularly in the literature, when talking about environmental conditions, researchers group them into social, political, and economic terms. Among the social conditions, the digital divide is probably the one that has been studied the most as a variable affecting the success of e-government. However, it is not the only one that is important and its relative importance varies depending on the specific context and characteristics of the potential users.

This case study documents the status of immigration procedures in the southern border of Mexico, focusing on the city of Tapachula, Chiapas, where waves of migrants from Central America and other countries place high demands on migratory regularization services. In particular, we focus on Central American immigrants who are following temporary residence procedures that allow them to change their undocumented status to a legal status in Mexico.

At the beginning, the research project sought to explore mainly the digital divide among these users. However, information gathered through fieldwork showed that there are prerequisites to digital skills and capabilities, such as the basic conditions of knowing how to read and write, having the minimum resources required to carry out the procedures, or simply awareness of the existence of certain laws and basic rights for immigrants.

As a result of the fieldwork, other variables such as poverty and legal vulnerability were taken into consideration. These variables weaken the success of e-government projects focused on immigration services. Aspects of which very little is said, but given the characteristics of this type of users, they are important to consider because, while there have been attempts to carry out e-government projects, their scope is very limited owing to environmental conditions, which will be further explained. In this sense, e-government projects should consider the addressed population conditions, and thus, adapt online services and not assume that they will work because they are well-designed from a technical point of view.

This paper is divided into six sections, beginning with this introduction. Second, we briefly review the general characteristics of immigration services in the southern border of Mexico. Third, we identify theory related to environmental conditions and review

the literature related to the conditions in our analysis. Fourth, we explain the project's methodology, which relied on a qualitative approach with semi-structured interviews with key actors. Fifth, we report the results we obtained, which are divided into digital divide and related social conditions, and then explained in relationship to legal vulnerability and poverty. Finally, we discuss these research findings, present our conclusions and suggest opportunities for deeper analysis of some of the variables we uncovered.

2 BRIEF HISTORY AND BACKGROUND

The southern border of Mexico covers 1,149 km and borders with Guatemala and Belize [17]. Physically, it is not a visible border like the one that can be seen on the northern border of Mexico with the United States; instead, there are only natural borders, like the Suchiate River, which becomes a means of connection rather than a means of division. As a result, it is an extremely porous border that lacks infrastructure and the presence of immigration authorities. In addition to raft crossings on the Suchiate River, there are hundreds of pedestrian crossings and many informal vehicular crossings, many of which violate immigration law.

Figure 1: Mexican Southern Border

In this border region, the most important city is Tapachula. It is the commercial capital of the Soconusco region in the state of Chiapas and it is the main border point with Guatemala. The context of this border is complex and dangerous. In our interviews, some described it as a place where "everything"-drugs, goods and arms smuggling, and human trafficking–circulates. The border point where there are the most risks associated with human and drug trafficking, as well as smuggled goods, is Ciudad Hidalgo, which is on the bank of the Suchiate River.

Historically, several migratory processes related to immigration and transmigration are carried out in this region. Transmigrants, are individuals who have another final destination (usually the United States); there are migrants coming from regions such as South America, the Caribbean (Cuba, Haiti), and even extra-continental ones from Asia or Africa.

On the other hand, there is the immigration to Mexico from Central America (Guatemalans, Hondurans, Salvadorans, and Nicaraguans). Poverty and security issues in Central American countries have forced a great amount of their population to flee, and the first point of refuge is Mexico. In the 1980s, Central American migrants arrived in Mexico because of armed conflicts in Central America. In this case, migration ceased to be only about labor and became refugee migration. The Mexican Commission for Refugee Aid (COMAR) was created and it began to operate in the border state of Chiapas, where refugee processes are still being dealt with today. The increased presence of these refugees generated the necessity to register these Central American citizens and to somehow legalize their stay in Mexico. From the 1990s onwards, not only did Central American immigrants arrive in Mexico to settle there, but also as a transit point to continue into the United States illegally. Some were able to enter the US, however, many stayed on the southern border of Mexico.

A very important characteristic for these refugees is their legal or illegal immigration status, which is commonly called documented versus undocumented. Central American citizens require a visa to enter Mexico, except for those immigrants coming from Guatemala or Belize for work purposes at the employer's request and who usually work on coffee and banana farms in the Soconusco region. They enter Mexico thanks to the employer's request for a border worker card, which is valid for one year, at which time it must be renewed at the request of the employer. Another legal form of entry is a local visitor card that allows them to stay in the Mexican border region for up to 3 days for touristic or shopping purposes. The local visitor card is only granted to Guatemalan or Belizean citizens who are residents of the border region with Mexico.

