



**NEAR EAST UNIVERSITY**  
**INSTITUTE OF GRADUATE STUDIES**  
**INNOVATION AND KNOWLEDGE MANAGEMENT PROGRAM**

**The Impact of Biometric National Identification on  
Governmental Performances and Citizen's Prospects  
– Kurdistan Region - Iraq**

**M.Sc. THESIS**

**Shobo N. Shali**

**Nicosia**

**January 2022**

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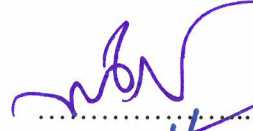

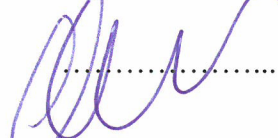
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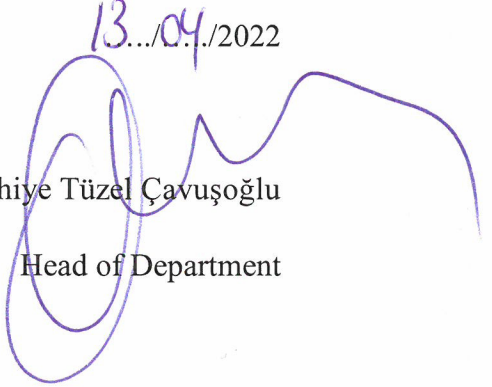
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## Approval


We certify that we have read the thesis submitted by Shobo N. Shali titled “**The Impact of Biometric National Identification on Governmental Performances and Citizen's Prospects – Kurdistan Region - Iraq**” and that in our combined opinion, it is fully adequate, in scope and quality, as a thesis for the degree of Master of Educational Sciences.

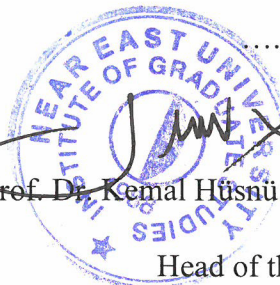
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## **Declaration**

I hereby declare that all information, documents, analysis, and results in this thesis have been collected and presented according to the academic rules and ethical guidelines of the Institute of Graduate Studies, Near East University. I also declare that as required by these rules and conduct, I have fully cited and referenced information and data that are not original to this study.

Shobo N. Shali

1/1/2022

## **Acknowledgments**

First and most of the appreciation goes to God for inspiration and strength. Throughout the writing of this thesis, I have received a great deal and assistance from many people. I wish to express my gratitude to my supervisor, Dr. Behiye Cavusoglu, for her support and the critical review of this research. I also want to thank participants who supported my research by giving their opinion. Finally, I would like to thank my family for their support and patience, especially my husband, Dr. Saman Shali, for his continued support and belief in me.

**Shobo N. Shali**

## Abstract

### **The Impact of Biometric National Identification on Governmental Performances and Citizen's Prospects – Kurdistan Region - Iraq**

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**Dec 2021, 119 Pages**

*This study explores the new national identification system project that contains biometric features in Iraq, represented by the Kurdistan Region of Iraq (KRI) citizen opinion. The literature aims to emphasize the importance of this modern technology tool and its impacts on governmental service efficiency and people's perceptions and to understand this project's intention in fulfilling the unification goal. This study situated in the theory of Organizing Vision by Swanson and Ramiller as well as the Knowledge Management Life Cycle of Mustafa Sagsan. It also situated by e-Government's G2G dimension founded to serve as a supporting tool in organizing daily tasks of the public sector, to create performance efficiency for the governmental organizational internal activities, to be able to serve their citizens at best. In addition, it situated by e-Government's G2C dimension, that founded for citizen by governments, in order to create smooth inquiry process in governmental efforts that leads to trust building, information privacy, and satisfaction. This study follows a mixed-method approach. Data for this study obtained from primary sources, mainly from surveys and interviews, and secondary sources of information included the internet, journal articles, books, and reports. The study revealed unfulfilling efforts by the Iraqi government in directing the national database benefits in serving e-Government initiation in Iraq. It also revealed that the unification fundamental not fully performed under these circumstances. The study suggests revisiting the impacts of this project by the Iraqi leadership to identify shortcomings and set solutions.*

*Keywords: national identification, electronic id, digital id, e-Government, biometric id.*

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### **List of Abbreviations**

<i>#</i>	<i>ABBR.</i>	<i>MEANING</i>
1	NICP	National Identification Card Program
2	CRM	Customer Relationship Management
3	ID	Identification Card
4	NID	National Identification Card
5	ENID	New/Electronic/Biometric National Identification-Iraq
6	KRG	Kurdistan Regional Government
7	KRI	Kurdistan Region of Iraq
8	Smart-ID/ S-ID	Smart Identification
9	Electronic-ID/ E-ID	Electronic Identification
10	Biometric ID/ B-ID	Biometric Identification
11	NDC	National Data Center
12	DNCA	Directorate of National Card Affairs
13	DNCPR	Directorate of Nationality Civil Status, Passports, and Residency
14	e-Government	Electronic Government
15	G2G	Government To Government
16	G2C	Government To Citizen
17	G2B	Government To Business
18	G2N	Government To NGO/ Non Profit Organizations
19	E-Taxation	Electronic Taxation System
20	E-Society	Electronic Society System
21	OV	Organizing Vision
22	KMLC	knowledge management life cycle model
22	NGO	Non Profit Organizations
23	SSN	Social Security National Identification
24	CSID	Civil Status Identity, Hawyat Ahwal Almadanya
25	INCC	Iraqi Citizenship Certificates

## **CHAPTER I**

### **Introduction**

The national identity is an official document that links people to their states. It is their proof of nationality, rights, and security. Citizen needs to show proper documentation in every formal or legal process of their inquiries with their government or any transactions they make at any time or the exit/ entrance of their country. In the meantime, governments are demanding legitimate documentation from their citizens to ensure citizens' rights and approve their legitimacy of inquiry to serve. They require seeing certain types of documents or legit documentations that (the government) created, not any others.

However, many governments and citizens are distressed about using multi-identification documents in their daily routine. For example, India's newspaper calls it "India National ID crises!" for the chaotic governmental processes and unnecessary practices when multiple identification cards are used. These multiple identification cards are issued by numerous governmental organizations and used for maybe the same or different purposes.

Globally, many countries have the same issues, especially with those whose governments did not pay much attention to modern technologies in governmental processes. Like India, an Iraqi citizen can own over eleven (11) identification documentation in different looks and formats simultaneously.

Today, the entire world directing toward modern technology in every aspect of life, including governmental operations. Electronic national identification cards with biometric features have added benefits for both governments and citizens.

This great innovation made a revolutionary technology shift in the governmental, institutional structures in the countries that implemented the whole project correctly, which means an entire infrastructure and full force of implementations.

This literature sought to identify and investigate Iraq's new national identification system represented by data collected from government employees and citizens in the Kurdistan Regional Government (KRG). In addition, this study seeks to understand measuring impacts in terms of efficiency level created in the administrative processes within governmental organizations and degrees of impacting satisfaction by citizens in terms of information security, the ease of registration, and the use of this new biometric identification document.

This chapter will introduce the study by first discussing the background and context, followed by the research problem, aim, objectives and questions, and significance and limitations.

## **1.1 Background**

The introduction of biometric national identity cards is one of the priority concerns for all the modern states in the world (Khan, 2018). Therefore, it is assumed that the willingness of the governments to introduce the biometric identity card would be more prominent in the future. Since issuing national identification documentation starts from governments for their citizens, it is a natural duty of governments to take necessary measures to make sure that the process of issuance, renewal, or cancelations are legally supported and easy for citizens to conduct. In return, citizens will build trust in their governments and confidently proceed with their inquiries. Therefore, governments need to form a robust documentations system and secure people's information.

The issuing, renewing, comparing, and reviewing national identification cards can take considerable time and effort from the government's side if implemented with the old classical system. Not to mention the number of errors and misleading information in that process and the possibility of opening doors for forgers to take advantage of the situation. Governments need to pay good attention to this critical service and implement technical measures from this angle.

The formation of multiple national identification documents for citizens by governments creates inefficiency and knowledge pollutions. The latest creations of identification cards like Smart-ID, Electronic-ID, or Biometric IDs are considered innovative solutions for improving governmental processes and have their benefits locally and internationally when supported by well-organized modern technological infrastructure, well-handled management structure, and complete data sharing management cycle.

Switching from multiple national identification documents to a single electronic one with biometric features is a great innovation. This transformation will reduce corruption, enhance governmental performances, and serve as a tool to keep public information safe. To achieve this goal, governments need to modify their organizational structures, add new levels of technology software, and integrate their process to include new features. This innovation process requires building the infrastructure to compile civilian information in an extensive, detailed, secure database called the National Data Centre (NDC).

The consecutive Iraqi governments considered among governments that issued and accumulated many documentations for its citizens throughout its existence. However, Iraq has gone through multiple wars and several political system changes in the past three decades. In addition, the Syrian conflict and Iran's unstable political conditions affected, leading to a chaotic population structure and continued movement of people from one location to another.

Iraqi governments decided multiple ways to handle people's identification systems but mostly in classical ways or on minimal/individual levels of management within the same directorate, which resulted in several identification cards with the specific purpose of use. As a result, it became a burden for people to safeguard and recognize their national identification documents and related inquiries. Moreover, it created another burden on government officials to manage issuance, transferal, and follow-ups, especially when many people move from one city or region. In addition, all this identification documentation creates a broad ground for errors and fraud.

Due to the non-availability of a nationwide data center or an archiving system, it is unclear how many agencies provide which types of services and what data they need in identification documentation. This issue creates a wide ground for people to abuse the system and benefit financially from governmental programs by using different identifications at different governmental departments. In addition, people can easily hide from the judiciary and law enforcement, or they might migrate to other countries under different names.

A unified identification with a technological system base and a biometric recognition was the answer to all these issues per project goals. Still, the direction of implementing the New Biometric National Identification card of Iraq does not seem to fulfill its targeting goals!

#### ***1.1.1 Iraqi New/ Electronic, or Biometric National Identification (ENID)- Project Initiation***

The Electronic National Identification card with biometric features for Iraqi citizens was approved by the Ministry of Interior in 2013. However, the Iraqi government started accepting applications in 2016 until now. Therefore, this project is still in a progressing stage despite exceeding the duration period for completion. The project duration was for five (5) years period and is supposed to be due in 2018.

The government claimed the new national digital identification would replace previously issued documentation and support by an extensive database to store the entire population's information.

### **1.1.2 Legal support**

This project is supported by two national laws, which are Law number 3 - 2016 the (National ID) and Law number 1 - 2017 the (National ID Instructions) – Appendix (A)<sup>1</sup>.

### **1.1.3 Vision and goals behind the project**

The following statements are the goals of the Iraqi government behind this initiative. Based on the official website's posting on the Directorate of National Card Affairs of Iraq (DNCA): (<http://www.iraqnationality.gov.iq/index.php>, n.d.)

- Building a unified central database that includes civil status data, nationality certificates, and housing information for all citizens will be flexible and expandable for the future.
- Issuing a national card with high-security specifications and compatible with international standards.
- To build a database to collect the vital identifiers and match them.
- To use a closed and secure internal communication network with a high-level encryption mechanism for the project.
- To build an electronic archiving system for civil status records.

### **1.1.4 Progress level of the Iraqi electronic identification project**

The status of this new identification project seems to be unclear. There is no actual data on the website about the progress level, and the application ratio to the population is not precise.

It is noticeable that many people have not applied for the new card and are doubtful about the safety of their information in the digital format. In addition, it is not clear if this step has made any improvements within the governmental procedures! Therefore, it leads to wonder about the details of the project and look in-depth for effecting issues wondering about the infrastructure, plans, policies, implementations, and connectivity within the governmental structure. By studying, mentioned aspects, we might conclude the success or frailer level or understanding reasons and influencing causes.

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<sup>1</sup> Iraqi National Identity System History – Appendix (A)



## 1.2 Purpose of the Study

The proposed study emphasizes the importance of the modern technology tool and its impacts on governmental service efficiency and people's perception. This idea gets deep into the innovation and current technology implementation in the public sector management of Iraq. Thus, it will focus on a vital tool, which is equally crucial for both citizens and governments, and known by the national identification document.

The research sought to identify and evaluate aspects of Iraq's Biometric National Identification system that were represented by data collected from governmental employees and citizens in the Kurdistan Regional Government (KRG) region. In addition, this study seeks to measure the success or failure of this new electronic identification system in terms of the efficiency impacts created in the administrative processes within governmental organizations as well as the degree of satisfaction made among citizens regarding information privacy, the ease of registration and use of this new biometric identification document.

This study aims to determine if this mega project meets its goals in terms of infrastructure and implementation. It appears the main factor behind the success or frailer of both infrastructure building and implementation plans is the knowledge sharing measures. This study highlights this point as a turning point and emphasizes success stories in different countries as examples.

## 1.3 Research Question/ Hypothesis

This study will analyse if the new Iraqi Biometric National ID card project considered a successful transformation step toward the Iraqi e-Government<sup>2</sup> and unification goals or not! In a similar context, this study will determine the following:

- 1- If this project contributes to the efficiency level of governmental performance. (G2G) Government-to-Government Services
- 2- If this project positively affects the Governmental - Citizen Service process (G2C) Government-to-Citizen Services.
- 3- If this project contributes to the trust-building relations between an Iraqi government and Iraqi citizens in terms of information security.

H0: The new Iraqi Unified Electronic National Identification card project under this circumstance is not considered a successful transformation step toward

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<sup>2</sup> See e-Government definition

the Iraqi e-Government practice but considered a successful step in the infrastructure building for an e-Government.

- H1: The new Iraqi Unified Electronic National Identification card did not contribute to the efficiency level of governmental performance. (G2G)
- H2: The new Iraqi Unified Electronic National Identification card project does not positively affect the Governmental - Citizen Service process (G2C).
- H3: The new Iraqi Unified Electronic National Identification project did not contribute to the trust-building relations between an Iraqi government and Iraqi citizens.
- H4: The new Iraqi Unified Electronic National Identification project is not serving the purpose of a unification idea.

#### **1.4 Significance of the Study**

The significance of this study positions in the prospect of people and their questions regarding the project's primary purpose. Many people wonder if this new identification card can replace previous ones, as the government announced at the beginning of this project. Still, it keeps working with previous ones too. People wonder if the government's infrastructure for this project is sufficient to fulfil this project's main goal! Therefore, this study is unique because there is a research gap, and there are not many studies to answer these questions as far as the researcher searched in the leading academic archives.

Electronic identification systems are new creations worldwide, particularly in unprivileged, underdeveloped, or troubling countries. Therefore, it is urgent for scholars and academic institutions to consider this area of study and shed more light or fill the research gaps in impacting results. In addition, these types of studies can offer some guidance to the governments as suggestions for improvements, and it can open doors for other researchers to get in more detailed steps.

This study can be used as a suggestion for the roadmap while the project is ongoing. In addition, it can assist both federal and regional government agencies in Iraq with details regarding the strengths and weaknesses of the operation processes. This study will serve the following points:

- Revisiting details of this project by highlighting weaknesses within the plan implementation, which is from the government's side to fix and ultimately serve the work efficiency.  
Which leads to,
- Build trust between government and citizens

- Transparency encouragement in the governmental institutions and services
- Building fundamental e-Government infrastructure in Iraq

### **1.5 Limitations**

The scope of this research is confined to the effects of the new/ electronic/ biometric national identification project in Iraq on the governmental organization's performance and citizen prospects. It focuses on the requirements, advantages, and obstacles that face Iraq's national identity project's execution. It covers the project's goals, status, and directions and the essential measures to adjust to meet the setting and keep the project ongoing.

The study's principal shortcoming is the absence of research on this particular initiative in Iraq from national academic institutions. In addition, the few studies that the researcher found were focused on the technical or methodological issues rather than this project's real impacts. Another constraint for the researcher was the limited participation of the citizen survey. As the researcher was targeting 346 samples – based on the population of KRG, only 205 were able to be obtained in one week period.

## 1.6 Definition of Terms

E- Government <sup>3</sup> :	E-Government refers to the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government.
Organising Vision (OV)	Is a term developed by E. Burton Swanson and Neil Ramiller that defines how a vision is formed, a vision of how to organize structures and processes in regards to an information systems innovation. Images and ideas about an innovation from a wider community are brought together.
Knowledge Management Life Cycle (KMLC)	It is the managing steps to organize of the cycle which knowledge comes to life and renew or dispose of.

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<sup>3</sup> [www.worldbank.org](http://www.worldbank.org)

## CHAPTER II

### Literature Review

This section is devoted to a critical view of multi-disciplinary literature on identification systems and the e-Government, especially on the biometric technology that features prominently in current identification projects globally and focusing on the biometric identification system in Iraq.

#### 2.1 Theoretical Framework

Generally, technology will always contribute to success, but this happens only if all significant criteria are successfully implemented. For example, if these projects solve issues created based on, or stockholders of these projects are fully satisfied with outcomes. In our example, if this national identification solution contributes to efficiency, it works within the entire governmental strategies in Iraq. In addition, if this project creates total reliability to the point that leads to the citizen's satisfaction.

There are multiple framework theories worth considering in the preliminary steps of these projects. In this study, three concepts were discussed to evaluate aspects of adaptation of the new Iraqi national identification system.

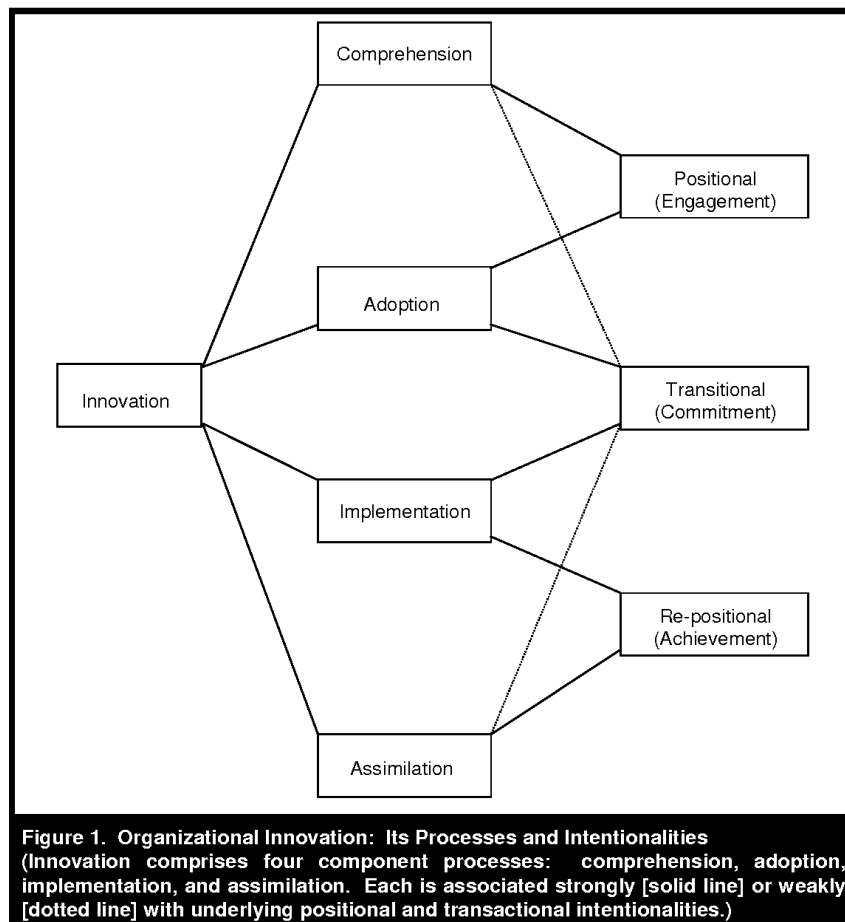
##### **2.1.1 Organizing Vision (OV):**

The central theoretical concept underpinning this study is the Organizing Vision (OV), which helps explain governments' decisions to adopt Information Technology (IT) innovation such as the pursuit of biometrics in national identification programs. (Swanson and Ramiller, 1997) propounded the (OV) theory in 1997 to explain how a collective process of creating a vision enables the successful adoption of programs within and across organizations. Organizing Vision (OV) provides a valuable framework needed to understand the series of actions taken by organizations to facilitate the acceptance and use of new technologies in that field. Swanson & Ramiller argues that technological innovation can be better if explained by considering the phenomenon as a collective process of creating and disseminating an organization vision that seeks to coordinate decisions and actions towards the technology's materialization and deployment. Swanson and Ramiller highlighted three main functioning aspects of the Organizing Vision (OV): interpretation,

legitimation, and mobilization. Swanson and Ramiller used the (OV) concept to highlight the differences between 'mindful' and 'mindless' innovations. Mindless innovation arises when organizations or societies pursue new technology like biometrics because others are doing so. In contrast, organizations and societies that innovate mindfully do so "with reasoning grounded in organization facts and specifics." Swanson and Ramiller identified five attributes of mindful innovation: learning from failures, sensitivity in addressing minor technological issues, commitment to resilience, and reluctance to oversimplify interpretations of new technology. In addition, mindful organizations pay special attention to experts' opinions than the formal authority. To this end, it argued that the organizing vision concept serves as an appropriate analytical tool to study the acceptance of technology in innovation in the society concerning building consensus in the early stages of its adoption.

*Figure 1- Organizing Vision for Organizational Innovation*

*Source: www.semanticscholar.org*



### **2.2.2 Knowledge Management Life Cycle:**

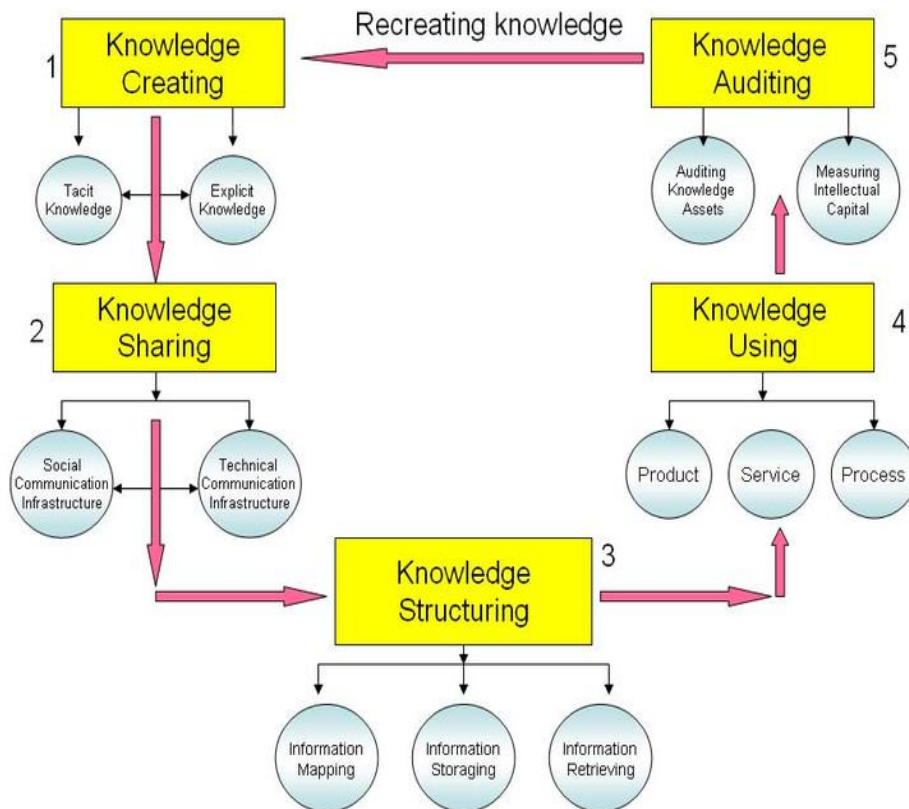
According to M. Sağsan, the central aspect of any Information base technology project is the considerations of the knowledge management system. Five basic procedures considered by the knowledge management cycle could be defined as creating, sharing, structuring, using, and auditing, in turn, called the "knowledge management life cycle- KMLC" model (Sağsan, 2006).