The rest of the Central American citizens must enter Mexico with a visa. However, there are other means to obtain a temporary residency in Mexico based on the social and security conditions of immigrants' countries of origin.

After having spent some time in Mexico illegally, individuals can seek to regularize their stay, which allows them to become temporary residents. If desired later, they can apply for permanent residence within four years. To carry out these procedures, immigrants must go to the National Institute for Migration (henceforth INM by its Spanish acronym), which is in charge of migration management at the federal level and is a technical body dependent on the Government Secretary. In the southern border of Mexico, the most demanded immigration procedure is the regularization of stay condition. This procedure is initiated online through the INM website through a pre-registration process. This pre-registration requires applicants to provide personal data such as the type of procedure, name, country of origin, nationality, identity document number, address in Mexico, and an email to receive notifications.

Once applicants have pre-registered, a notification will be sent via email with an appointment date to visit the INM offices. The applicants must present official documents such as their birth certificate to start the application. Once they begin the application, the INM holds their documents and assigns them a number called a NUT (the Spanish acronym for Unique Number Procedure) to look up the status of their procedure on the INM website, although they can also visit the INM offices at any time for a status update. Subsequently, the INM generates a payment sheet (around US$60) for this application process, with a later payment of around US$423 for the temporary resident card that is valid for a period of four years. In general, anyone who wants to regularize their migratory status must follow this process. However, as will be explained later, what might seem to be a simple process, can actually be quite complicated for many people.

3 THE IMPORTANCE OF CONTEXTUAL CONDITIONS FOR DIGITAL GOVERNMENT

In the present case, the environmental context is fundamental to understanding the user's conditions, and thus to know to what extent and how e-government is used by this migrant population. These environmental factors could be categorized as technological, legal, cultural, political, economic, demographic, and ecological. In other cases, they are described as economic, political, and social factors [11] or as political, economic, and operational challenges [15]. These contextual factors are significantly related to the success of e-government [23].

3.1 Economic, Political, and Social Conditions

The economic variables are based on the size of the economy, which includes the number of jobs in the local government, number of jobs in the administration, total income at the state level, number of employees in government businesses, etc. In developing countries, the internet and e-government policies are immersed in a situation where there is low use of ICTs and the slow and superficial progress of e-government projects cannot be solved with new technology only [4].

E-government requires a substantial quantity of financial resources to purchase the necessary equipment. Studies show that the spread of the internet, e-commerce, and e-government are significantly influenced by the availability of wealth measured as GDP per capita between countries and regions [16]. Consequently, countries with more financial resources have more e-government programs and services on government websites.

The political and policy variables are considered determining factors in the success of the information systems [20][13]. Only if an e-government policy is based on a firm political position will it have a good opportunity of being successful. Therefore, this policy should be part of a broader project based on a political vision and with a long-term purpose [4]. Institutions such as the rule of law also influence e-commerce and e-government dissemination [16]. Among the reasons why certain countries fall behind others in several aspects, including e-government, is the weak or non-existent national governance institutions and a weak rule of law.

3.2 Digital Divide and other Social Variables

In the social conditions, first there is the idea of the digital divide. There are, broadly speaking, two lines of explanation for the digital divide. On the one hand, there is the micro part which explains the divide at the level of individuals. On the other hand, there is the macro part which explains the divide at the level of social structures and social and economic conditions found in the regions. While there is a consensus on what the digital divide concept generally implies, different scholars define the concept with different elements. DiMaggio and Hargittai [8] identify these components of the digital divide: 1) technical means, 2) autonomy of use, 3) models of use, 4) social support networks, and 5) skills. Bélanger and Carter [1] separate the divide into two aspects: the divide in access (ethnicity, income, education, and age) and the divide in skills and capabilities (experience in the use of computers, general internet use, online purchases, and information searches on the internet).

For Gil-Garcia, Helbig, and Ferro [12], there are three variables that mainly explain the digital divide, which are age, income, and education; variables that coincide with Bélanger and Carter [1] in the use of e-government. In general terms, it can be said that there are two variables constituting the digital divide, material access and usage capabilities. However, these two aspects are influenced by the social and demographic characteristics of the users. So, it could be said that these socio-demographic characteristics define the material access and usage capabilities.