Per Sağsan, an organization can produce and re-produce knowledge; it can feed itself and innovate while processing knowledge. Therefore, it is critical for governments to knowledge management cycle when approaching digital project planning. This five-step knowledge management system can positively contribute to the success of any project. It can be the right approach in the electronic national identification systems because knowledge is about citizens' personal information and their data collected from citizens directly. This five-step can integrate into the project process with some modifications regarding the knowledge categories. Based on this project, knowledge (data at this point) types that contribute to the national biometric identification systems are:

- Permanent data – like Biometric data is a type of password (signs) connected to one's biological features, such as fingerprints, palm prints, optical scans, facial recognition scans, or voice recognition scans (Matar, 2003).
- Variable data – family size number, residential address, and telephone numbers (any information possible to change).

Figure 2 - Knowledge Management Life Cycle

(<https://www.researchgate.net/publication/229019873>)



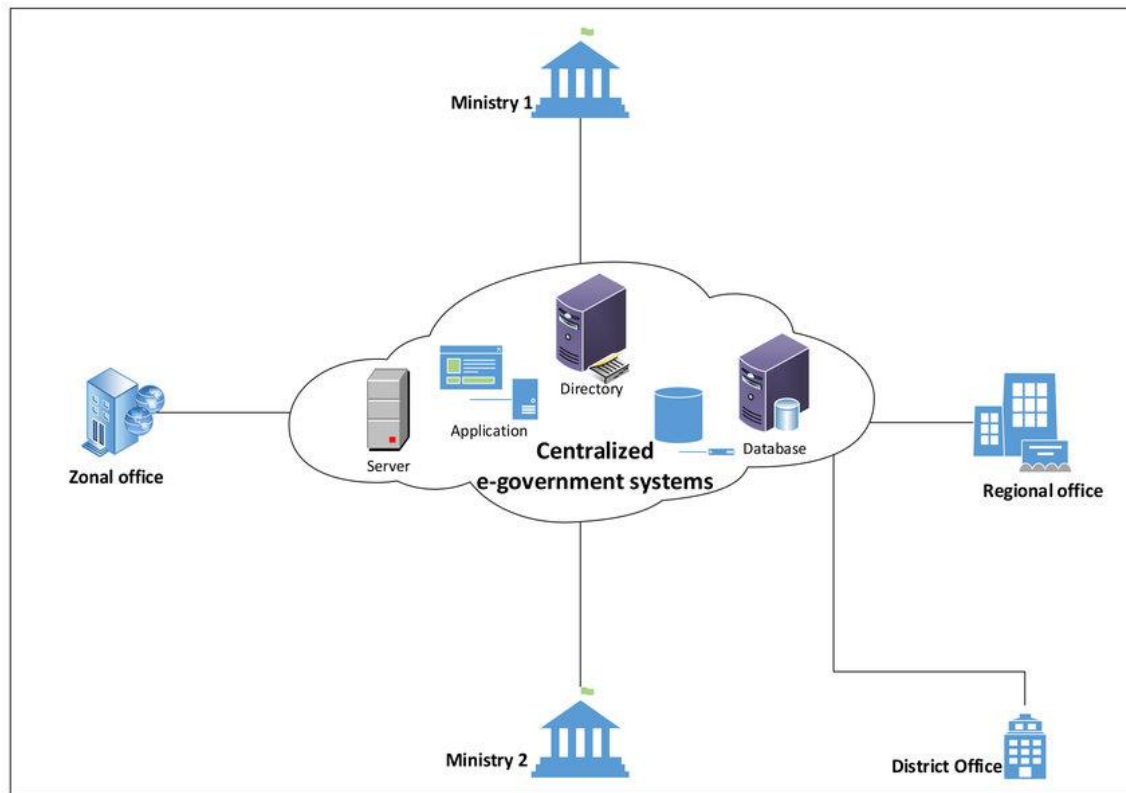
### 2.2.3 The E-Government Rolls and Dimensions

E-Government or the Electronic Government is a technology-driven administration. The citizen can avail of government services like property registration or getting copies of land records, submitting annual taxes, applying or renewing the driving license, and many more services that governments offer citizens. E-Government is the subset of public information technology that involves delivering governmental services and information to citizens. This delivery of services and information also consists of integrating databases, networks, software and servers to allow for cross-agency communication and interaction, which is an internal technology application Fig. (3).



Figure 3- The Integration of e-government system for streamlined e-government services

Source: <https://www.researchgate.net/publication/325578351/figure/fig3>



E-governance is a part of the government's strategy for social presence, improving IT, and assisting people in improving their lives. It involves delivering a selection of services via the internet, telephone, community centers, or government departments to transform the government from a 'procedure and power-centred mechanism to a 'citizen and service-centred platform' (Mishra, S.S. Pani, N. & Sahu, B.S, 2004). Based on (Kumar 2011), e-governance has the following main dimensions:

1. **GOVERNMENT TO CITIZENS (G2C):** Aims to bring people closer to governments by talking to citizens, promoting accountability, listening to citizens, promoting democracy, and enhancing public services. It entails providing improved services to residents through a single-point delivery mechanism in sectors such as e-citizenship, e-transport, e-medicine, e-education, and e-registration by offering services through one-stop government shops. Information for all, citizen feedback, and service improvement are necessary criteria for this service to be realized.

2. **CONSUMER TO GOVERNMENT (C2G):** This category will primarily include locations where citizens interact with the government. It will consist of topics like elections, in which citizens vote for the government; censuses, individuals contribute information about themselves to the government; and taxation, in which citizens pay taxes to the government. E-democracy is one of the most critical C2G services. E-democracy is an endeavour to shift citizens' roles from passive information providers to active participants.

3. **FROM THE GOVERNMENT TO THE GOVERNMENT (G2G):** This is also known as "e-administration." It entails reducing government costs, controlling performance, forging strategic alliances within the government, and empowering citizens. It involves connecting all government offices to create synergy. E-Secretariat, E-Police, E-Court, and State-wide Networks are the main areas.

4. **BUSINESS TO GOVERNMENT (G2B)** E-Taxation is a significant component of the government-to-business concept. This encompasses covering a variety of services that business requires from the government, such as obtaining licenses and other permits. In a similar circumstance, it can flow from a business to the government, like when the government purchase from a business. Standards for electronic transactions, a secure payment method, and critical public infrastructure are necessary for achieving G2B services for safe and genuine trades.

5. **FROM THE GOVERNMENT TO THE NGO (G2N)** E-Society is part of the government-to-NGO model. The goals of E-society are to create interactions outside of government by building communities and strengthening government relationships and civil society. It will entail the formation of diverse associations or interest groups dedicated to the advancement of society.

## **2.2 Related Research**

Many researchers have sought to study various facets of national identification, each from a different perspective based on their interests. The following are some researcher suggestions regarding national designations.

### **2.2.1 National ID Systems and the Role of Governments**

As suggested by (Mummolo, 2018) that everyone on this globe wants to be recognized and gets much attention, and this only gets possible if other people can stand one out among the crowd, which means that other people can relate to a person living in any state if they can identify us through some way. Thus, it emphasized that an identity of a person makes him stand out in a crowd even if numerous methods and forms of identification are present. According to (Erisen, 2017), identification is the most critical aspect of a country where the government must perform different operations.

Each country has different procedures and implementation processes for the National Identification System. For example, there is a minimum age to obtain an ID in some countries, while issued upon birth in other countries. Almost every country has some background behind creating its national identification system and its development throughout history. For example, the USA government developed the Social Security number (SSN) system to organize disbursements of Social Security benefits, after that, many other functions were created around this identification system and covered most of the agencies, to the extent that no US citizen can stay without this vital identification. Because the entire social legislations used it in their supporting services like opening a bank account, obtaining a credit card, obtaining a driving license, obtaining a passport, hiring processes, opening a business, even returning a purchased item to a store will require this identification number! In countries with no established nationwide identification number, their governments need to create a unique number for each person and every purpose. However, there is a risk of mismatching, duplications, misuses, and fraud.

Similar to the USA case, you find the same or close scenarios leading to national identification systems in almost every country. However, the degree of collaboration and political atmosphere of governments will lead to creating more complex solutions to organize and manage these systems and shifting from classical paper-based records to digital archiving and the establishment of gigantic databases. These are turning points of innovation projects and the developments of the e-Government revolution.

It is mainly an act of developing an identity for every citizen, making a single entity recognizable and definable in terms of having certain qualities, names, or characteristics different from another entity of varying form. Numerous studies have been proposed in the past few years that emphasized the use of national identification cards and investigated their impacts on governmental operations and citizens' experiences. However, this study targets the case of Iraq represented by KRG (Kurdistan Regional Government). Therefore, it will cover those pieces of literature, which covered the influence of national identity cards on Iraq's government performance and its citizen's prospects.

### **2.2.2 The Iraqi National ID System History**

Based on the official website of the Directorate of Nationality Civil Status, Passports, and Residency (DNCPR) - Appendix (A), which is a branch of the Ministry of Interior, the first citizenship legislation in the modern era was in 1924. However, the Civil Status Identity (CSID) was issued under the Civil Status Records of 1957. These are solid records approved by the Iraqi government since its adoption of the Population Books (Daftar Al-Nifoos) in 1962. Based on these records and the Civil Status ID (Hawyat Ahwal Almadanya) records, in addition to the Iraqi Citizenship Certificates (INCC), the unification project is becoming known under the recent project. As a result, the Directorate of Nationality Civil Status, Passports, and Residency (DNCPR)- previously named, or the Directorate of Nationality Card Affairs (DNCA) – the new name - formed to issue a national identity card with high-security features through the use of advanced operational programs such as the electronic civil registry program and a national level database that includes all citizens and foreigners residing legally in Iraq. This directorate aims to achieve the following goals:

1. Building a unified database that includes all Iraqis and foreigners residing in the country
2. Granting a national number to every Iraqi, which is a unique number and not repeated and represents a key to the registration relations within the unified database
3. Issuance of a sophisticated national card that is difficult to forge to all Iraqi citizens and foreigners residing in Iraq
4. Development of the civil status registration system from manual to electronic.
5. This identification number is an essential base for issuing passports.

The Directorate of Nationality Civil Status, Passports, and Residency (DNCPR) structure contains four major functional sub-directorates:

- Citizen's Affairs
- Civil Status Affairs
- Passports Affairs
- Residencies' Affairs (for non-citizen)

A study by Ogochukwu (2019) has suggested that the government of Iraq released a statement in 2018 stating that identity number within national identity card is allotted to every individual to gather all records about them, including fingerprints, demographic data, head-to-shoulder face pictures, digital signature, and biometric data. Information is stored in a national identity database, making it efficient to confirm and verify one's identity when individuals engage in transactions, travel, and

more (Ogochukwu, 2019). Furthermore, it claimed that the availability of complete information of an individual in the form of a national identity card makes it easy for the government to regulate its operations and lead to a safe and secure environment for citizens (Brinkerhoff et al., 2016).

### **2.2.3 Impact of E- NID - Government Performances**

(Ghareb, 2015) has suggested the prospects of the Iraqi national identity system, which have greatly affected governmental sectors' performances. According to the research, the national E-ID card was introduced in Iraq. This project brings the augmented recurrent platform for carpet region authorities to interact with different sources and agencies and transact digitally. This approach of the Iraqi government has improved its performance in numerous sectors. The government promoted efficient and meaningful citizenship, forcing governance, efficient ontology, and cashless actions. Another study was given by (Abdulrahman et al., 2018), suggesting, "After the national identification card or E-ID has got recognition in Iraq, most of the operations of the government will ease through, and their output will be even more remarkable. For example, incorporating ID cards, driver licenses, health insurance, voter registration, pensions, and taxes will indulge into one platform, leading to the government's success. This project was anticipated to transform how government interacts with the public and the future development of Kurdistan Region Iraq - KRI. Through this project, the Iraqi government has effectively addressed multiple issues faced by the citizens. Thus, citizens' views have also improved due to this national E-ID project. According to Kika, governments worldwide realize the need for national identification systems because of the increasing rate of threats of terrorism and kidnapping (Kika, 2019).

Moreover, with the rapid growth of telecommunication, most people are predisposed to travel long distances to access government services. The current governmental views shift towards a cashless economy, emphasizing evidence and communication technologies. Along with multiple reasons for the governments to improve their performance and services for the citizens, some adverse outcomes experienced that might negatively affect their performances. As suggested by (Azfar et al., 2018), despite the introduction of national identity cards and so many positive facets of technological approaches, some individuals use these amenities for disparaging purposes, including privacy invasion, identity theft, provision of a fake identification document to the government sectors as well as promoting illegal immigration for small or big ratios of profits, and many other issues.

According to (Lu et al., 2019), due to multiple cases reported in Iraq regarding the management of credulous members of society mixed with the power of CRM's impressive information technology advancements to be used to their full

extent in the shape of safer and secure national identification card program (NICP).

#### ***2.2.4 Impacts of Electronic National ID: Citizen's Satisfaction, Security, Privacy, and Efficiency***

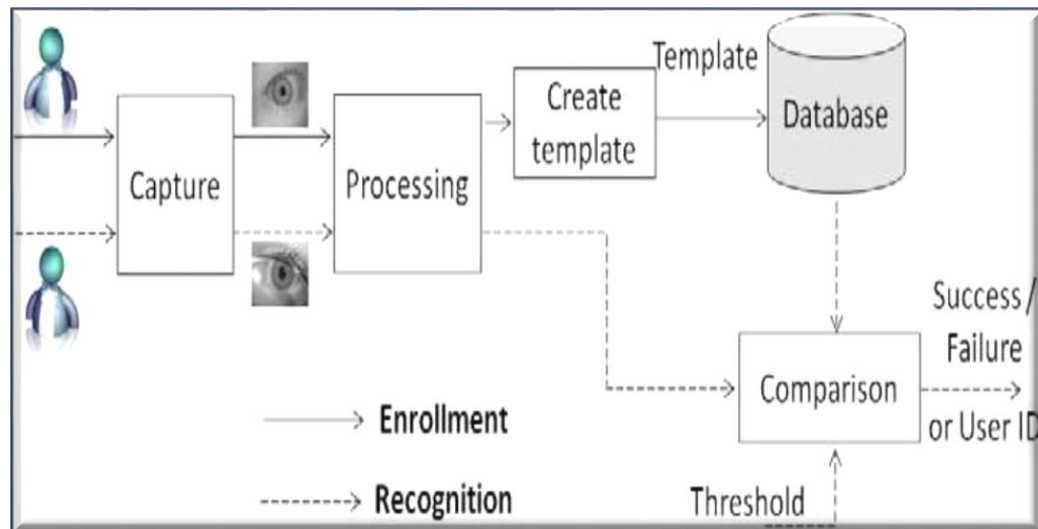
According to (Rao et al., 2019), a remarkable influence respective to the citizens is also experienced as the formulation of a national identification system reassures less inclusive philosophies of citizenship and enables the understanding of desirable or undesirable nobilities based on identity management of individuals. (Sena, 2018) claims that the Iraqi government's social performance and sorting capacities will improve with their enhanced capabilities of un-playing new IDs because of the implications of governance of multiple functioning identification systems with social justice outcomes.

#### ***2.2.5 The Biometric National ID is the latest technology in the field-Fig. (4)***

(Lyon, 2007) suggests that new and innovative identity card systems are being formulated globally in nations based on biometrics and even searchable databases (Fig-3). The companies with high technological approaches support and promise such identification systems, and the governments are also seeking them for their better performance and achieving administrative efficiency. Furthermore, claimed that governments are looking towards implementing effective and innovative approaches to national identity cards based on biometrics and databases that are searchable. Another study (Lee, 2018) suggests that reconnaissance problems are not much emphasized, but the national registries of individuals in Iraq provide enough space to process the personal data. The technology of national identity cards leads to massively improved operations of the country as they nurture the culture of control to reach the security expansion geographically with the harmonization and integration of identification measures across the national borders.

Figure 4- The Biometric Identification System

Source: <https://www.semanticscholar.org>



Regarding the overall impacts of national identification cards on the government's performance and citizen prospects, different issues counted that are still not improved through the innovative systems of identification cards. First, the governments must use other means of authentication and identification. For example, a study proposed by (Atick, 2016) suggests that national identity card systems in Iraq and other countries will not prevent terrorism. The governments will have to look for alternate solutions to ensure no terrorism and cyber-attacks. Furthermore, criminals and terrorists invade governmental policies regarding national identity by legal or illegal means. The anticipation of the researcher says that terrorism will continue that will challenge the credibility of governments through the document that even has the government ID, including the owner's signature and birth certificates. All the documents related to national identity cards do have information like digital fingerprints on them, which does not prove one's real identity (Rivera et al., 2017).

In the past, some researchers have also investigated different prospects of citizens' national identification card impacts. (Gelb et al., 2018) has suggested that national identity cards within Iraq will play an important role by developing a system of internal passports that will ominously moderate the privacy and freedom of the law-respecting citizens. However, it seems expected that this identification system is not restricted to its original purpose. For instance, social security numbers that later took the shape of national identification cards were initially envisioned to be utilized certainly to administer the retirement programs. However, this limit has been ignored continuously and slowly uninhibited over the past five decades.

Thus, the national identity systems will eventually impend people's privacy and gradually increase government and technological organizations' control over everyday citizens. (Domingo et al., 2018) has claimed in research released under Acuity Market Intelligence that the circulation of E-ID cards will reach up to 3.6 billion citizens by the end of 2021. This service will influence the ways governments will perform eventually as the electronic national identification cards will swiftly evolve ascendancy by reflecting the global drive towards e-commerce and e-Government services empowered by electronic identities. According to the mutually decided statement of Acuity, this move of implementation of national identity cards all over the countries will lead to numerous remarkable opportunities for governments and citizens as regional, national, and global transactional infrastructure held by valuable and known digital identity schemes will surface over within next five years.

Leong (2019) has suggested that national identification cards retain significant importance in the business world and for all the sectors of the governments that work for the welfare of citizens. As claimed by the researcher, in the business sector of Iraq, national identification cards play a vital role in empowering financial services firms and telecommunication organizations to address consumers' issues and queries related to identification and privacy. However, such companies let the governmental departments communicate and interact with users and citizens more efficiently. Another study by Bauder suggests that the government of Iraq has a massive opportunity of showing the best performance after implementing advanced systems of national identity cards. Through that project, a border control environment will activate; this will combine with biometric authentication systems and facial recognition, which will help lift security and progress passenger throughput. These sorts of approaches taken by the government will give confidence to the authorities regarding the authentication of a person standing in front of them (Bauder, 2017). According to Kaufmann (2019), the government of Iraq has realized the importance for the citizens to keep national identity cards and declared that these ID cards will now start operating as 'internal passports' that monitor citizens' movements. This process explained as follows, proving the positive impact of national identification systems on the government's overall performance. Iraq, Pakistan, other Asian and European countries have already gone through specific procedures where the society contained the governmental authorities that acted as totalitarian entities and asked for the papers to authenticate the individuals. Later, when the technological advancements started to be recognized and database technology. Currently, the government ordered the police officers and security guards to scan one ID card with the pocket bar-code reader. For instance, whether these internal passports will provide a permanent record of that check, including location



and exact time. The governmental sectors will know when citizens locate or travel through these identity cards.

Regarding the overall impacts of national identification cards on the government's performance and citizen prospects, it is believed that different issues counted that are still not improved through the innovative identification systems. As a result, the government must use other means of authentication and identification. Another significant impact of national identity cards in Iraq in terms of governmental performance and citizen prospects is that discrimination and harassment will not come to an end (Medaglia et al., 2017). It is expected that applying a national identification system and national documentations within Iraq will not eliminate discrimination. Instead, it will introduce its new and innovative forms, and such harassment will be perceived as looking "foreign."

Thus, the above literature review has effectively covered some articles and research papers given by valuable researchers in the past few years that covered the impact of national identification cards on government performance and citizens' prospects. Some positive and negative effects were observed through this literature review—they have implications on the citizens and the overall operation performances of the Iraqi government.

## CHAPTER III

### Methodology

The methodology approach used for this study is a mixed-method approach. It is essential to obtain information and collect data from citizens with different backgrounds and geographical locations. In that regard, a quantitative approach used in two (2) online surveys to collect information from citizens and general governmental employees. In addition to online surveys, the qualitative method approach also used one-on-one with people directly involved in the Iraqi Electronic National ID Project. Another form of qualitative approach was the internet research and studying the official website for further information required to support the thesis study. Therefore, both qualitative and quantitative methods can serve this study very well.

#### 3.1 Research Design

The design of this study offers a direction of how this study will be conducted, and it gives details of how the researcher will collect data for this study. The researcher developed two sets of questionnaires to support this study. Surveys, one-on-one interviews and internet searches were tools of this study and assisted the researcher in collecting data.

##### 3.1.1 *Self-designed Questionnaires*

Self-development of questionnaires was a necessary step for the following reasons:

- There were no standardized questionnaires within the time of the topic research and in line with the Iraqi case. (The researcher looked into legitimate online journals and university research archives in Iraq).
- The researcher felt confident in developing her questionnaires, inspired from her own experiences in the questionnaire developments in the market research field like Kantar and Nelson.