These characteristics are ethnicity, age, and gender, all of which are predictor variables of the possibility of internet access and usage to a certain extent [12]. Regarding age, Hargittai [14] points out that there are clear generational differences in people's capacities to use the internet. Thus, age has a negative effect on internet usage [12]; older adults are less likely to have the same level of internet skills as younger adults [29][30]. Education is considered a predictor in relation to internet access and it affects the level of skills in internet usage [14]. Other authors consider it a global predictor variable [29][30]. Education is strongly related to having access to computers and the internet [12].

Income has a positive effect on internet access [12] and some authors consider it as a socioeconomic position indicator [29]. Financial means can be meaningful variables in relation to internet capabilities, because, depending on resources, for example, an individual could attend a training course to gain greater technical skills for internet use.

In summary, the literature identifies three aspects related to the digital divide at a micro-level that represent individual users' capabilities: skills for digital literacy (operational, formal, integrational, strategic, and communicative), resources (access, computer access, internet access), and variables related to people's sociodemographic characteristics, which are considered as determinants of internet skills: gender, age, educational level, and income [6][14][12][9][10][1].

Location and poverty concentration have been identified as important variables that contribute to the digital divide too [25][24][22]. Other studies mention that factors other than sociodemographic variables are also important. Some examples are civic mentality and information poverty, which could be related to too much or too little information or the fact that information is obtained from too few sources [28][19]. In addition, research about immigrants shows how frequently they do not have access to information technologies and electronic government [21][2][27]. Among the factors that affect the use of technology by these individuals are (1) the lack of technological skills, (2) limited formal education, (3) their legal status, (4) language barriers, and (5) age [21][2][27]. Similar to other individuals, older immigrants have more limitations when using technology. Based on the case of migration services at the southern Mexican border, this paper argues that it is necessary to rethink the importance of context, particularly in situations in which contextual variables are very different from most existing research. The digital divide is still important, but there are also other variables with similar impact on the use of online migration services.

4 RESEARCH DESIGN AND METHODS

The research was conducted using a qualitative methodological approach. The case study method was used in order to understand a real-life phenomenon in depth and several of its contextual conditions [31]. We gathered the information through semi-structured interviews because they allowed us to conduct flexible interviews and adapt them to the different cases, occasionally integrating other questions derived from conversations with the informants. Interviews were conducted with Central American immigrants who want to complete the migration regularization procedure and with intermediaries who support immigrants, such as government organizations, consulates, non-governmental organizations, and public help desks. For the interviews, a snowball sample was used, "a distinct method of convenience sampling which has been proven to be especially useful in conducting research in marginalized societies. This method is commonly used to locate, access, and involve people from specific populations in cases where the researcher anticipates difficulties in creating a representative sample of the research population" [7]. Additionally, this type of sample "is particularly aplicable when the focus of study is on a sensitive issue" [3]. Sampling defined as a snowball happens when the researcher accesses the informants through a contact that is provided by other informants [26].

For the snowball technique, as we began our case study in the city of Tapachula, early interviews suggested that we consult with the NGOs supporting the rights of Central American immigrants. When contacting the first NGO, Fray Matias Cordova, we learned that consulates also support immigrants in the regularization procedures. We were then able to conduct interviews with representatives from the consulates of Guatemala, El Salvador, and Honduras. From these interviews, it was corroborated that the consulates work closely with the Immigrant Protection Directorate, which is an office at the Ministry of South Border Development. Our interviewees also suggested that we contact the same NGO that Fray Matias had recommended to us: Medicos del Mundo Francia. Interviews with Central American immigrants were conducted during visits to the INM in the city of Tapachula. Fieldwork was done between November 2016 and July 2017 in the city of Tapachula, Chiapas; several visits occurred during the months of November 2016, December 2016, February 2017, and July 2017. This research includes information from 11 interviews with key informants and four periods of direct observation at the INM offices and at diverse organizations that play the role of intermediaries and help immigrants.

5 ANALYSIS AND RESULTS

This section describes the main results of this study. It first focuses on the impact of the digital divide and some related socio-economic variables such as education, income, and ethnicity. The second subsection highlights the significant role of other variables in the social context, such as legal vulnerably and extreme poverty, which are characteristics of many of the individuals using migration services in the southern Mexican border. We argue that these latest variables need further research and our study is a good starting point for that work.