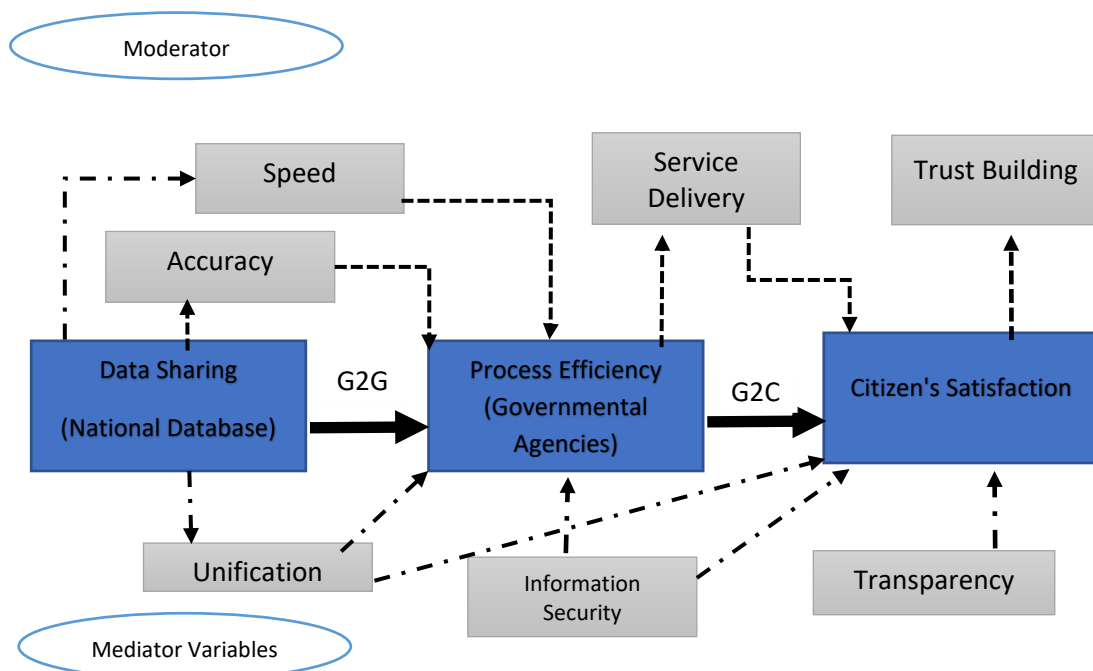
These questionnaires developed with Google Forms and translated into the Kurdish language – the formal language of KRG. Both questionnaires distributed digitally via WhatsApp and emails to participants, in addition to posting it on the researcher's Facebook for friends to share. Another way of distribution is a direct handout to participants. These questionnaires come in two sets, one for the governmental organization employee and another for the public to give their inputs and opinions.

### 3.1.2 Research Model – Figure (5)

This study tries to investigate direct and indirect relations between the Unified Electronic National Identification card project and e-government initiation in Iraq. It investigate three (3) main key variables concerning the Iraqi Unified Electronic National Identification card project. It is also investigates other mediating, moderation, or control variables as factors contributing to these relations. The key variables are data sharing, process efficiency and citizen's satisfaction and other variables like speed, accuracy, service delivery, trust building, loyalty, transparency, information Security. This study investigates five main hypothesis that suggested by the researcher and in the end it figures out the acceptance and rejections based on result findings.

In this research model, the researcher suggests the following hypothesis and figures out how they will be agreed or rejected based on result findings:

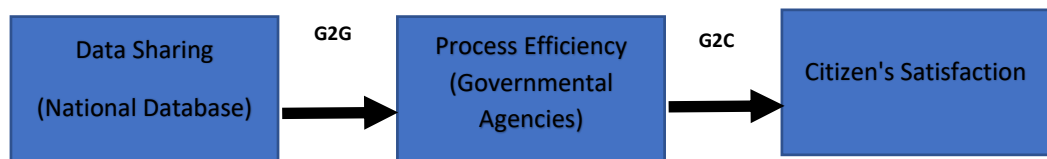
Figure 5- The Research Model



**H0:** The new Iraqi Unified Electronic National Identification card project under this circumstance is not considered a successful transformation step toward the Iraqi

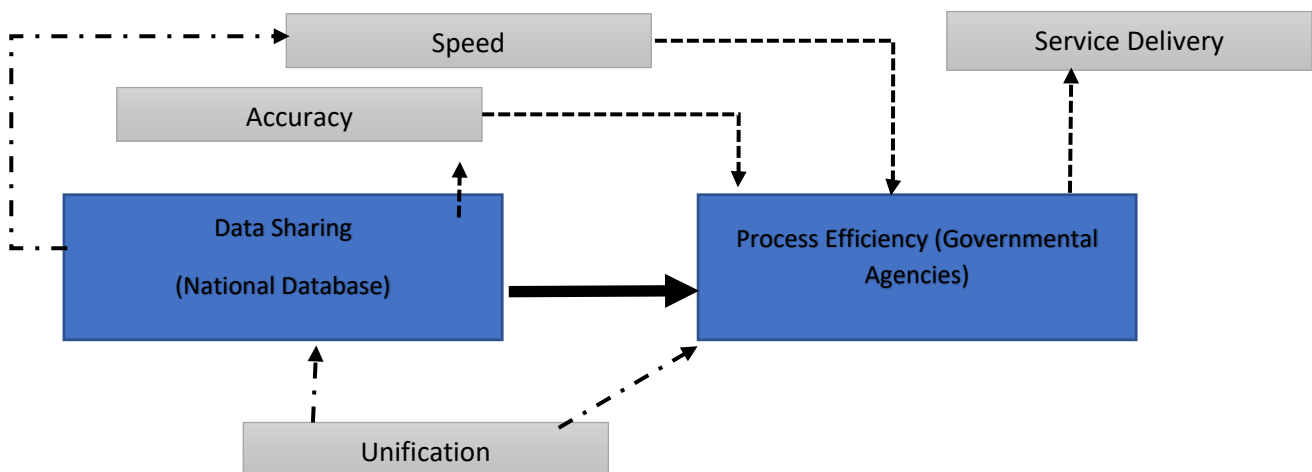
e-Government practice but considered a successful step in the infrastructure building for an e-Government. This move of implementation of national identity cards all over the countries will lead to numerous remarkable opportunities for governments and citizens as regional, national, and global transactional infrastructure (Domingo et al., 2018). The researcher suggests this hypothesis based on the importance of the availability of the national database as the most critical element of the e-Government services.- *Figure (6)*

*Figure 6- H0 Hypothesis Model*



**H1:** The new Iraqi Unified Electronic National Identification card did not contribute to the efficiency level of governmental performance - (G2G). The researcher suggested this hypothesis based on the existence of requiring elements of the e-Government, which consists of the national database centre and contributing factors to the governmental process efficiency. In this model the researcher emphasise on the four (4) factors including Accuracy, Speed, and Service delivery as moderating factors and Unification as the mediating factor. *Figure (7)*

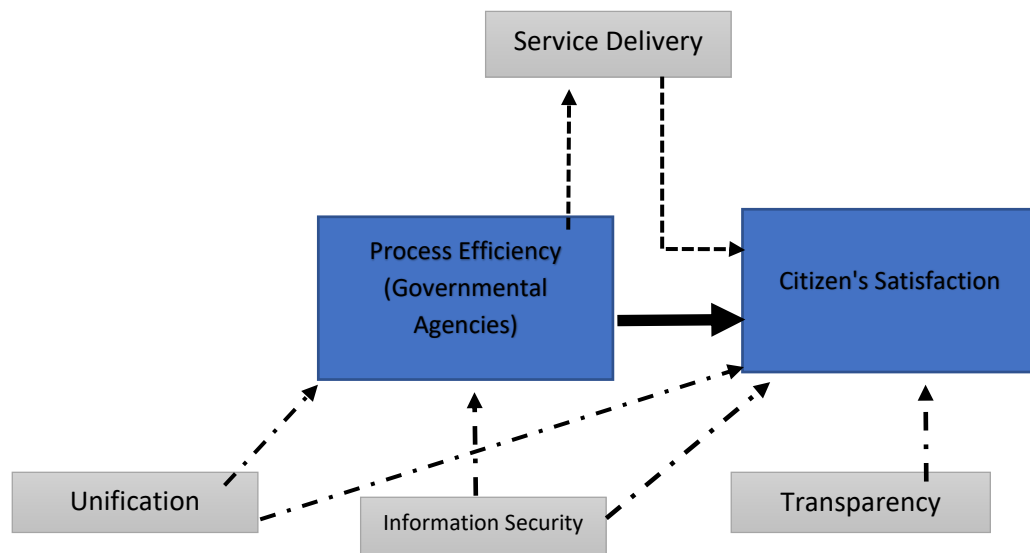
*Figure 7 - H1 Hypothesis Model*



**H2:** The new Iraqi Unified Electronic National Identification card project does not positively affect the Governmental - Citizen Service process (G2C). The researcher suggested this hypothesis based on the existence of requiring elements of the e-Government, which consists of the Process Efficiency in the governmental organizations processes and contributing factors that leads to the Citizen's Satisfaction. In this model the researcher, emphasise on the seven (7) factors including Service Delivery, Trust building, and Loyalty as moderating factors and unification, Information Security, and Transparency as the mediating factor. *Figure (8)*

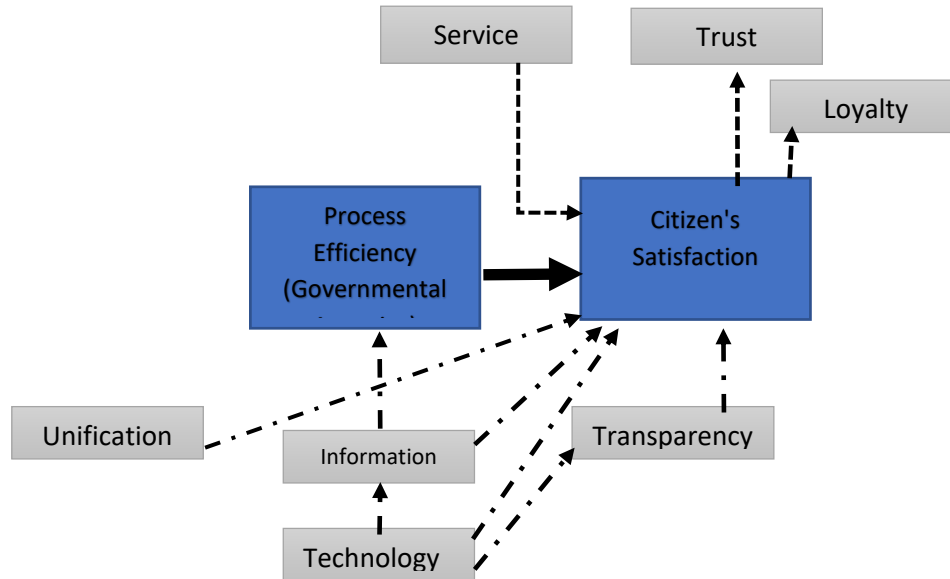
**H3:** The new Iraqi Unified Electronic National Identification project did not contribute to the trust-building relations between an Iraqi government and Iraqi citizens. The researcher suggested this hypothesis based on factors leading to the Citizen's Satisfaction. In this model the researcher, emphasise on the seven (7) factors including Service Delivery, and Trust building as moderating factors and unification, Information Security, and Transparency as the mediating

*Figure 8- H2 Hypothesis Model*



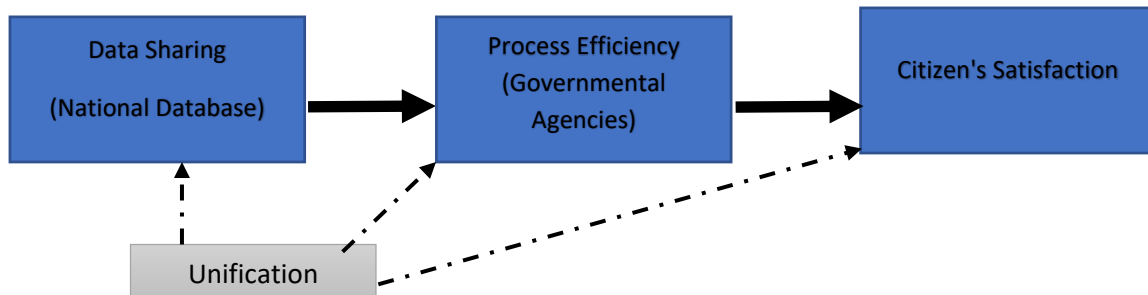
factor. *Figure (9)*

Figure 9 - H3 Hypothesis Model



**H4:** The new Iraqi Unified Electronic National Identification project is not serving the purpose of a unification idea. The researcher suggesting this hypothesis based on the role of the unification decision by the government for merging multiple identifications information and its impacting benefits on both Governmental Organizations efficiency and citizen's Satisfaction. In this model the Unification factor plays a mediating impacts on both Organizations efficiency and citizen's Satisfaction. *Figure (10)*

Figure 10 - H4 Hypothesis Model



### 3.2 Survey Coverage - Participants/ Population and Sample:

The initial intention for these survey coverages was to cover the entire country of Iraq. However, it is challenging to conduct a project at this scale in a short period with limited resources; Therefore, the researcher discussed the issue with the supervisor and requested to focus and narrow it down to a smaller population. Thus, choosing KRG (where she resides) was ideal for the task.

By doing this step, KRG survey samples will represent the entire country without jeopardizing the outcome. The probability sampling will include:

#### 3.2.1 Quantitative Method Approach:

Two sets of questioners developed by the researcher to assist data collection. The formation of questionnaires followed nominal scales of measurement with multiple answers and Yes or No choices.

#### 3.2.1 (A) The first government questionnaire survey - Appendix (B).

It is essential to collect data from governmental organizations/employees, as they are direct users and empowering force of the system to understand the following:

- The infrastructure supports
- The status of connections
- The sharing knowledge model among organizations
- The level of understanding e-Government concepts
- Challenges facing this project
- Degrees of preparations in the governmental organizations
- Furthermore, to know the changes made by this new project to figure out efficiency impact.

Details of sampling selections and decision comparison:

- **(A-1)** Iraqi government – 21 ministries + 3 upper organizations  
- <https://gds.gov.iq/pm/>.
- **(A-2)** KRG government – 19 ministries + 3 upper organizations  
- <https://gov.krd/government/the-cabinet/>- Appendix (B) reflects chosen population Criteria
- One sample/ ministry is enough to give good information about the infrastructure and data sharing models, but more than one can provide more details.

### **3.2.1 (B) The second set - citizen questionnaire survey - Appendix (C).**

On the other hand, it is crucial to collect citizens' opinions about this project and understand their degrees of satisfaction to determine their views of electronic services and trust-building aspects.

Details of sampling selections and decision comparison:

- **(B-1)** Iraq population estimated at 40.22 million based on <http://data.un.org/>.
- The head of the household can apply for all members in one package - in line with Iraqi laws.
- The Iraqi family average size is 6.3, the total survey number will come close to 6,384,444 household samples, and selection based on 0.001% will result in 6,384 samples.
- **(B-2)** KRG region – Inner-city citizens' Sulaimani, Erbil, Dihok, and Halabja population:
- Estimated 1,939,170 million, Household size of 5.6 = 346,280 total household samples <https://reliefweb.int/>, and selections based on 0.001% 346 samples. Appendix (C) reflects chosen population Criteria

### **3.2.2 Qualitative Method Approach:**

Because academic studies and journals lacked first-hand information about the new National Identification or electronic ID project, the researcher opted to conduct personal interviews with those directly involved in the project. These individuals are fully aware of the project's history, current status, and plans. Three officers from different sub-directorate offices (G), Appendix (H), and Appendix (I) agreed to perform phone interviews.

Another qualitative technique approach was to look at the official website of the Iraqi Nationality Directorate to learn more about the project's history and current



state. Appendix (M). In addition, the researcher looked on the internet for any media articles or comments about the New Electronic National ID.

### **3.3 Data Collection Tools/Materials and Procedures**

The primary data collected from participants through a quantitative method approach. Two questionnaires developed to collect data from people over 18 years old who are government employees and regular citizens of KRG inner-city residences. Another data collected from several employees working for the Iraqi Nationality directorate and considered the first department involved in this project. The secondary data/ information was collected from earlier studies/literature and legitimate websites, including the official website of the Iraqi Nationality Directorate. Moreover, some web articles concerning the New Iraqi National ID.

#### ***3.3.1 Data Collection Tools - Quantitative Method Approach:***

The survey questionnaires for the Governmental organization's Survey - Appendix (B), and the Citizen Survey - Appendix (C) - were developed through Google Forms. They sent links via email or WhatsApp to participants and posted on the researcher's Facebook account for friends to share and aim more participation. The survey opening timeframe was one week, Nov 21<sup>st</sup>, 2021 – Nov 28<sup>th</sup>, 2021. Participants could fill out an online survey questionnaire on their mobile phones or personal computers. Results saved automatically on Google Forms. The researcher accessed results as soon as participants clicked on the "Send" button.

The first survey questionnaire was designed to gather information from the governmental organization's employees, it consists of 5 sections (Appendix (D)), and the second set of questioner contains three sections to collect citizens' opinions about the new identification card (Appendix (E)).

After closing an online survey, the researcher transferred the results to an Excel spreadsheet for further development, cleaning, and analysis.

#### ***3.3.2 Data Collection – Qualitative Method Approach:***

One-on-one interviews with governmental employees, especially those directly involved in the project, were essential to know more details. Three (3) officers from the sub-directorates interviewed over the phone – due to the Covid-19 pandemic, and phone interviews were more practical than face-to-face interviews. of National Identification system. (Appendix (F)- Interview Mapping)

### 3.4 The Pilot Study for the Quantitative Method Approach

A pilot study conducted to evaluate the visibility of components of full-scale research for each survey questionnaire within the following boundaries.

- Eligibility - 18 years older can participate in Citizen Survey, while these boundaries are not implacable to the government participation survey (Appendix (B)) because the minimum employment age is 18 by Iraqi law.
- Time - 10 minutes for Citizen Survey and 15 Minutes for Government Survey.

The process started with testing both surveys by sending their links via WhatsApp to participants. Both, (Appendix (B) Government) – Eighteen (18) samples, and (Appendix (C) Citizen) – three (3) samples. A probability sampling conducted. Participants could fill out an online survey questionnaire on their mobile phones or personal computers. Results saved automatically on Google Forms. The researcher could access results as soon as participants clicked on the send button.

The following are the outcomes of the pilot study's process:

- No significant issues in the survey application found. Only a few duplicated questions and section re-arrangements to shorten the questionnaire and cut participants' time filling out these surveys.
- Some challenges with font compatibility regarding the language writing direction and font limitations observed, but they did not affect the results.

### 3.5 Data Analysis Methods, Plans, and Procedures

In this study, three-step approach was used concerning data collections and analysis. The following steps conducted:

- The first step was about the data collection through Google Forms.
- The second step, data transfer from the forms to a spreadsheet using Google Sheets
- The third step, data transfer or export to Excel spreadsheet for clean-up (<https://www.youtube.com/watch?v=-EkANfvvtXY>, n.d.)
- The fourth step, statistical analysis for accepting and validating questionnaires.
- The fifth step, visual creations in the form of graphs.

The researcher watched several videos on the YouTube channel to get familiar with this procedure and its practical steps.

(<https://www.youtube.com/watch?v=uFatMR1rXqU&t.>, n.d.)

### **3.5.1 Survey Questionnaire Details- Data Distribution Based on Hypothesis - Quantitative Approach**

#### **3.5.1 (A) Government survey mapping - Appendix (D).**

This survey's data collection and analysis concern governmental employees' ideas about their organization's activities, behaviors, and performances about the New National ID. One survey per ministry filled out to reflect data - 21 organizations total.

Leading questions asked to reflect specific hypotheses:

H0 – H2 covered by these Questions:

#### **First Section:**

Q1- Q12: The general use of IDs by organizations and knowledge management cycles. It is aimed to collect information about the type of administrative services, types of processes that require national IDs, and the name of necessary IDs by their process cycles.

#### **Second Section:**

Q13-Q18: About the New Electronic National ID, focused on the role of the new Iraqi National ID, unification aspects, contributed efficiency, speed rate, and accuracy of processes, key factors supporting positive impacts, and challenges facing adverse effects.

#### **Third Section:**

Q19-Q24: The legal aspects of the new Biometric National ID as the foundations. The aim is to investigate challenges and legal supports, to understand the legal framework and law amendment gaps and levels of the amendments in different organizations.

#### **Fourth Section:**

Q25-Q30: About The culture of e-Government and Innovation Aspects. The aim is to investigate employees' reactions to the innovation and e-Government processes contributions.

#### **Fifth Section:**

Q31-Q33: About the Technical Aspects – for Technical Employee in ICT, focuses on the role of the technical department in this project and understanding types of involvement in the data management cycle. The

aim is to know the direct participation, level of implementation speed of a particular organization.

### **3.5.1 (B) Citizen survey mapping - Appendix (E)**

The data collection and analysis from this survey concerns citizens of Iraq represented by KRG inner city's ideas about the New National ID. The goal was to collect 346 based on 0.001% of the estimated population of 1,939,170 million and represent the household size of 5.6, which equals 346,280 total household samples based on <https://reliefweb.int/>. However, with time limitations of one week, participation reached 205, which was the final full participation. However, a smaller amount of involvement did not affect the results.

Leading questions were asked to reflect specific hypotheses:

H3 – H4 covered by these Questions:

#### **First Section:**

Q1-Q5: About General questions - like age, occupation sector, and marital status, as well as the name of National IDs in positions.

#### **Second Section:**

Q6-Q13: About New/ Biometric National ID. Focuses on the process of obtaining the new/ biometric National ID, challenges and period length, unification aspects and challenges, and understanding the unique ID from the citizens' prospect or impact's opinion.

#### **Third Section:**

Q14-Q15: About Information Security. The aim is to investigate citizens' opinions about information privacy and governmental organizations' trustworthiness.

### **3.5.2 Data Cleaning and Manipulation**

As a part of pre-analysis, gathered data needs to be cleaned and manipulated to be ready for generating visuals like graphs (<https://www.scribbr.com/>, n.d.). Therefore, the researcher transferred incoming data from both surveys to an Excel spreadsheet for efficiency and visual creations in this study. Another step carried out by the researcher was to translate retrieved data from the Kurdish language to English, create visuals like graphs, and complete data analysis.

### **3.5.3 Data Visualization**

Several programs create visuals like charts, graphs, and pivot tables. However, for this study, the Excel spreadsheet was more efficient for analyzing results, and graphs generated by Excel from transferred results, to connect results with survey questionnaires, which was the language of surveys.