5.1 Digital Divide and some Related Socio-Economic Variables

There are significant environmental factors affecting migration procedures in the southern border of Mexico, specifically the social conditions and the digital divide. The context in which migratory services are developed has a great deal of social inequality. Central American immigrants often have very limited economic resources and no schooling, sometimes they do not even know how to read or write. Most of the immigrants requesting these procedures come from Guatemala, Honduras, El Salvador, and (to a lesser extent) Nicaragua.

The first factor of this divide is the low or non-existent level of literacy among this population. As expressed by the Guatemalan consul: "Unfortunately, a lot of Guatemalans do not know to read or write". For migrants without these basic communication skills, it is unlikely that they will be able to use a computer or the internet. This low rate of literacy has prevented many migrants from having internet knowledge, as the Salvadoran consul mentioned: "Many co-nationals do not have schooling where they have learned to use a computer. Not everyone has access to a computer and they are often unaware of technology".

Moreover, Central American immigrants living in the border region of Mexico and Guatemala often have very limited economic resources because those who are younger, have more advanced educational attainment, and greater economic resources decide to continue the journey to the United States. Therefore, those who stay in the Mexican southern border are people who have fewer resources in every sense (less money, less schooling, and fewer skills). According to officials from the Honduran consulate, "Most of the people from Guatemala, Honduras, and El Salvador who come to settle in here are people of very limited economic resources, and there are a lot of cases in which they do not know how to use the internet".

Another aspect influencing the digital divide is ethnicity. For example, there are 23 Mayan languages that are still spoken in Guatemala and individuals' first language is linked with their region of origin. Hence, another problem arises, because although some Guatemalan migrants speak Spanish and can sometimes read it, they do not always comprehend the nuanced meaning of words, particularly those associated with the INM vocabulary. As one Guatemalan consul commented, "So, [some] people are able to read, but they will not be able to understand what they are reading". The latter not only affects indigenous language speakers, but all immigrants who do not understand migratory terminology appearing on the INM website, according to officials from the Honduras consulate: "Here, for someone who does not know what a stay condition is, they do not know what they are looking for. With the specified vocabulary used by the INM, people do not know what it is, nor what they are talking about, if one is being spoken to in those terms".

Another variable affecting migratory processes is access to the internet and to a computer. In the case of the southern border, there is no infrastructure to provide internet services, so immigrants are at a disadvantage when trying to access INM services. One official from the Migration and International Affairs Directorate of Mexico said, "We accompany them to apply for this procedure, because it

should be made clear that in some communities of Tapachula there is no internet".

This point is corroborated by an owner of a small business that helps immigrants to complete the necessary forms and access the information online: "I think that it is a bit complicated for people because there are many people who do not have internet or many who do not have the time to do it, either. They can spend two, three hours trying to do it and still not succeed". This finding aligns with data from the national statistics agency INEGI's [18] survey on the availability and usage of information technologies in households. Chiapas is the state of Mexico with the least computer and internet use. Just 27.7% of the population uses a computer and only 33.1% of the population are internet user, which reflects the digital divide that exists in that region, even among Mexican citizens.

One observation that might be surprising in other contexts is the fact that many migrants are unaware of the basic aspects of the internet or how to use it, as mentioned by the Salvadoran Consul: "Even if you tell them to send a document via email, you need to explain several times what an email is, or what the @ sign means". The aforementioned could be called digital illiteracy, but in the described context it can be better understood as an overall lack of formal education. One Salvadoran immigrant explains, "I hardly have any knowledge [about technologies], I know how to read and write, but I know nothing of the internet". This digital divide obliges most of migrants to hire businesses called public help desks. One owner of a public help desk explains the process: "I fill in all of the forms, all their documents until the last photocopy they need to complete their procedure".

Near the government offices we often found businesses that make photocopies, take photographs, and even help with the process needed to obtain or renew a passport. These businesses become a necessary part of the regularization process. The use of these services has dual causes: the lack of knowledge among migrants about how to use technology and their overall low level of educational attainment. For example, some migrants have never had to write a formal business letter, and find the bureaucratic processes overwhelming.