### **3.5.4 One-on-one Interviews**

The researcher conducted three phone interviews with persons who work for the Nationality Directorate in the KRG area. For social distancing linked to the Covid-19 epidemic, face-to-face interviews were replaced with phone interviews. Two of the interviewees are working for the Nationality ID offices in Erbil and Sulaimani, while the third one was working for the Passport Agency in Halabja, which works closely with the Nationality ID offices. The goal is to learn more about the biometric national ID project, including its history, structure, progress statistics, and data sharing knowledge model. (Appendix (F) Interview Mapping)

To collect information structurally, the researcher structured her questions based on five (5) areas of concern.

- The background
- The new Iraqi national ID project details Infrastructure, national database, Biometric Scheme, unification aspect, security measures, statistics, challenges, and plans.
- Knowledge management aspects like Mode, partners, data sharing methods, and challenges
- The e-Government understanding and contributions
- The Paperless government understanding and contributions

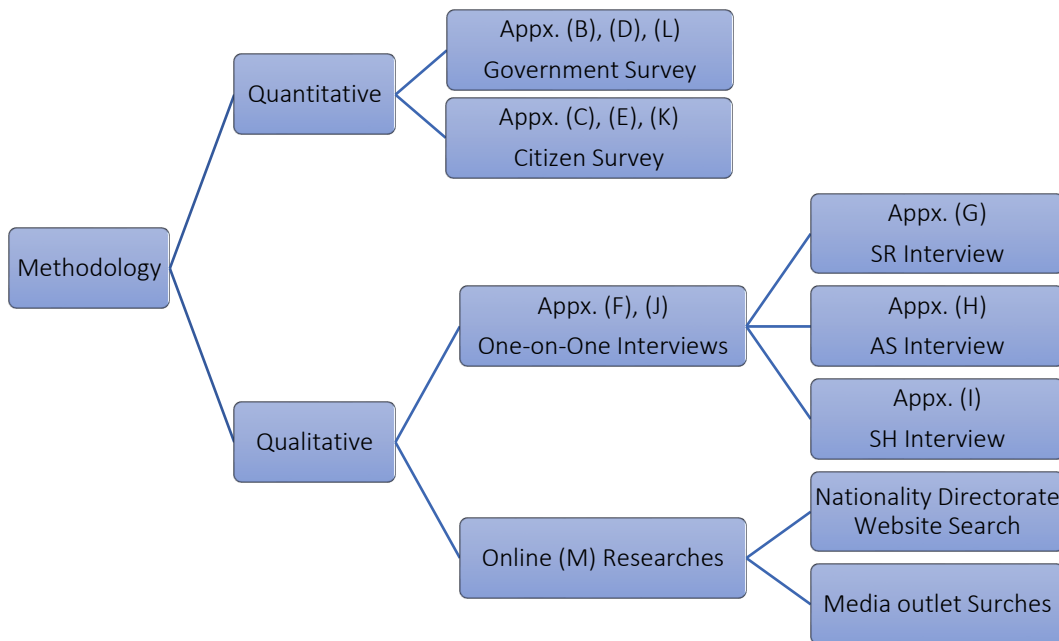
To better understand the details of qualitative method analysis, the researcher watched various coaching videos on YouTube channels. For example,

<https://www.youtube.com/watch?v=DRL4PF2u9XA&t=321s>. The following mapping is the structure that the researcher depends on to direct her questions to collect information from interviewees:

**3.5.5 Web Search Data Analysis**

Any research project should begin with an internet search. The researcher used scholarly publication sites, and Google searches to learn more about national identification, particularly biometric identification. The official website of the Directorate of National Card Affairs was another key internet search (DNCA)

**3.5.6 The Methodology Structure Overview**



## CHAPTER IV

### Results and Findings

This chapter discusses the researcher's findings and discoveries concerning the New/ Biometric/ Electronic National Identification (ENID) in Iraq, the only e-Government solution that presented by the Iraqi government to its inhabitants on a full-scale national level. Data collection from qualitative and quantitative methodologies covered the subject's most important components. The responses of both Government and Citizen's surveys are presented in this chapter are analysed with the use of Microsoft Excel spreadsheet.

#### 4.1 Results of the Government Survey

This survey's data collection and analysis concern governmental employees' ideas about their organization's activities, behaviors, and performances about the New National ID. One survey per organization filled out to reflect data - 23 organizations total. *Figure (11)*

##### **First Section:**

This section is about organizations' general use of IDs and from the Knowledge Management cycles model. It aimed to collect information about the type of administrative services, types of processes that require national IDs, and the name of necessary IDs by their process cycles.

Q1- Name of the organization or the ministry, which reflects data gathering from various governmental organizations. Each organization owns particular processes that require specific knowledge management approaches. A sum of twenty three (23) Organization representatives participated out of the total 25 ministries including the Kurdistan parliament.

*Fig. J- 1*

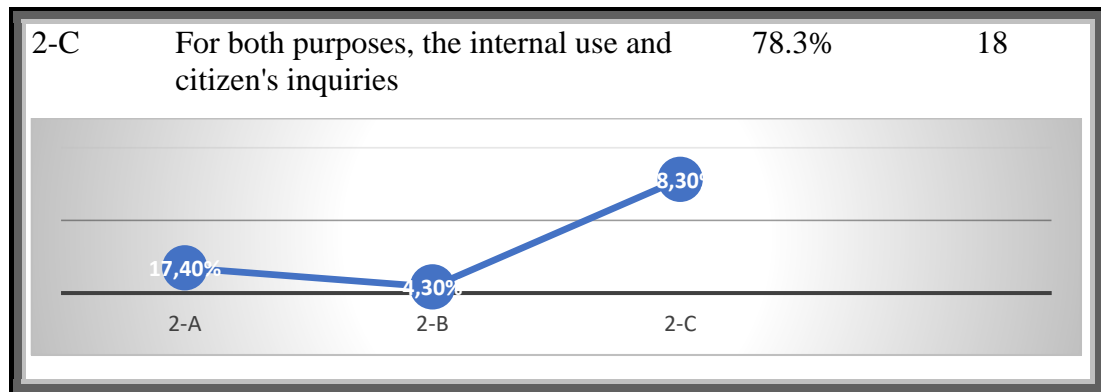
Ministry of Health  
 Ministry of Culture and Youth  
 Ministry of Education  
 KRG Parliament  
 Ministry of Higher Education and Scientific Research  
 Ministry of Agriculture and Water Resources  
 Ministry of Justice  
 Ministry of Peshmerga Affairs  
 Ministry of Labor and Social Affairs  
 Ministry of Endowment and Religious Affairs  
 Ministry of Transport and Communications  
 Ministry of Finance and Economy  
 Ministry of Municipalities and Tourism  
 Ministry of Planning  
 Ministry of Construction and Housing  
 Ministry of Trade and Industry  
 Ministry of Martyrs and Anfal Affairs  
 Ministry of Electricity  
 Ministry of Interior  
 Ministry of Natural Resources  
 No Name  
 No Name

Q2- How your department deals with citizens' NID? One Answer

*Fig. J- 2*

<i>Opt.</i>	<i>Answer</i>	<i>%</i>	<i>Part.</i>
2-A	For internal use. Human Resources	17.4%	4
2-B	For citizen's enquiries	4.3%	1

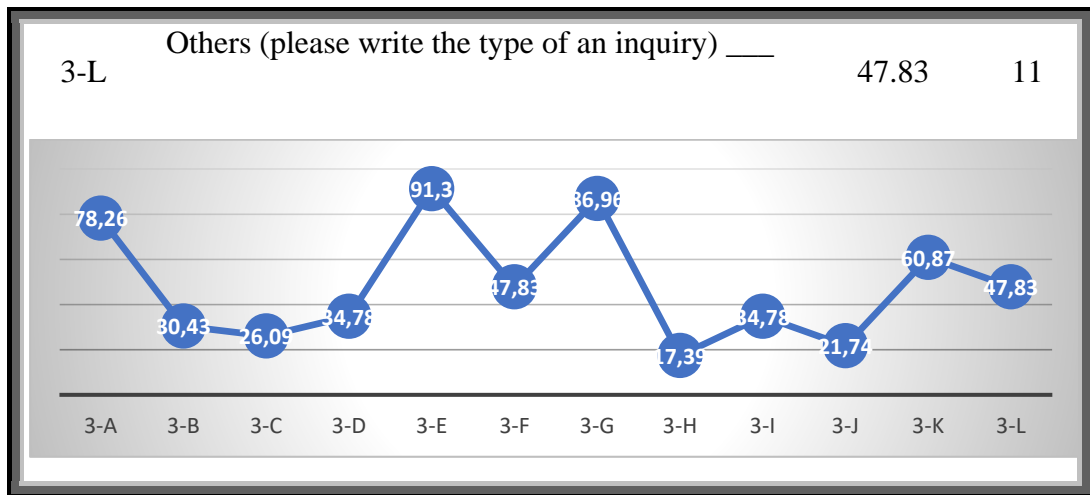




Q3- For which inquiries/ process/ programs in your department require the citizen's NID? Multiple answers allowed.

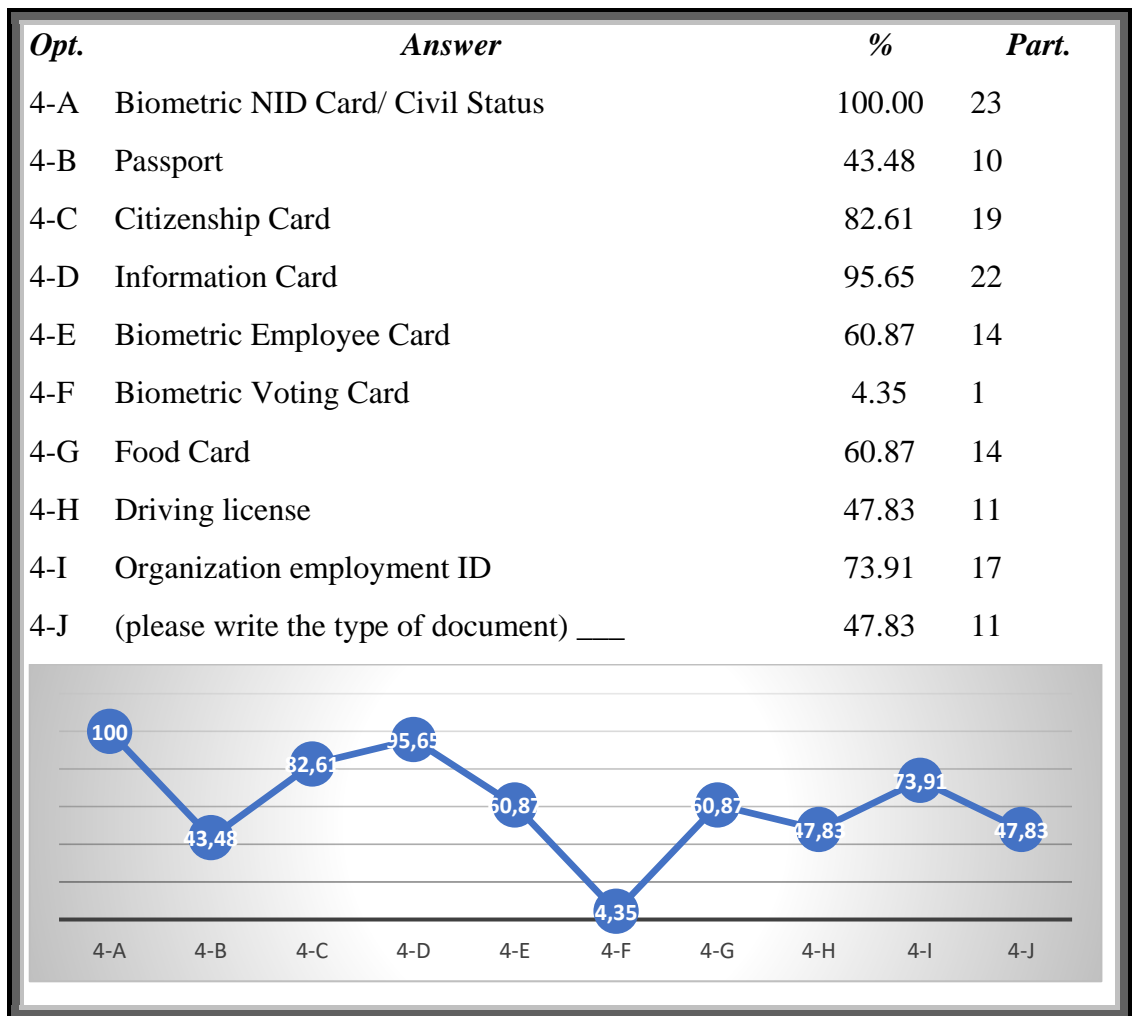
Fig. J- 3

<i>Opt.</i>	<i>Answer</i>	<i>%</i>	<i>Part.</i>
3-A	Application for ownership/ status change at gov. organizations (property, business, vehicle, etc.)	78.26	18
3-B	Application for obtaining (Passport, visa to travel, information card, food card, voting card, employment card)	30.43	7
3-C	New-born/ child registration under my name	26.09	6
3-D	School admission	34.78	8
3-E	Employment with government, retirement, long-term leave... etc.	91.30	21
3-F	Employment with private sector	47.83	11
3-G	Contracting, supplier, and anything else	86.96	20
3-H	Health sector inquiry (vaccine, long-term leave if worked with government...etc.	17.39	4
3-I	Driving license	34.78	8
3-J	Open a Bank account, credit card, ATM Card	21.74	5
3-K	Court inquiry	60.87	14



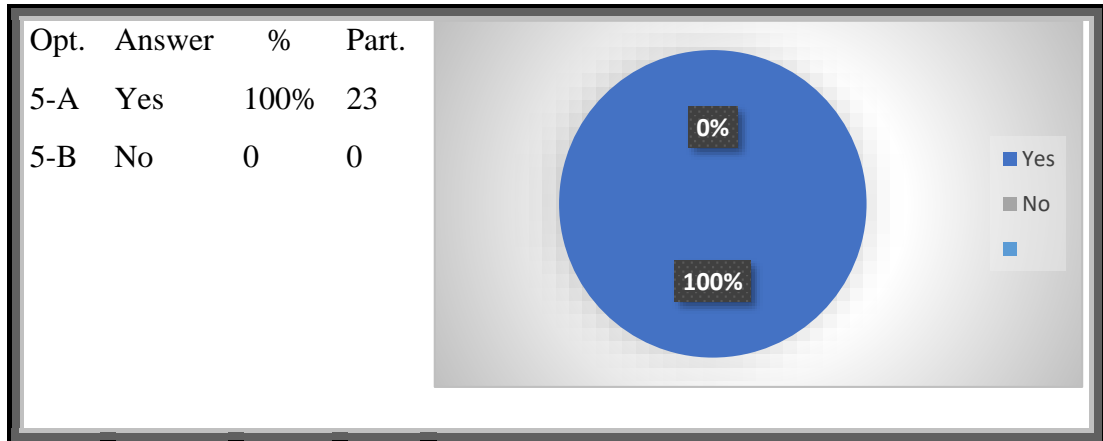
Q4- Which NID was used. For which process/ program? Multiple choice.

Fig. J- 4



Q5- Do you share these documents or copies of these documents with other departments? One answer

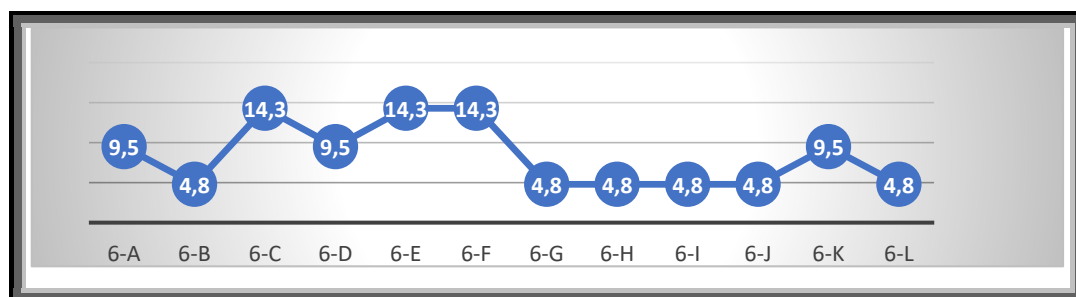
Fig. J- 5



Q6- How many other department/s are participating in this process? Open end

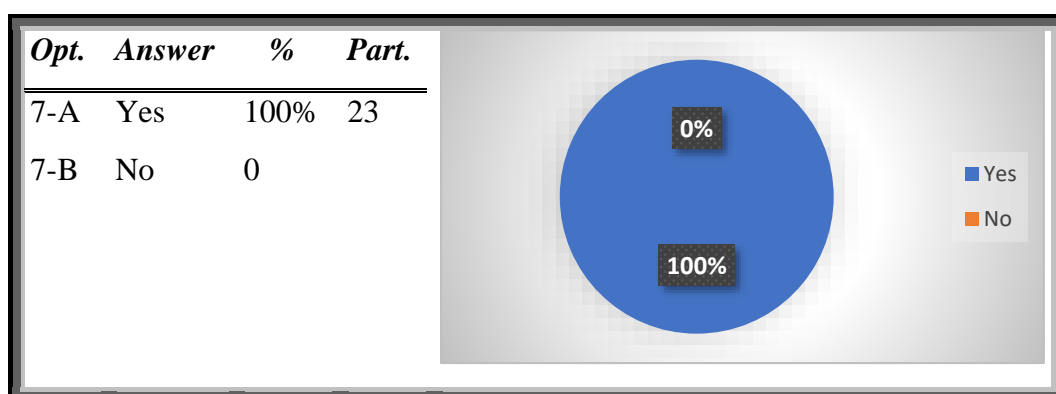
Fig. J- 6

<i>Opt.</i>	<i>Answer</i>	<i>%</i>	<i>Part.</i>
6-A	10-12	9.5	2
6-B	15-16	4.8	1
6-C	3	14.3	3
6-D	4	9.5	2
6-E	4-5	14.3	3
6-F	5-6	14.3	3
6-G	6-7	4.8	1
6-H	6-8	4.8	1
6-I	8-10	4.8	1
6-J	8-9	4.8	1
6-K		9.5	2
6-L	2-3	4.8	1



Q7- Do you store copies of citizens' NID or its info.? If No, skip to Sec. 2 – One answer

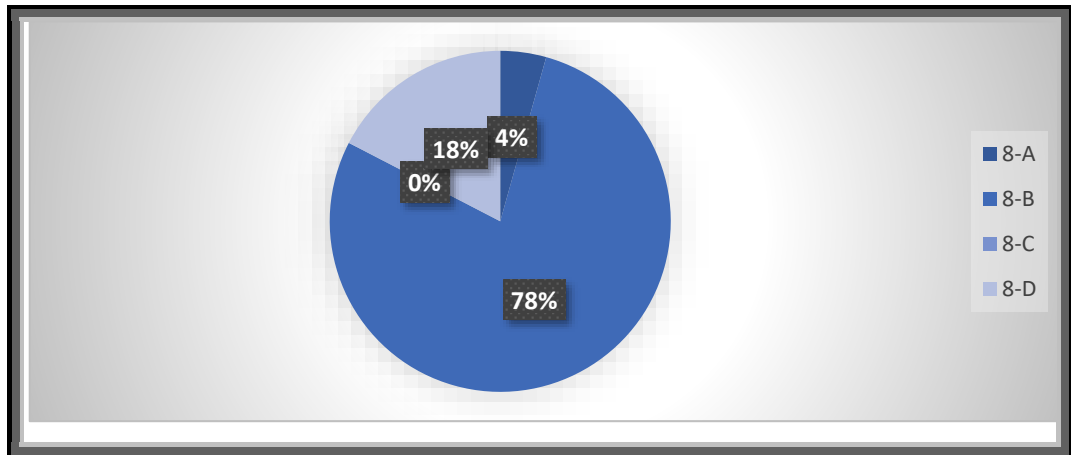
Fig. J- 7



Q8- How do you deal with this information from people's IDs? One answer

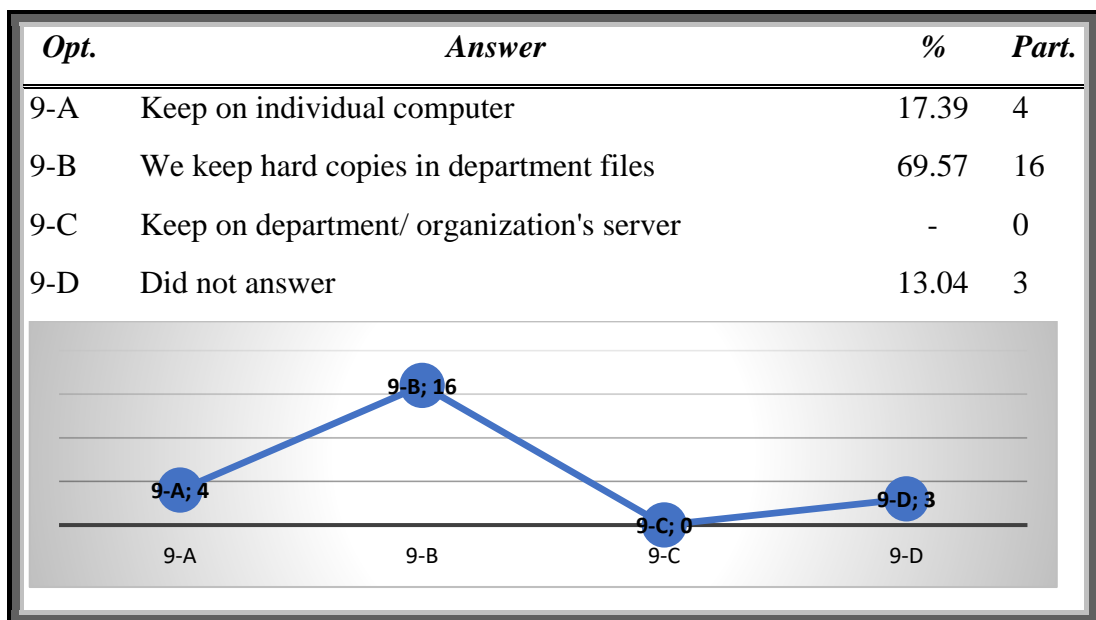
Fig. J- 8

<i>Opt.</i>	<i>Answer</i>	<i>%</i>	<i>Part.</i>
8-A	Keep original until the inquiry is made then returned to the owner	4.35	2
8-B	Keep paper copies	78.26	18
8-C	Make digital copies - scan and store	-	0
8-D	We keep digital copies and hard copies	17.39	4



Q9- How do you store copies of these documents? One answer

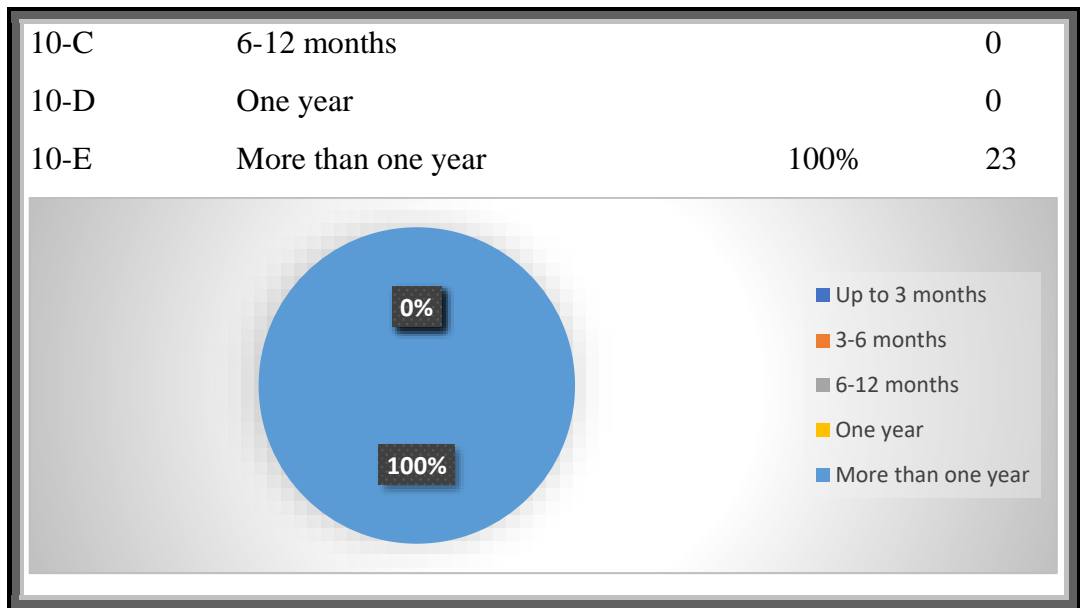
Fig. J- 9



Q10- How long do you keep these hard or digital copies until disposing of them?  
One answer

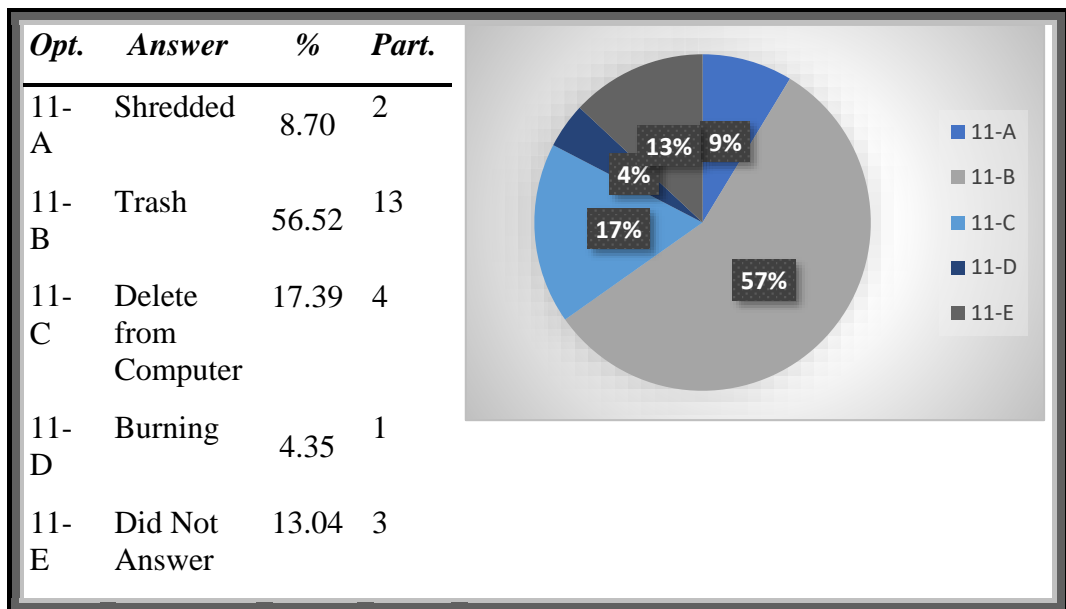
Fig. J- 10

<i>Opt.</i>	<i>Answer</i>	<i>%</i>	<i>Part.</i>
10-A	Up to 3 months		0
10-B	3-6 months		0



Q11- How do you dispose of these hard copies or digital copies? One answer

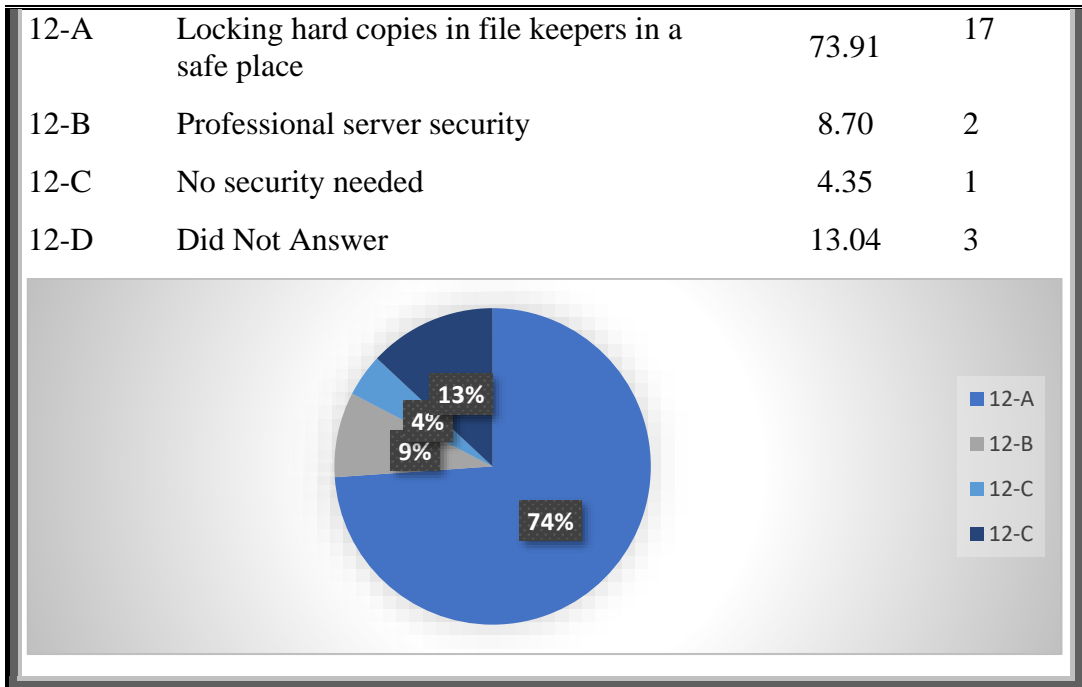
Fig. J- 11



Q12- How do you maintain data security? What are measures of Security in your department? One answer

Fig. J- 12

<i>Opt.</i>	<i>Answer</i>	<i>%</i>	<i>Part.</i>
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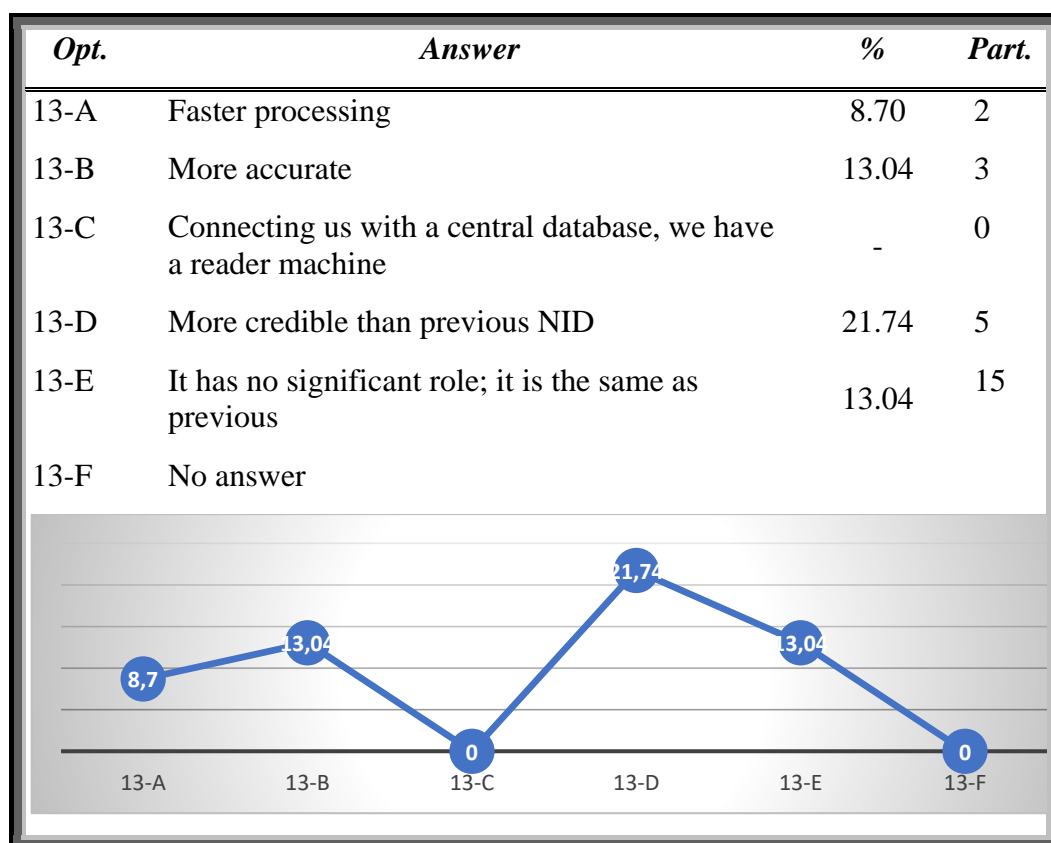


### Second Section:

The New Electronic National ID focused on the role of the new Iraqi National ID, unification aspects, contributed efficiency, speed rate, the accuracy of processes, key factors supporting positive impacts, and challenges facing negative effects.

Q13- What is the role of the new Electronic NID in this process/ program? -Multiple answers allowed

Fig. J- 13

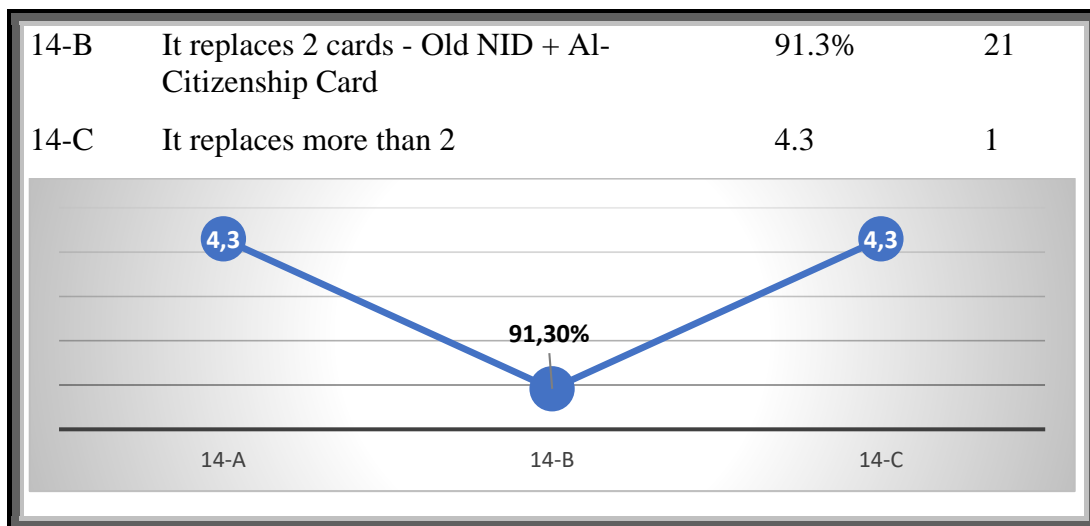


Q14- Can you use this new Electronic NID instead of the NIDs mentioned before in the process/ program. One answer

Fig. J- 14

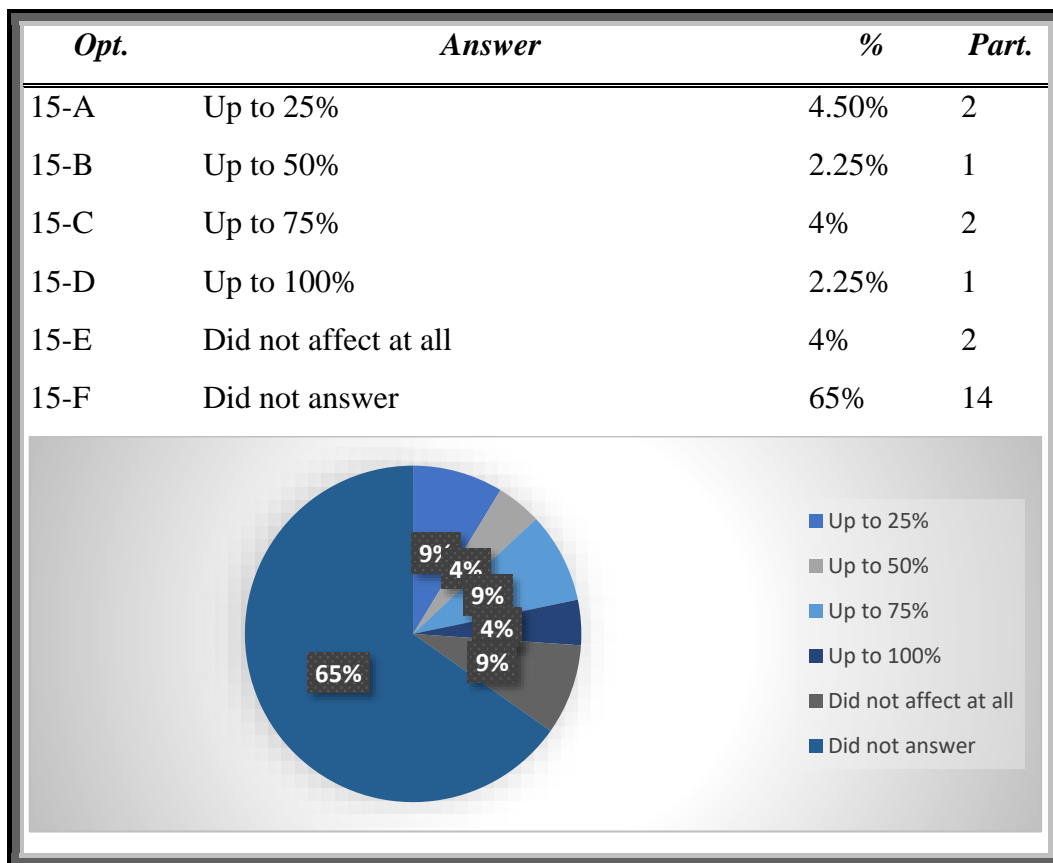
<i>Opt.</i>	<i>Answer</i>	<i>%</i>	<i>Part.</i>
14-A	It replaces only one card - Only instead of the previous NID	4.3	1





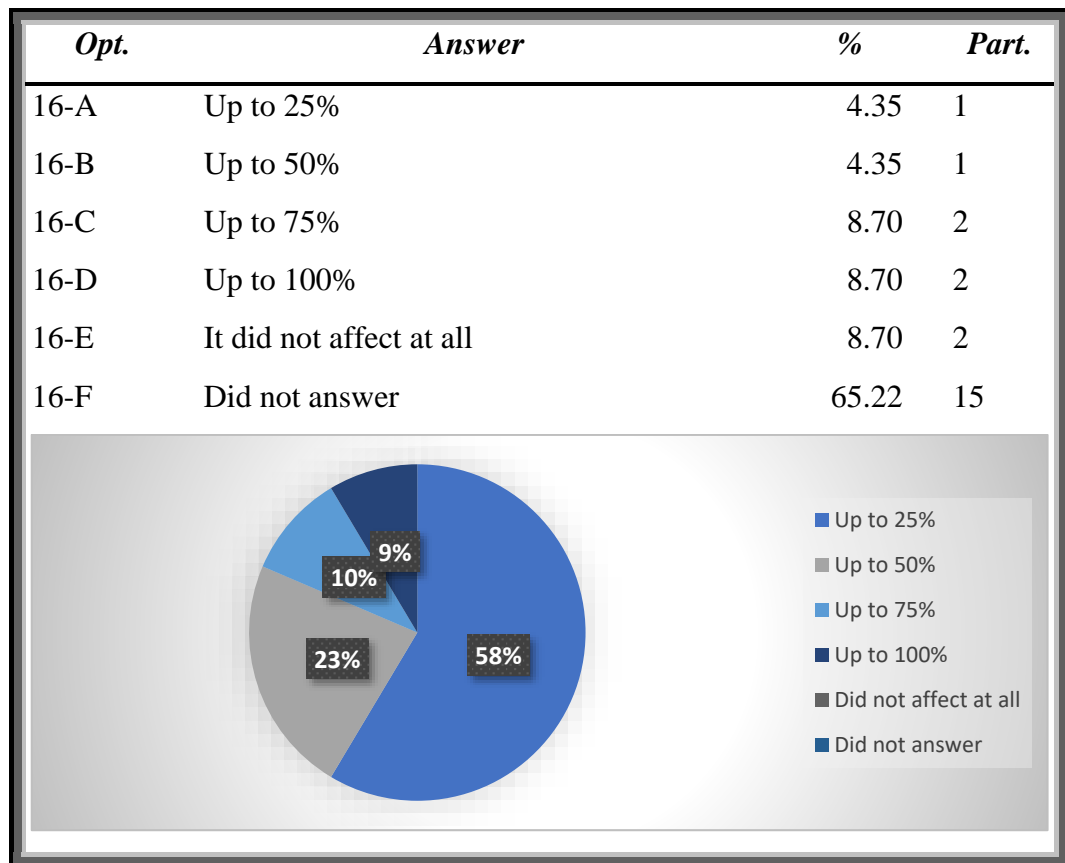
Q15- Is the use of new NID speeding your processes? If yes, by which rate? One answer

Fig. J- 15



Q16- Is the use of new NID contributing positively/ more efficiency to process? If yes, by which rate?

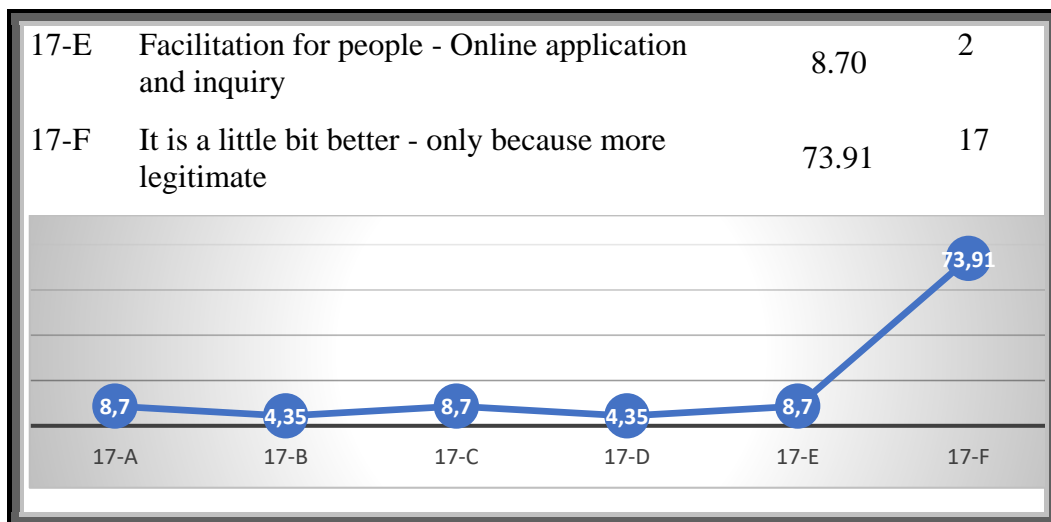
Fig. J- 16



Q17- In your opinion, how does the use of the new NID speed the process and more efficient? Multiple answers allowed

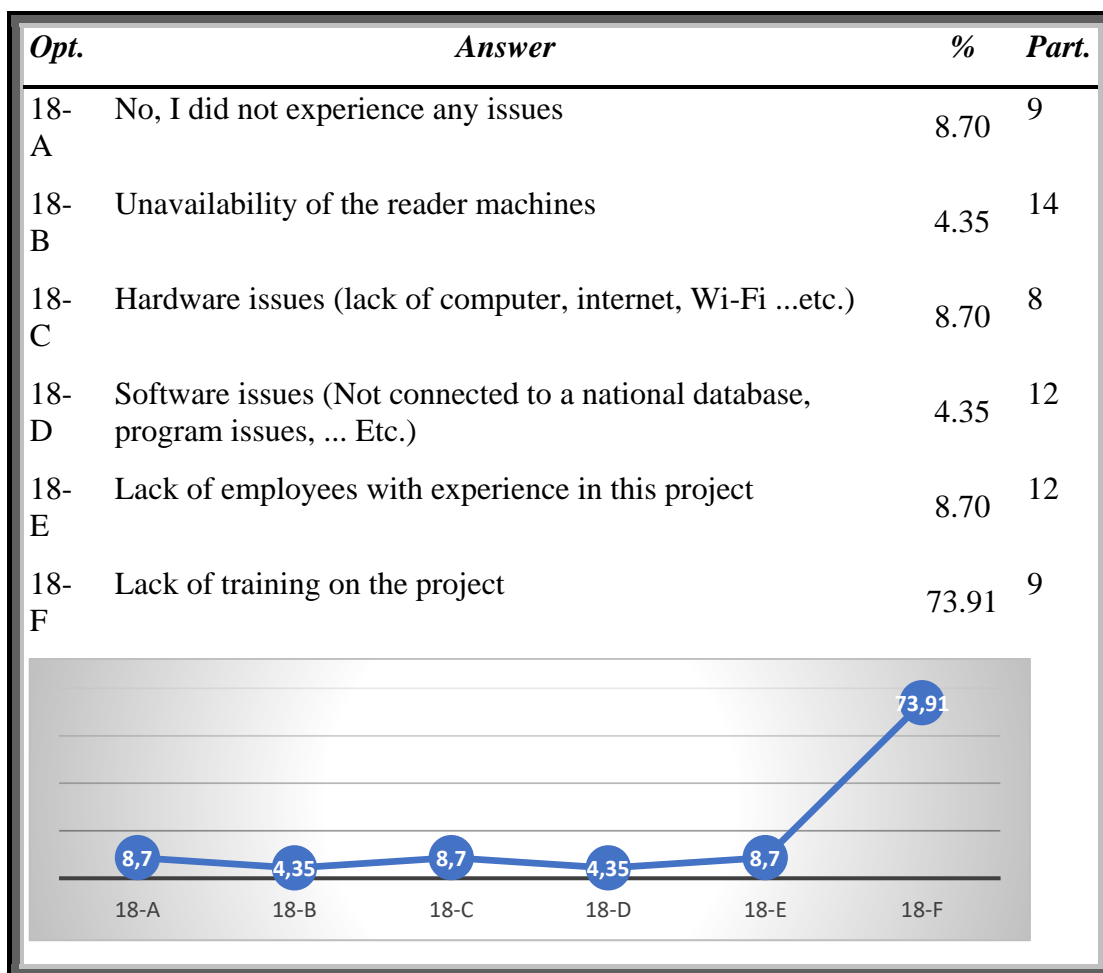
Fig. J- 17

<i>Opt.</i>	<i>Answer</i>	<i>%</i>	<i>Part.</i>
17-A	Fewer people are involved in processes because of having electronic readers- Information inclusiveness	8.70	2
17-B	less departments involved in processes - Less routine	4.35	1
17-C	Electronically processed - information security and transparency	8.70	2
17-D	Work facilitation for employees - Online work from home	4.35	1



Q18- Have you experienced any issues with the new NID process/ program/ inquires? - Multiple answers allowed

Fig. J- 18

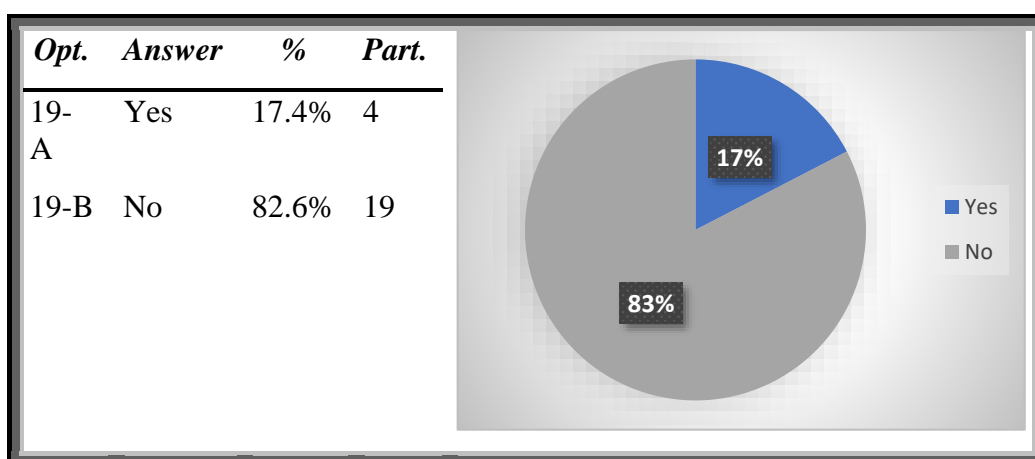


### Third Section:

This section is about The legal aspects of the new Biometric National ID as the foundations. The aim is to investigate challenges and legal supports, to understand the legal framework and law amendment gaps and levels of the amendments in different organizations.