It seems clear that one of the main barriers to the success of e-government for immigration processes at Mexico's southern border is the digital divide. This has been a widely considered variable in many prior studies. However, in this case, it is of utmost importance to consider other contextual variables that have not been referred to in the literature with the same frequency. In other words, there are more traditional economic, political, or social variables that affect the way in which technology is conceived and applied in government settings. However, there are also variables that are more specific to a particular context and we argue that they should also be studied and understood.

5.2 Legal vulnerability and extreme poverty

There are social variables that cannot be ignored because they make reality extremely complex and, consequently, e-government functions should not be expected to be uniform across contexts. The extreme poverty and legal vulnerability of immigrants at risk of being deported or having their human rights violated are variables that also limit e-government usage by them.

We use the phrase legal vulnerability to refer to the situation where immigrants have entered Mexico illegally, and therefore do not have the same citizenship rights as a Mexican citizen, but must instead rely on more ambiguous human rights. According to Bustamante [5], immigrants are vulnerable when they have limited access to rights and resources for their protection. Since they have entered the country illegally, they do not have any documents that allow them to enter, transit, or reside in Mexico, let alone permission to work. They have a high chance of being deported, which has very important costs. After spending some length of time at migrant holding centers, which undoubtedly do not provide the best conditions, they are then returned to their countries and to the social conditions of violence, insecurity, and poverty from which they are fleeing.

This risk of deportation encourages migrants to keep a low profile with the authorities, either local and federal police or immigration agents. In fact, many are at risk for extortion by individuals who threaten to report them to the immigration authorities, and consequently be deported. A staff member from the NGO Fray Matias de Cordova clearly summarizes this: "they live hiding where they will not be easily recognized or where they are not deportedâĂę access to information of their rights or how they can become residents is hard to obtain".

Not only does this exploitation affect immigrants who recently entered Mexico, but also those who have lived in the country for a long time without documentation. One staff member of the NGO Fray Matias de Cordova said, "Some people have lived in Mexico for 30 years, they have children born in Mexico, but they have not been regularized due to lack of information. They do not know they have rights and are really frightened". The lack of information is even worse given the illiteracy rates, as expressed by a staff member of the NGO Medicos del Mundo Francia: "There are people who do not even know how to read or write, and above all, they are sex workers or bar workers who do not even know they can legally live in the country". The migration law allows those who have children born in Mexico to obtain permanent residence, but in most cases they do not pursue it, because lack of knowledge about this. According to officials from the Immigrant Protection Directorate, "There are some who have up to twenty years of living in Mexico, but for migration you are still illegal. Many people still have children born here and could apply for their permanent residence, but have not registered their children, as they say, because of the fear of being deported". The Guatemalan consul also explained that "some think that if they go to the INM they will be arrested, and they may fear that". Consequently, they do not even ask about the options they have to regularize their immigration status.

Associated with this legal vulnerability are a series of adverse conditions for these immigrants, which they and representatives from the NGOs identified. There is then a series of cascade effects as being in an illegal stay condition makes them vulnerable to not only legal authorities, but also to society in general. For instance, without documents, as many interviewees confirmed, employers do not want to hire migrants because they fear legal sanctions or, if they do hire them, the owner wants to pay a low salary. According to staff from the NGO Fray Matias de Cordova, immigrants earn around US$100 monthly. As explained by a Guatemalan immigrant, "If you do not have a work permit, then you cannot be hired by a

company because they must include you in the payroll, and in the social security system, which implies having your CURP (Mexican Unique Population Registry Number) and all the other documents, and so, many others stay working in informal trade".

In the case of immigrants who have only lived in Mexico for a short time, most arrive at the border without any money, since they are searching for better work opportunities and living conditions. Therefore, they do not have sufficient resources to remain unemployed, having to pay for basic needs like accommodation, food, and transport, as well as the regularization procedures. The INM offices in Tapachula are found in the south of the city, 30 minutes from the city center by public transportation, and generally far away from where people live. In these offices, several procedures can be conducted, such as immigration regularization, humanitarian visa issuance, temporary resident card renewal, and permanent resident card issuance. In other words, all foreigners who want to complete any migration procedure must go to these offices, at least for part of the process.

Above all, immigrants facing low wages and extreme poverty are often unable to pay the fees associated with regularization of their immigration status, making that process inaccessible. For example, a down payment for the process is around US$80, which is clearly a steep cost for someone who earns US$100 monthly, and probably has to pay for housing and food, as well as potential economic dependents.

Most immigrants end up going through an asylum application process via COMAR, but the procedure lasts around 45 days, and each week they have to visit COMAR to sign paperwork, which interferes with having a stable job. As a Salvadoran immigrant commented, "The one who waits is filled with despair...To be honest, as I have been filling in all the documents, I have not been thinking about what impact any decision may have. And, I really thank God because I was given a resident card, but it is not permanent. I need to talk to COMAR to know. I really do not want to be here much. I work in the construction business... I have been working there for a while, but the reality is that here you have to pay 100 pesos or 200 pesos for some food, for a house, and one only earns 200 pesos". This immigrant had only been living in Mexico for four months and he was making his request as a refugee.

As we observed, social vulnerability and extreme poverty are conditions that affect both well-established undocumented immigrants and those who are just arriving. Even for those who have spent a long time in Mexico, they often live in secrecy and try to avoid any contact with the Mexican government for fear of being deported. As some interviewees pointed out, their fear is great and awareness of their rights is very limited. However, as mentioned by the Guatemalan consul, "If the procedures were done online, and so they would avoid going to the offices in person, that would save immigrants from extortion and discrimination". While online services might be help reduce the fear of being deported, this is not an easy task given some of the barriers related to poverty and literacy. In addition, the fact that these processes require clear identification of the individual becomes another challenge to make them totally online.

6 FINAL COMMENTS AND FUTURE RESEARCH

This case study highlights the importance of extreme poverty and legal vulnerability to the success of digital government services directed to immigrants. It is clear that the digital divide and more traditional contextual variables are important, but it should be recognize that some variables specific to the context under study need to be considered too. For instance, in this case, extreme poverty affects e-government success beyond the lack of Internet access, the necessary technical skills, or the level of educational attainment. In order to begin their regularization procedures, immigrants need to pay fees and also pay for advisors with knowledge about the migration services and skills related to Internet and computer use. They also need to pay for public transportation multiple times in order to visit one or more government offices. The fact that some steps of the regularization procedure have to be done online and others in person does not help immigrants, but on the contrary, make the process even more difficult and practically unaffordable for many of them.

On the other hand, the legal vulnerability of immigrants is clearly a limiting factor in relation to the government and the users of the procedures, particularly Central American immigrants who have low schooling levels and fear of being deported. They remain in the country illegally and with the possibility of being extorted and exploited for labor. This case clearly shows how important it is to carefully analyze who is the target audience or audiences for online services, since their actual characteristics, resources, and capabilities should be considered in the development process. In addition, it seems clear that the role of intermediaries is very important for some services, because these organizations and individuals help the target users to be able to actually use online services. In some case, like the consulates and some nonprofit organizations, the intermediaries also provide immigrants with assurance and a trusted environment, despite their undocumented status, reducing their legal vulnerability.

From this research and its respective fieldwork, we have evidence that additional variables related to e-government services for migration could be studied in the future. One of them in the fact that, in many cases, the ultimate objective for many of these migrants is to continue their journey to the United States. To do so, they seek out immigration documents in Mexico to travel freely across the country without fear of deportation, extortion, or kidnapping. However, because of this, they do not meet the requirement for regularization, since they need to be in Mexico for two years before applying.

Second, there are also users who are fugitives from law enforcement in their countries of origin and try to obtain their residence in Mexico as a strategy to flee from their countries. Future studies should consider this situation and how it affects the willingness of government to make the procedures easy and online. For instance, situations like these are what make organizations like the INM to have stricter guidelines and review protocols and to avoid services that can be done completely online. Most of the time, these procedures require personal interviews with applicants, address verification, and a series of additional filters, which cannot be performed online.

Moreover, future studies should attempt to understand the specific conditions of immigrants and other possible variables that prevent the use of online services by these groups. It would also be important to study other border areas in Mexico and even big cities with no borders, but in which these services have high demand, such as Mexico City, Guadalajara, and Monterrey. This would help to understand how very different conditions affect the use of online services and the overall results for immigrants. Furthermore, not only is it important to identify the officials' perspective to know how they have considered the social conditions of the immigrants on the website characteristics, but also what the challenges facing government agencies in contexts as complex as the southern border are in order to carry out the immigration procedures. Future research should attempt to capture the challenges government agencies are facing when dealing with non-traditional target audiences.

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