Q19- Do you have new policies, rules, and procedures regarding the new NID use?  
One answer

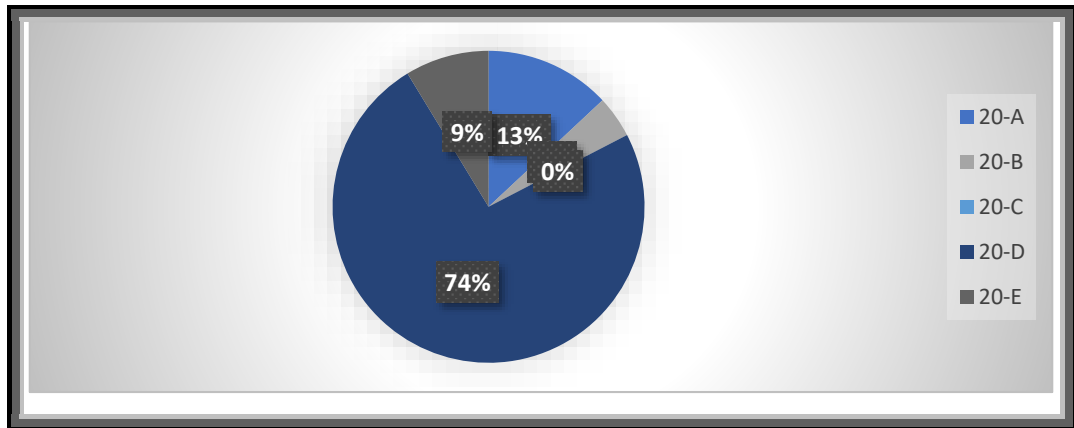
Fig. J- 19



Q20- What are new policies, rules, procedures concerning the new NID use?  
Multiple Answer

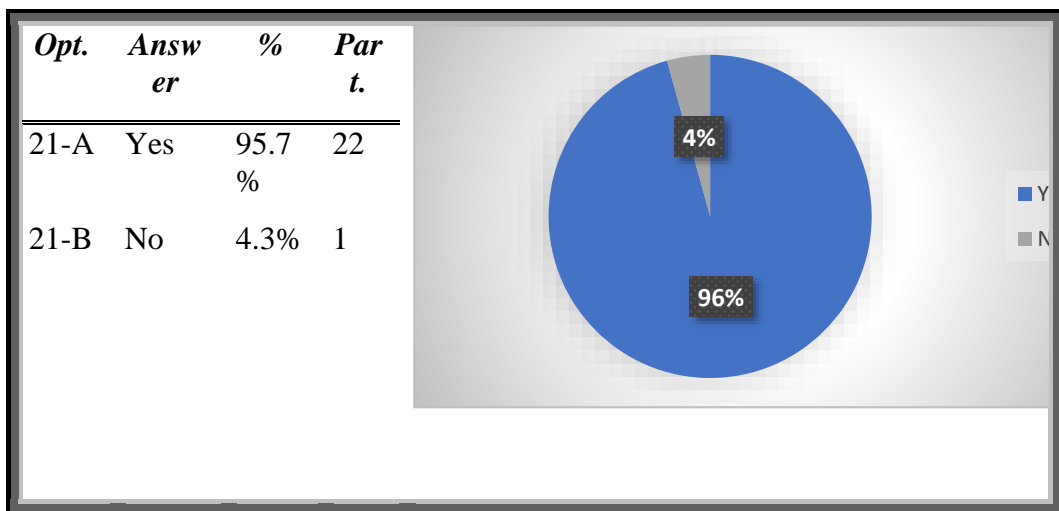
Fig. J- 20

Opt.	Answer	%	Part.
20-A	We have internal legislations (On the level of ministry/ directorate/department)	13.04%	3
20-B	We have external legislations (general instructions from the council of ministries/ higher level)	4.35%	1
20-C	There is a new law - National level	-	0
20-D	There is a new law - Federal level	74%	17
20-E	Did not answer	8.70%	2



Q21- Do you think there is a legal gap in relation to the new NID use? One answer

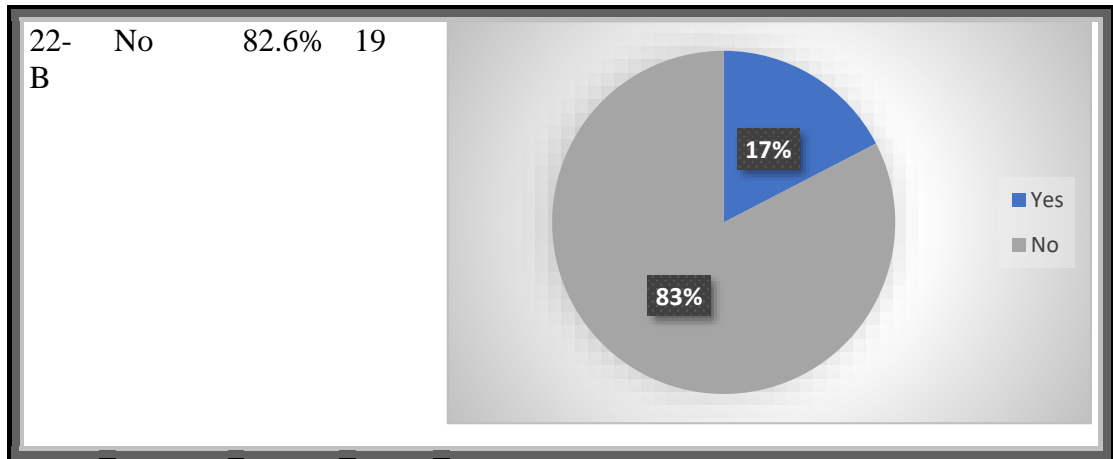
Fig. J- 21



Q22- Do you have legal policies regarding security measures? One answer

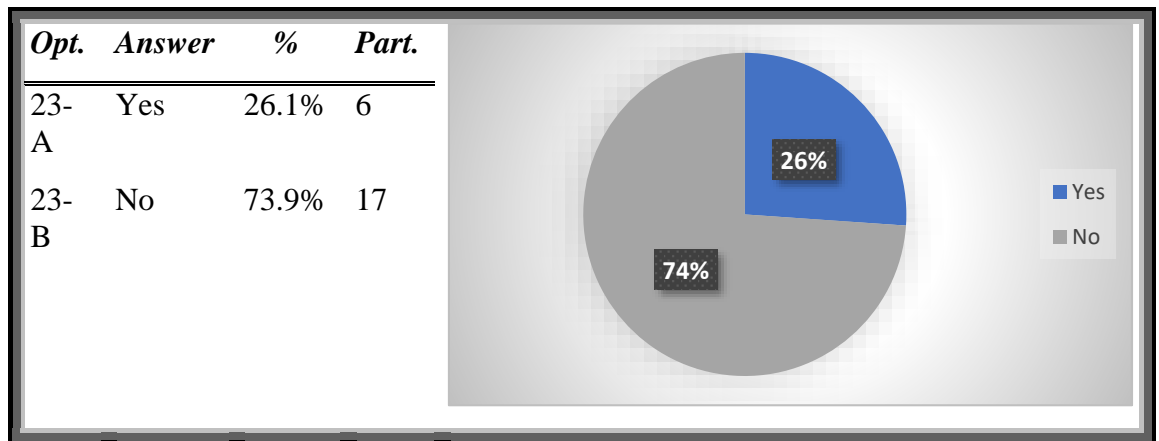
Fig. J- 22

Opt.	Answer	%	Part.
22-A	Yes	17.4%	4



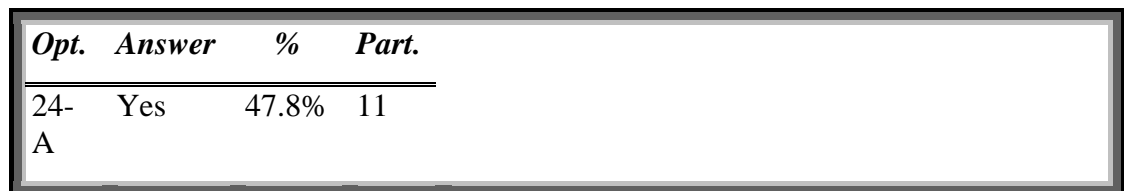
Q23- Do you have legal policies regarding the fraud measures? One answer

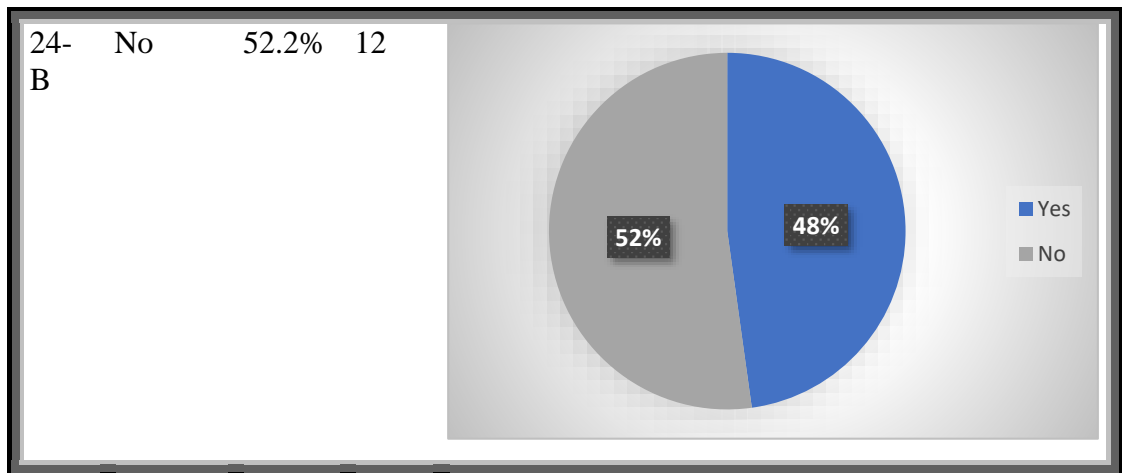
Fig. J- 23



Q24- Have you experienced any issues regarding security breaches and fraud? One answer

Fig. J- 24



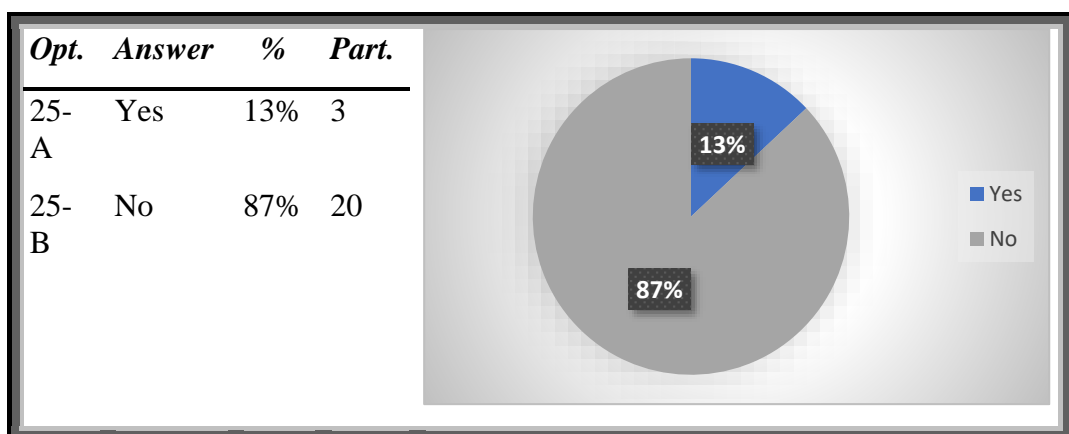


**Fourth Section:**

This section is about The culture of e-Government and Innovation Aspects. The aim is to investigate employees' reactions to the innovation and e-Government processes contributions.

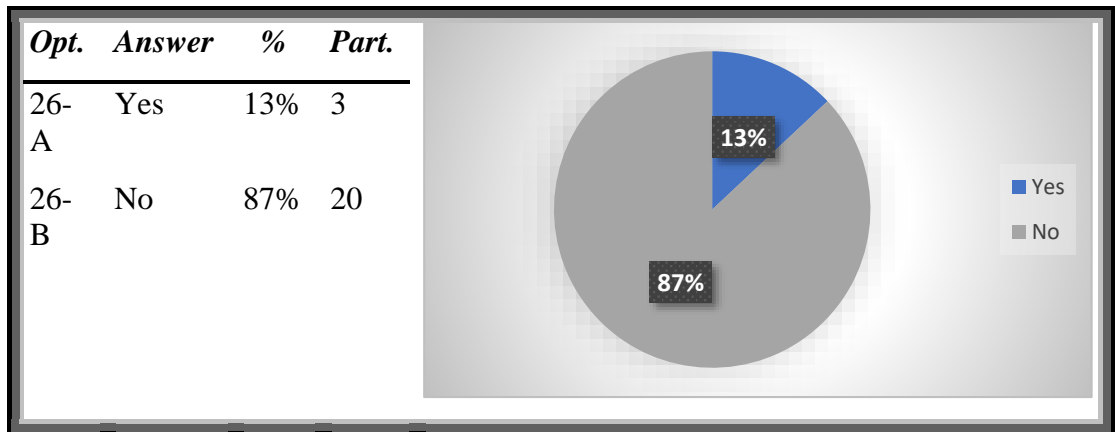
Q25- Did the new NID make any difference in your department if you deal with the new NID. One answer

*Fig. J- 25*



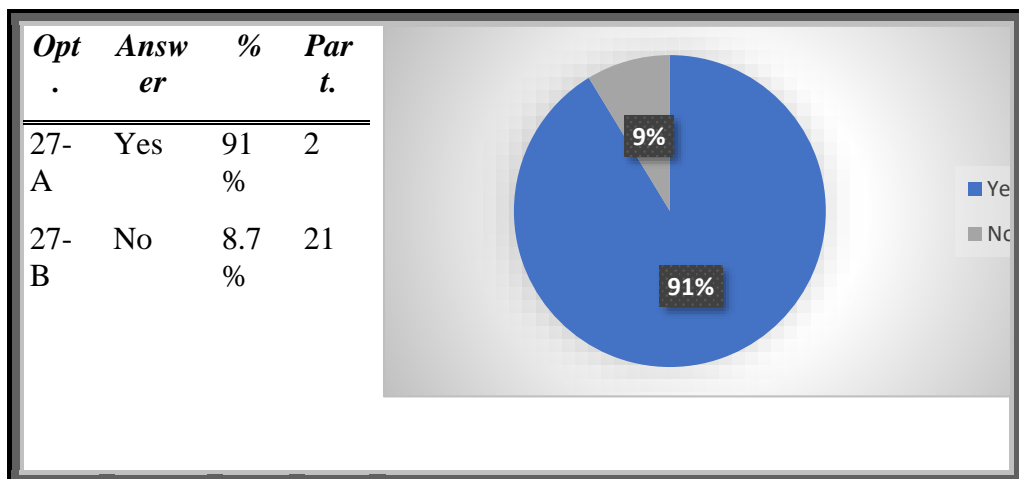
Q26- Are there new physical resources obtained concerning this project, Like computers, the internet, servers,...etc?. One answer

Fig. J- 26



Q27- Did you develop different procedures and/or policies concerning this project?  
One answer

Fig. J- 27

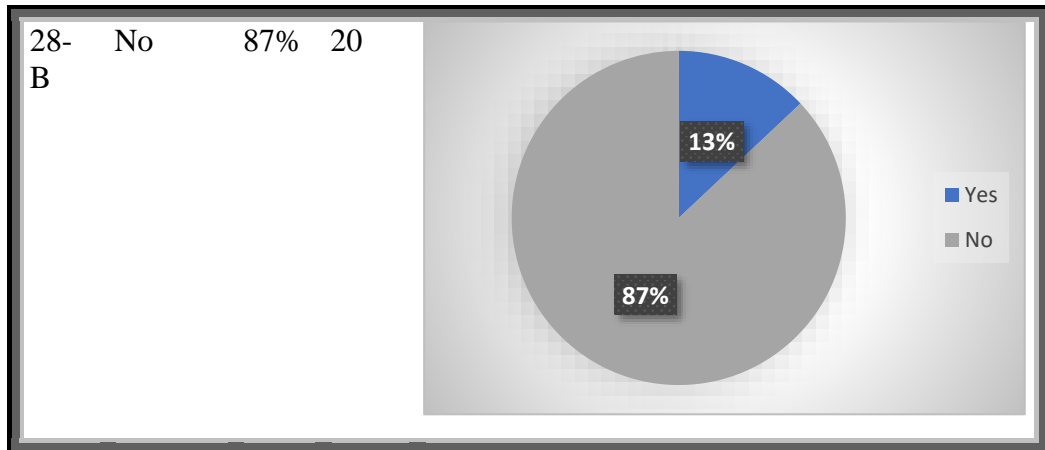


Q28- Did you get the training concerning this project. One answer

Fig. J- 28

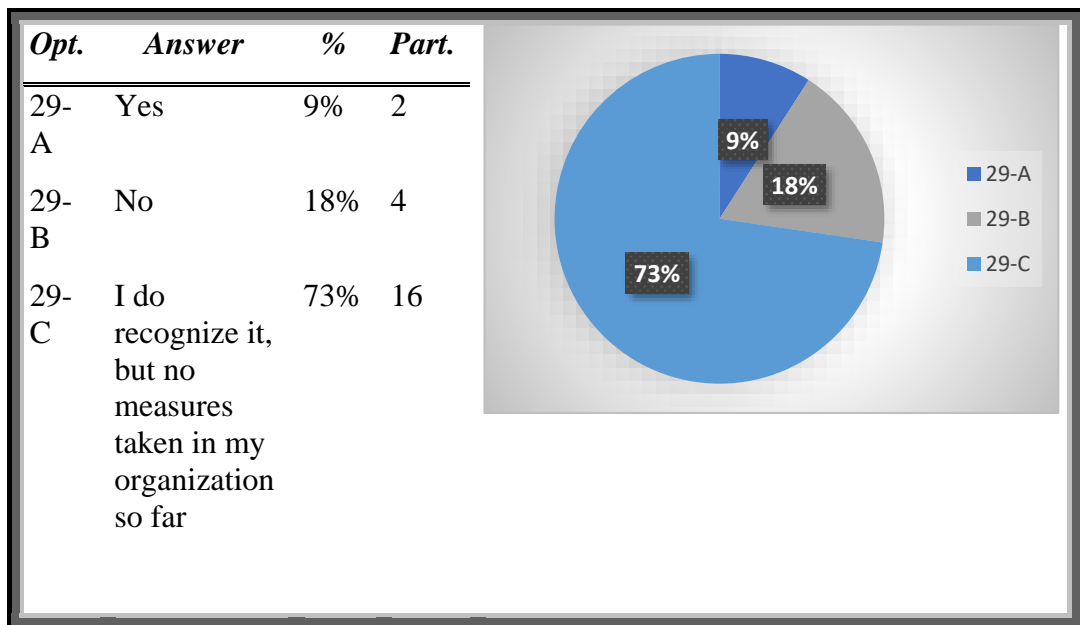
<i>Opt.</i>	<i>Answer</i>	<i>%</i>	<i>Part.</i>
28- A	Yes	13%	3





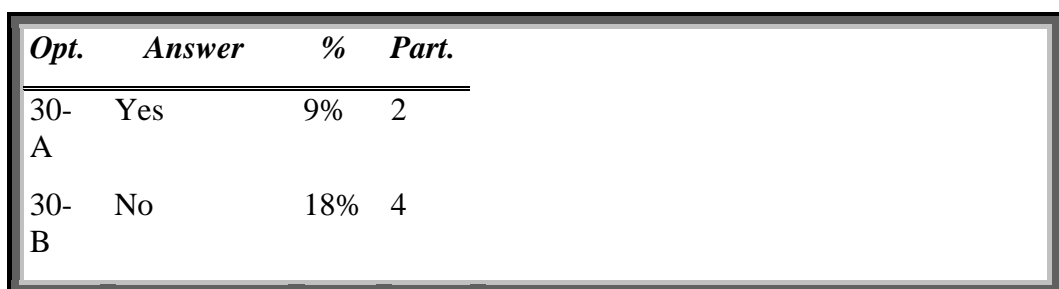
Q29- Are you familiar with e-Gov.? One answer

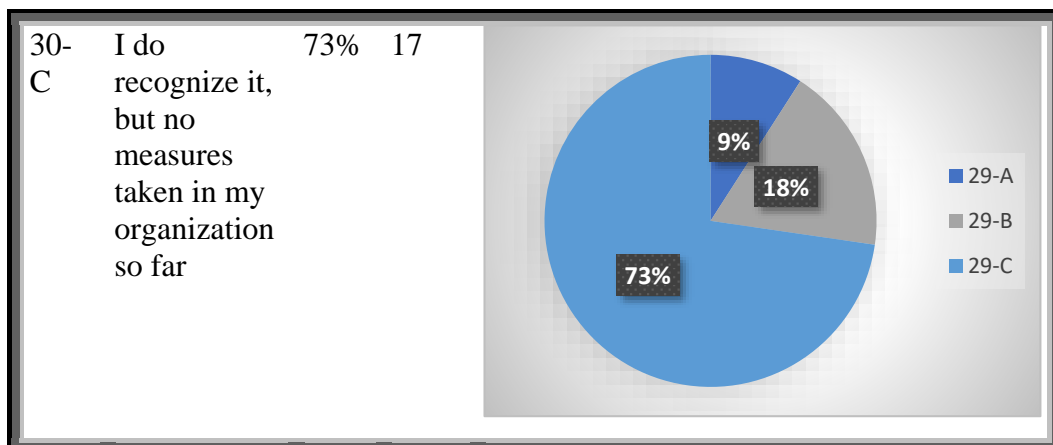
Fig. J- 29



Q30- Are you familiar with paperless Government? One answer

Fig. J- 30





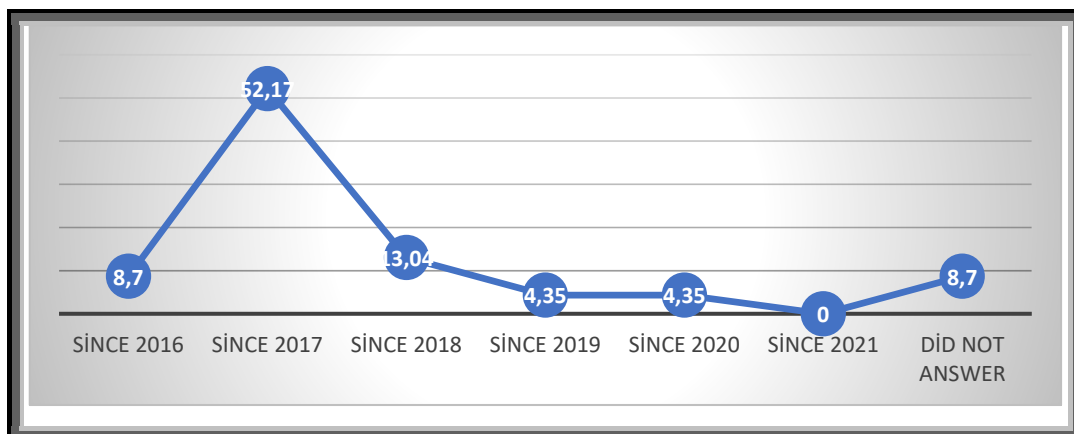
**Fifth Section:**

This section is about The Technical Aspects – for Technical Employee in ICT, focuses on the role of the technical department in this project, and understanding types of involvement in the data management cycle. The aim is to know the direct participation, level of implementation speed of a particular organization.

Q31- When does this new NID project start for your department. One answer

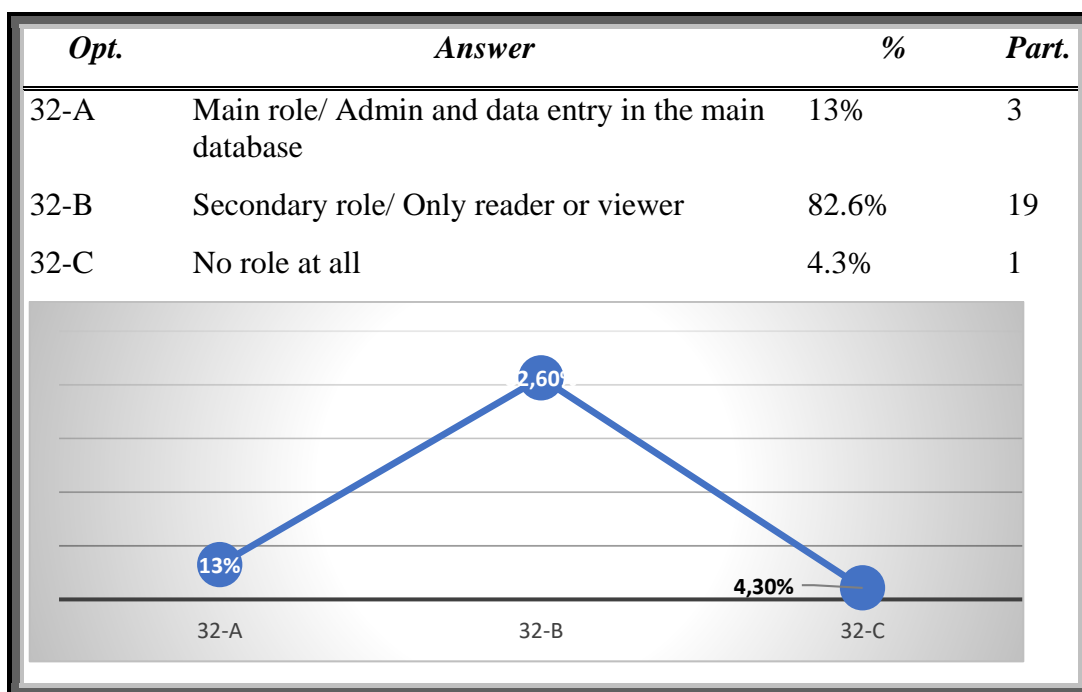
*Fig. J- 31*

<i>Opt.</i>	<i>Answer</i>	<i>%</i>	<i>Part.</i>
31-A	Since 2016	8.70	2
31-B	Since 2017	52.17	12
31-C	ce 2018	13.04	3
31-D	Since 2019	4.35	1
31-E	Since 2020	4.35	1
31-F	Since 2021	0	0
31-G	Did not answer	8.70	2



Q32- What is your department's role in the new NID project? One answer

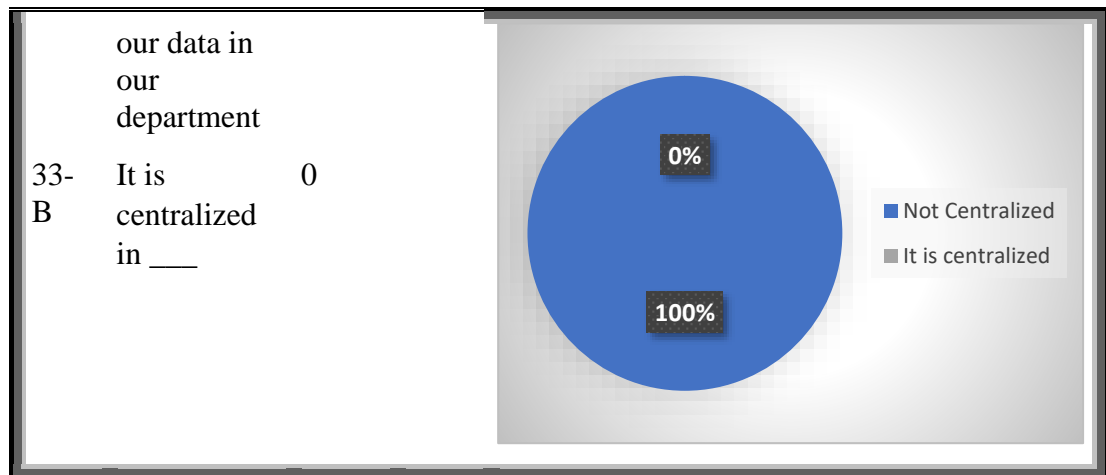
Fig. J- 32



Q33- How is the data sharing at your organization/ agency/ department/ unit...etc.? One answer

Fig. J- 33

Opt.	Answer	%	Part.
33-A	Not Centralized, we keep	100%	23



#### **4.2 Summary of Findings for Government Survey – *Figure (11)***

- Q1 Results: This survey included representatives from 23 different KRG governmental organizations.
- Q2 Results: The Nationality ID is used by 78.3 % of governmental agencies in the KRG for internal use and citizen inquiries.
- Q3 Results: In addition to contracting services and ownership registrations, most governmental organizations that participated in this poll employ a national ID for human resources. However, depending on the kind of ID and the organization's tasks, the usage of national ID for external inquiries differs from one organization to the next.
- Q5 Findings: 100% of participants share ID documents with other agencies/ departments.
- Q6 Results: The National ID data sharing procedure network differs per organization; some share this data with 15-16 other departments as the highest involvement, and the lower two as the lowest participation. For example, 9.5 % of participants must contact 10-12 different departments/organizations for NID data.
- Q7 Results: 100% of participants stores national ID copies.
- Q8 Results: More than 78% of samples make paper copies, while just 18% make both paper and digital copies, with only 4.35 % dealing ultimately with digital.
- Q9 Results: More than 69 % of participants save paper copies, whereas just 18 % save digital copies on their computers, and none store data on servers. In addition, 13% of people did not reply to this question.
- Q10 Results: 100 % or all samples maintain national ID information for more than a year.
- Q11 Results: Trash (56%) is the most popular technique of discarding these ID cards, followed by deleting from a computer (17%), shredding (8%), and not mentioning the method (13%).
- Q12 Results: About 74% of samples employ the traditional technique to safeguard national ID information. They keep them in a closed or archive room in their organizations. Only 9% said they had server security, and 4% said they don't see why they should be kept safe.

- Q13 Results: A distinct role of the new biometric national ID is not visible in 65% of samples. 30% did not respond, whereas 22% believed it is more trustworthy than the old national ID.
- Q14 Results: 91% of participants use this new /Biometric National ID instead of 2 IDs which are the old NID, plus the Citizenship Card
- Q15 Results: The majority of the samples, or 65 %, did not respond - most likely because they cannot notice any difference, as they said in the previous question since they do not possess readers or have access to the database - Meanwhile, 8.7% felt it contributed 25%, another 8.7% thought it contributed 75%, and another 8.7% thought it made no difference in speeding up procedures.
- Q16 Results: The majority of the samples, or 65 %, did not respond - They are unlikely to notice a difference, as they said in the previous question because they do not possess readers or have access to the database - Meanwhile, 8.7% felt it made a 100 % difference in process efficiency, another 8.7% thought it made a 75 % difference, and another 8.7% thought it made no difference in process efficiency.
- Q17 Results: The majority of participants (74%) believe that this new biometric ID improves credibility, while 8.7% believe it offers other benefits such as reducing the number of persons engaged, increasing security, and providing individuals with more convenience. However, 4.3% of participants think it cuts off routine in the organizations.
- Q18 Results: When asked about the new/Biometric National ID's obstacles or concerns, 61% indicated the lack of a reader machine, implying that they are not linked. 39 % of participants highlighted lack of training, while another 39 % said they had no problems, 52 % said they had software issues, and another 53 % said their personnel lacked experience.
- Q19 Results: Most respondents (83%) believe they have new rules in place for the new national ID, while only 17% believe they do not.
- Q20 Results: Only 13% pointed to another layer of internal policies, while the majority of 74 % referred to federal legislation.
- Q21 Results: Most respondents (96%) believe there is a legal gap, while only 4.3 % believe none.
- Q22 Results: The majority of participants (83%) believe there are no clear policies in place regarding security measures, while 17% think No.

- Q23 Results: The majority of participants (74%) believe there are no clear regulations in place to combat fraud, while 26% think No.
- Q24 Results: Regarding national ID fraud, 48 % of participants have observed it during their work, while 53 % have not.
- Q25 Results: The majority of 87 % of respondents said that the new ID had no impact on their department. The remaining 13% said it did contribute to the shift in culture.
- Q26 Results: The majority of 87 % of respondents said they did not obtain additional physical resources such as a server, computer, readers, and so on. The remaining 13% believed that it did.
- Q27 Results: For the new ID, the majority of 91 % developed some sort of procedural adjustments. The remaining 8.7% did not.
- Q28 Results: The majority of 87 % of employees received little or no training for the new system. The remaining 13% did.
- Q29 Results: Most participants (73%) identify e-Government; however, their departments/organizations lack e-Government measures. Moreover, 18% are unaware of it, whereas 9% have a strong understanding of it.
- Q30 Results: Although most participants (74%) identify Paperless Government, they do not have any Paperless Government measures in their departments or organizations. Only 17% are aware of it, whereas 9% have a strong understanding of it.
- Q31 Results: The majority of 57 % began applying for these new IDs in 2017, while 8.7% applied in 2016, 17% did not respond, and 13% did so in 2018.
- Q32 Results: Despite working in the IT department, 83 % of participants said they were not allowed to participate in this project. 13 % experienced, whereas 4% had no role.
- Q33 Results: All participants 100% have no data sharing center.

Table 1- Summary of Government Finding

<i>Se c. #</i>	<i>Variables per Research Model</i>	<i>Q u e. #</i>	<i>Participant Answer Maximum Rate</i>	<i>Participant Answer Maximum Rate</i>	<i>Result Maxim um Rate</i>	<i>Fig. #</i>
1 <sup>st</sup>	The general use of IDs by organizations and knowledge Management Cycles					
	Data Sharing	1	Organization name – Open end	---	--	Fig. J-1
	Data Sharing	2	The purpose of NID use – One answer	NID needed for the internal and external purposes	78.3%	Fig. J-2
	Data Sharing	3	Processes that needs NID – Multiple choice	Employment	91.30%	Fig. J-3
	Data Sharing	4	Names of NIDs citizen can have – Multiple choice	Biometric NID Card/ Civil Status	100%	Fig. J-4
	Data Sharing - Efficiency	5	NID info. sharing internal/ external partners – Yes/ No	Yes	100%	Fig. J-5
	Data Sharing - Efficiency	6	Numbers of partners – Open end question	As high as 14-15 partners	--	Fig. J-6



	Efficiency - Speed	7	Storing copies of NID - Yes/ No	Yes	100%	Fig. J-7
	Efficiency - Speed	8	Dealing method – One answer	Keeping paper copies	78.26%	Fig. J-8
	Efficiency - Speed	9	Storing method – One answer	Storing in the department files	69.57	Fig. J-9
	Efficiency - Speed	10	Storing period – One answer	More than one year	100%	Fig. J-10
	Efficiency - Information Security	11	Disposing method – One answer	Trashing	56.52%	Fig. J-11
	Information Security	12	Information security method – One answer	Locking hard copies in file keepers in a safe place	73.91%	Fig. J-12
2 <sup>nd</sup>	The New Electronic National ID focused on the role of the new Iraqi National ID, unification aspects, contributed efficiency, speed rate, the accuracy of processes, key factors supporting positive impacts, and challenges facing negative effects					
	Efficiency – Trust Building - Information Security	13	New/ Electronic/ Biometric ENID Role in the organization – Multiple answer	More credible than previous NID	21.74%	Fig. J-13

	Unification	1 4	Numbers of IDs covered – One answer	Old NID (Sivil Status) + Citizenship Card (Al-Jinsiya)	91.3%	Fig. J-14
	Speed	1 5	Operations speeding rate in the org.- One answer	Did not answer	65%	Fig. J-15
	Efficiency	1 6	ENID Efficiency contribution- One answer	Did not answer	65.22%	Fig. J-16
	Speed - Efficiency	1 7	How ENID can contribute to the efficiency – Multiple answers	It is a little bit better - only because more legitimate	73.91%	Fig. J-17
	Efficiency	1 8	Issues with application process of ENID	Lack of training on the project	73.91%	Fig. J-18
3 <sup>rd</sup>	The legal aspects of the new Biometric National ID as the foundations.					
	Efficiency – Service Delivery	1 9	Availability of supporting main legislations – One answer	Yes	82.6%	Fig. J-19

	Efficiency – Service Delivery	2 0	Supporting legislation level – Multiple answer	Federal level	74%	Fig. J- 20
	Efficiency – Service Delivery	2 1	Legislation gap in secondary legislations – One answer	Yes	95.7%	Fig. J- 21
	Efficiency – Trust Building - Informatio n Security	2 2	Security measuring legislations – One answer	No	82.6%	Fig. J- 22
	Efficiency – Trust Building - Informatio n Security	2 3	Fraud measuring legislations – One answer	No	73.9%	Fig. J- 23
	Efficiency – Trust Building - Informatio n Security	2 4	Experiencing security breaches and fraud – One answer	No	52.2%	Fig. J- 24
4 <sup>th</sup>	The culture of e-Government and Innovation Aspects					
	Efficiency - e- Governme nt	2 5	Making differences in the total performance level – One answer	No	87%	Fig. J- 25

	Efficiency - e- Governme nt	2 6	Physical resources support for the project– One answer	No	87%	Fig. J- 26
	Efficiency - e- Governme nt	2 7	Procedural development support– One answer	No	87%	Fig. J- 27
	Efficiency - e- Governme nt	2 8	Human development support – One answer	No	87%	Fig. J- 28
	e- Governme nt	2 9	E-Government familiarity – One answer	No measures taken	73%	Fig. J- 29
	e- Governme nt	3 0	Paperless familiarity – One answer	No measures taken	73%	Fig. J- 30
5 <sup>th</sup>	Focuses on the role of the technical department in this project and understanding types of involvement in the data management cycle					
	Efficiency – Service delivery	3 1	Starting ENID – One answer	Since 2017	52.17%	Fig. J- 31
	Efficiency – Service delivery	3 2	Department role in the ENID project	Secondary role/ Only reader or viewer	82.6%	Fig. J- 32

	Data sharing	3 3	Data sharing model	Not Centralized, we keep our data in our department	100%	Fig. J-33
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### 4.3 Results of the Citizen Survey

The data collection and analysis from this survey concerns citizens of Iraq represented by KRG inner city's ideas about the New National ID. The goal was to collect 346 based on 0.001% of the estimated population of 1,939,170 million and represent the household size of 5.6, which equals 346,280 total household samples based on <https://reliefweb.int/>. However, with time limitations of one week, participation reached 205, which was the final full participation. However, the fewer participation did not affect results. *Figure (12)*

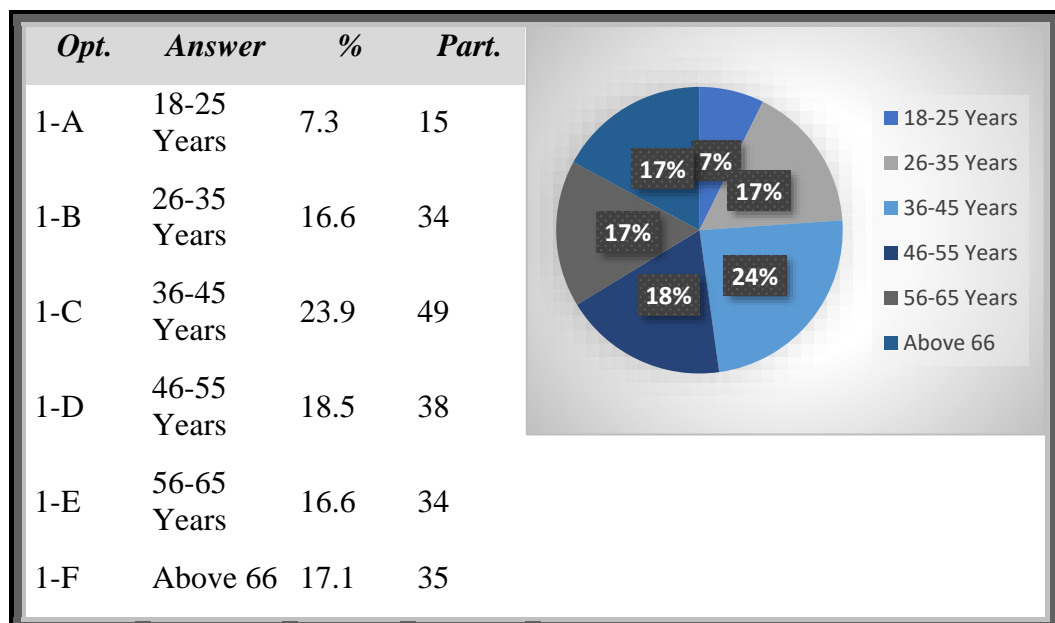
The following data reflect results of the Governmental agencies survey with sections and questions:

#### First Section:

This section is about the General questions like age, occupation sector, and marital status, as well as the name of National IDs in positions.

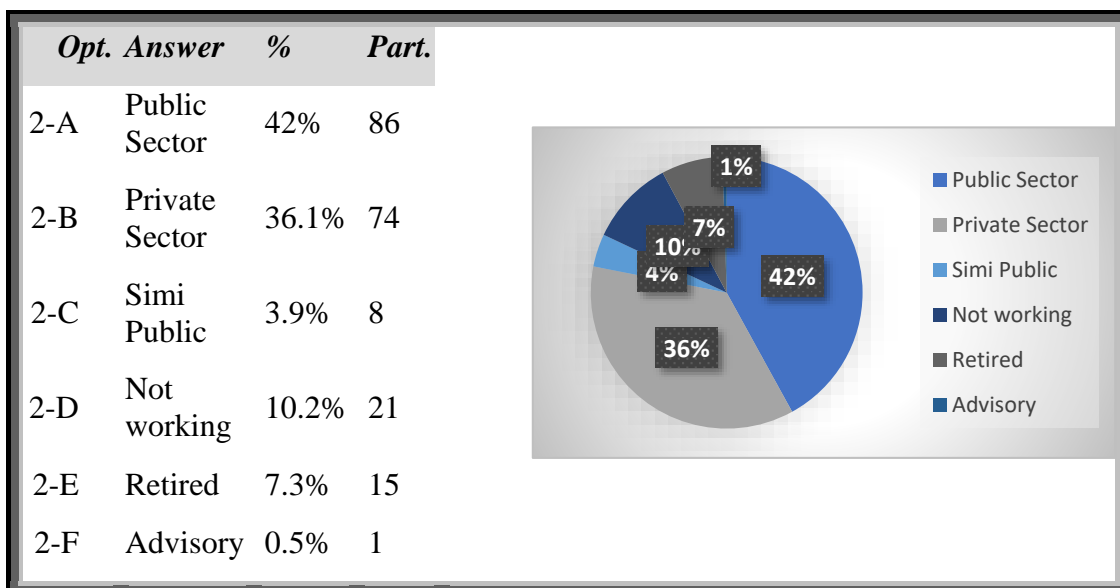
Q1- What is your age? One answer

*Fig. K- 1*



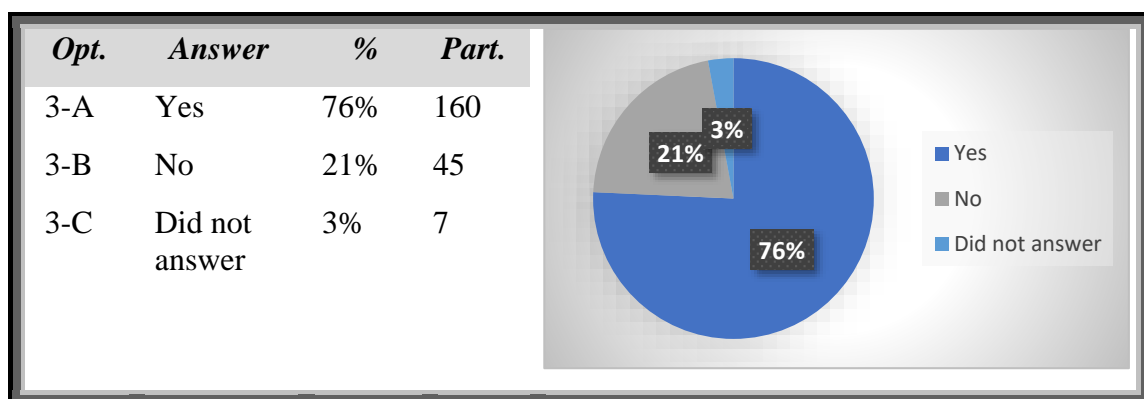
Q2- What is your occupation status or sector? One answer

Fig. K- 2



Q3- Are you married or single? One answer

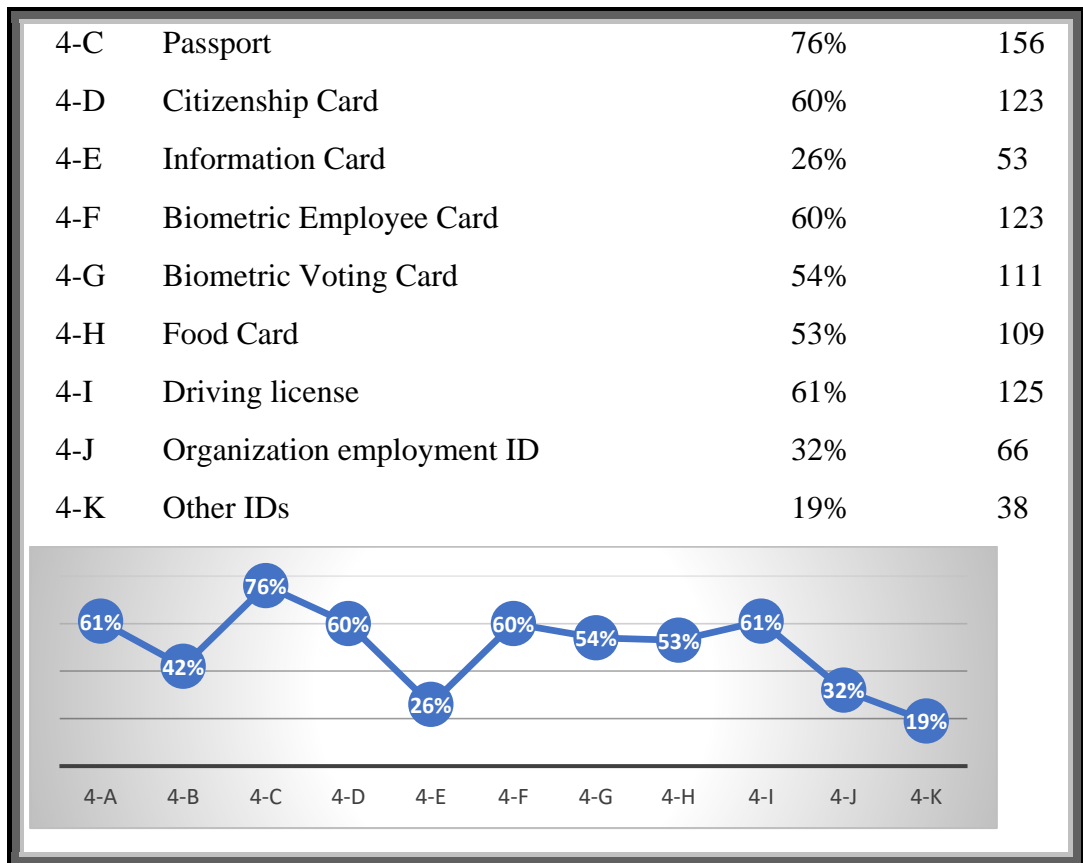
Fig. K- 3



Q4- What are the national documents or identifications that you have? If family- Multiple answers allowed.

Fig. K- 4

<i>Opt.</i>	<i>Answer</i>	<i>%</i>	<i>Part.</i>
4-A	The New Biometric NID Card	61%	126
4-B	Civil Status ID – the old National ID	42%	86

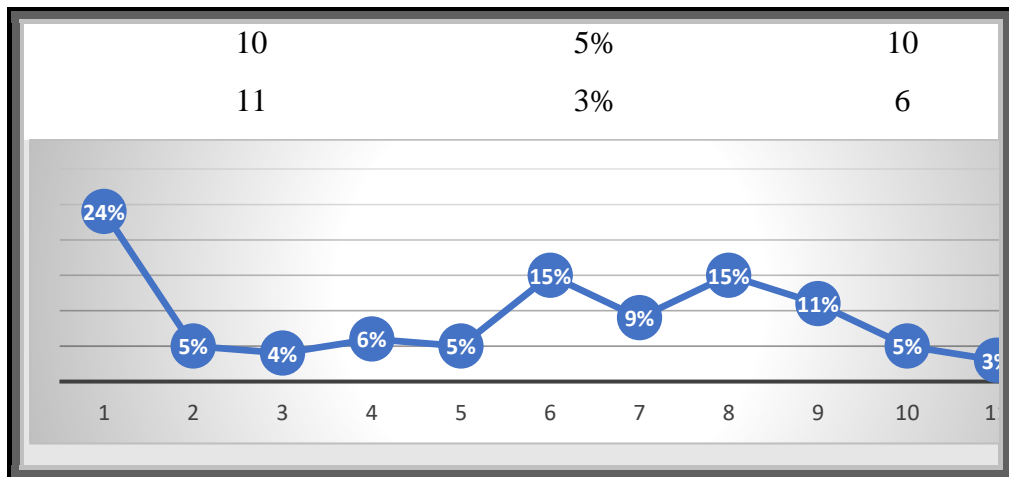


Based on Q4 results. How much National identification - Governmental Documents do you possess? If Family, please write the total.

*Fig. K- 5*

<i>Total IDs</i>	<i>%</i>	<i>Person</i>
1	24%	49
2	5%	10
3	4%	8
4	6%	12
5	5%	11
6	15%	30
7	9%	18
8	15%	31
9	11%	22



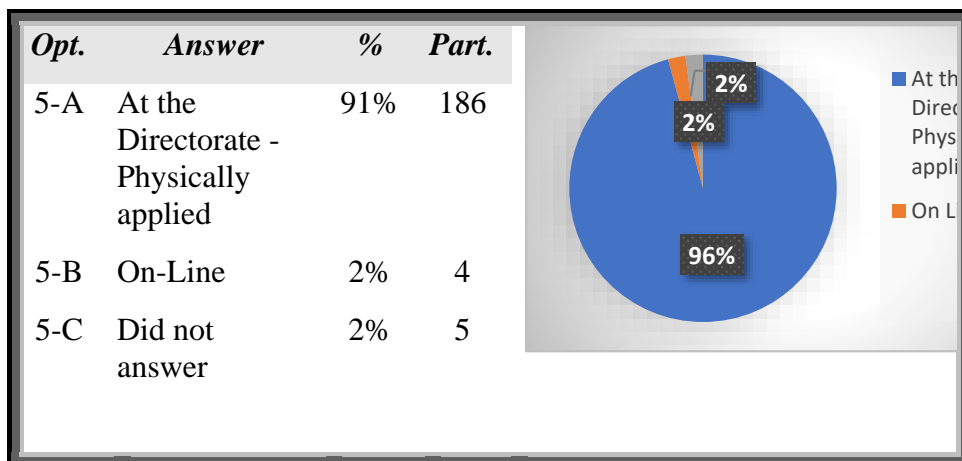


**Second Section:**

This section was about New/ Biometric National ID. Focuses on the process of obtaining the new/ biometric National ID, challenges and period length, unification aspects and challenges, and understanding the new/ digital ID from the citizens' prospect or impact's opinion.

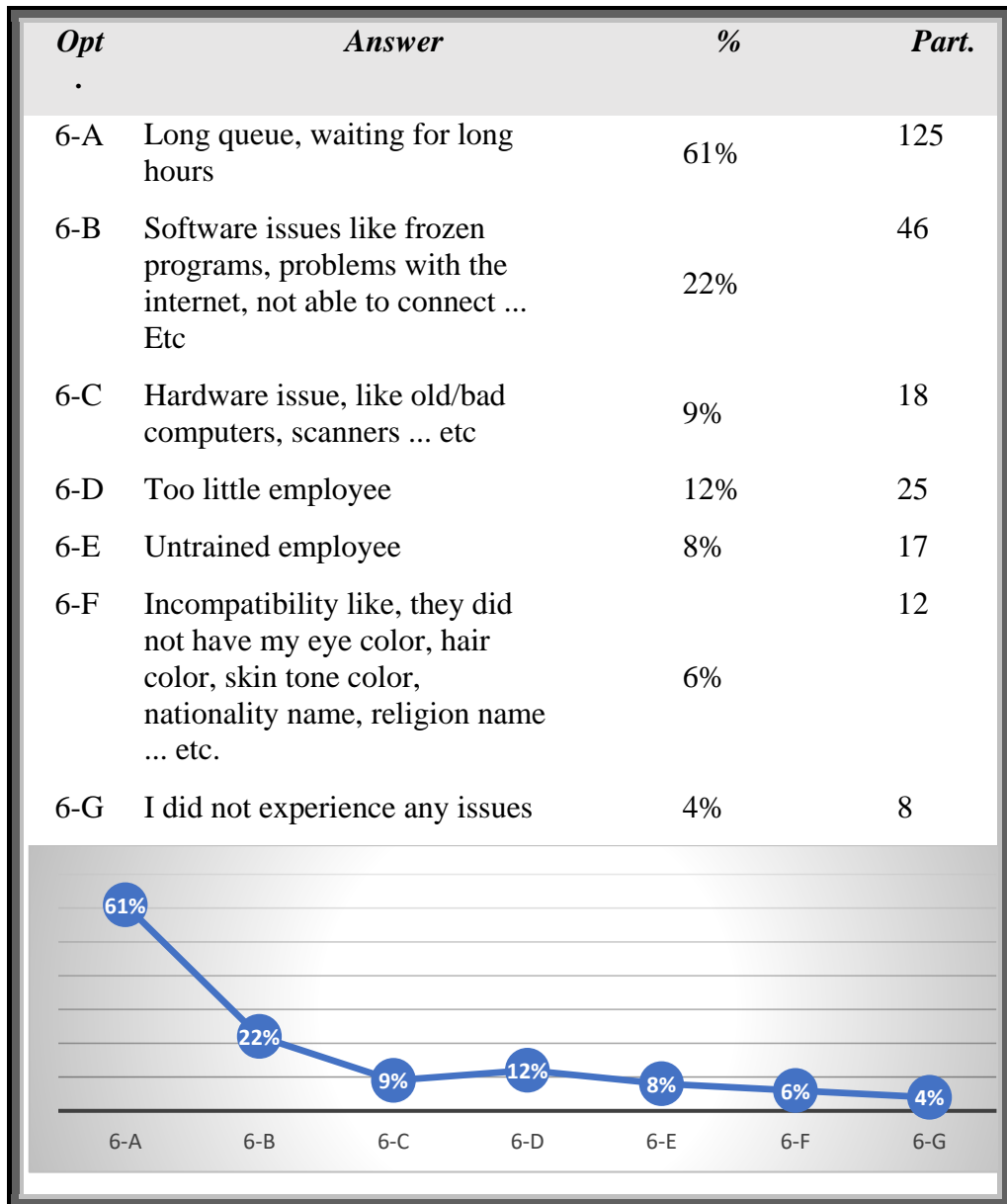
Q5- How did you apply for Biometric National ID? One answer

*Fig. K- 6*



Q6- Did you experience any issues concerning the application at the directorate during the process? - Multiple answers allowed

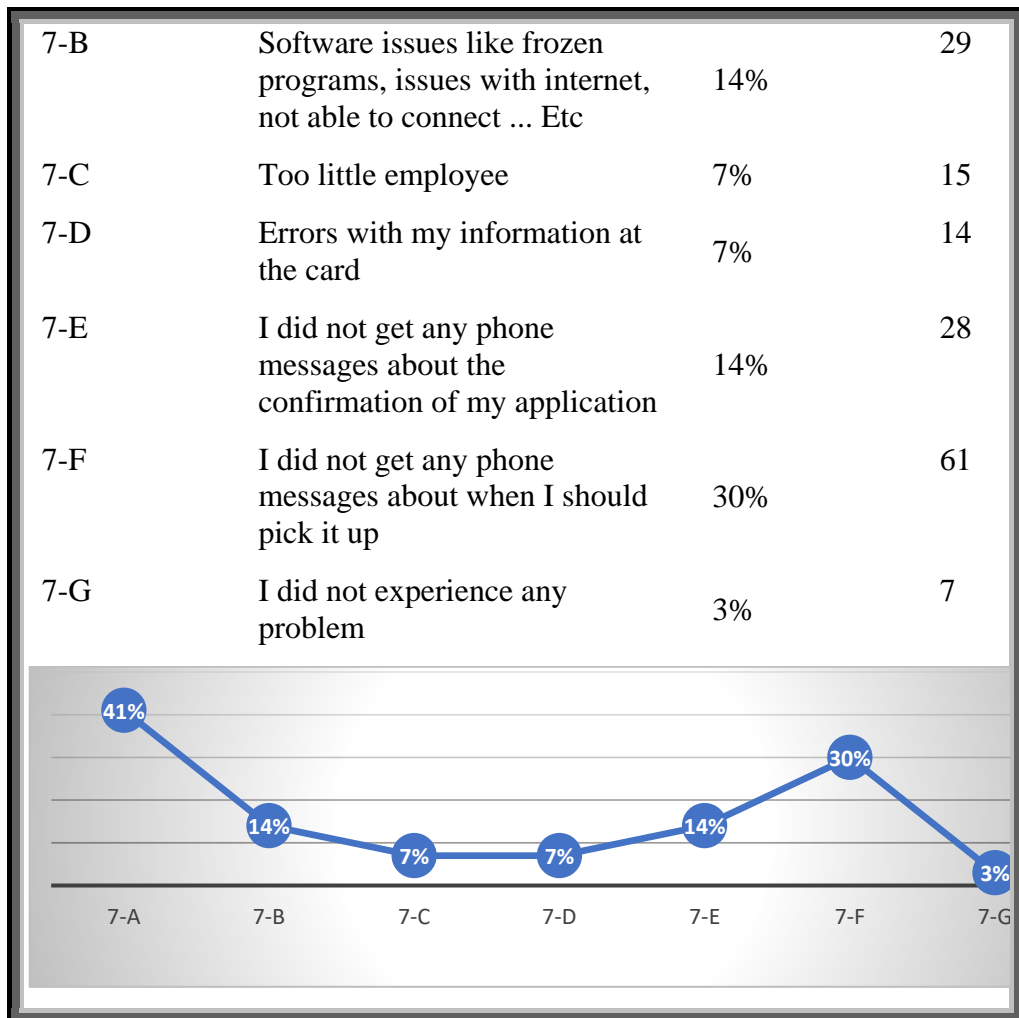
Fig. K- 7



Q7- Did you experience any issues concerning receiving your National Biometric ID? - Multiple answers allowed

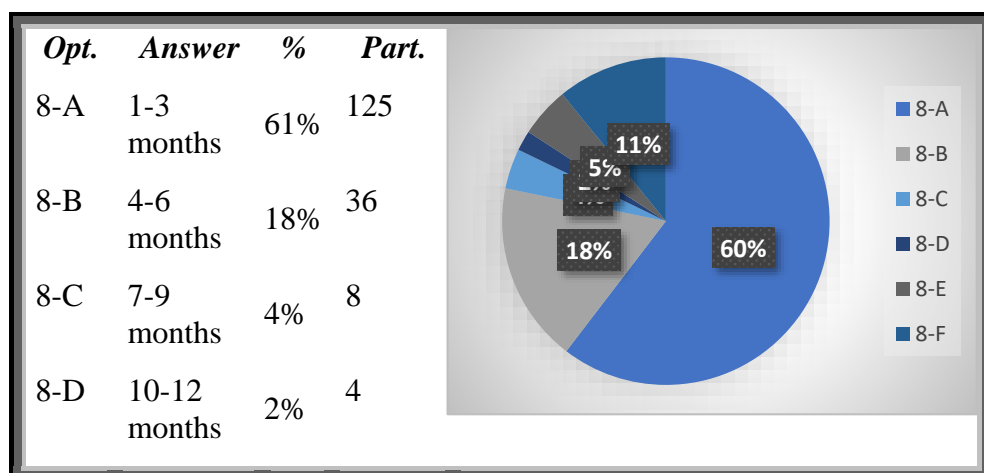
Fig. K- 8

<i>Opt.</i>	<i>Answer</i>	<i>%</i>	<i>Part</i>
.			
7-A	Long queue, waiting for long hours	41%	85



Q8- How long did it take to receive the actual Biometric ID? One Answer

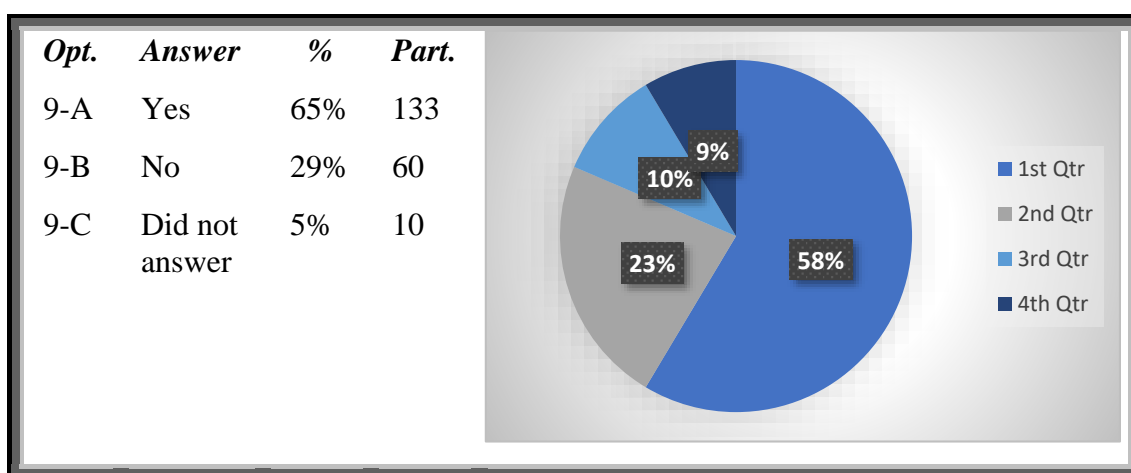
Fig. K- 9



8-E	Over one year	5%	10
8-F	Did not answer	11%	22

Q9- Have you recently used Biometric NID instead of any other documents?  
If Yes, Choose below. If No, go to Q11. - One answer

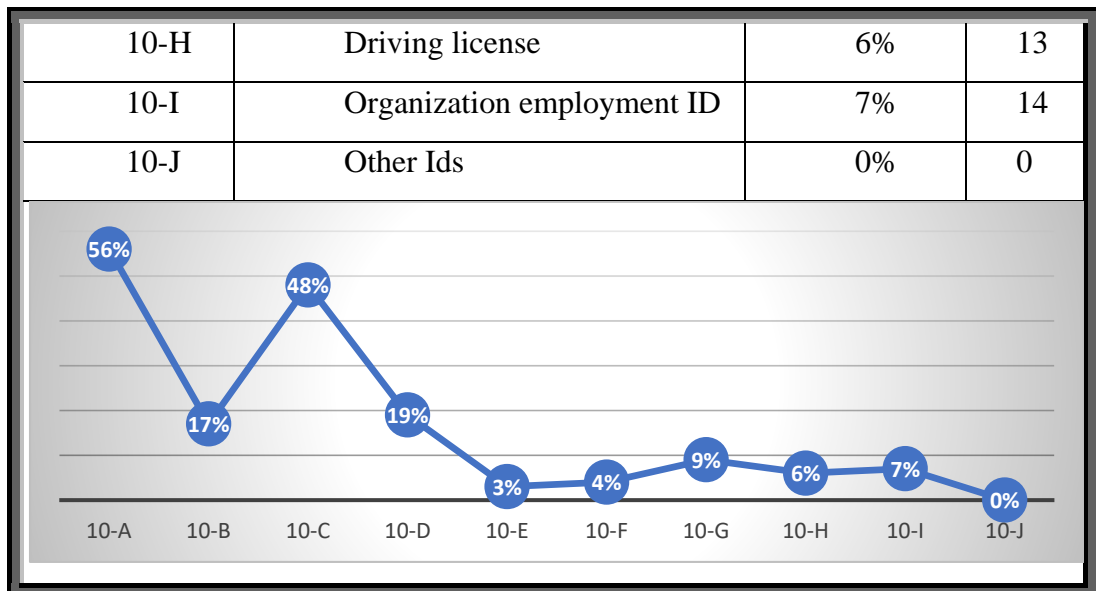
*Figure 10 - ENID replaced with*



Q10-Part A- Instead of which ID? Multiple answers allowed

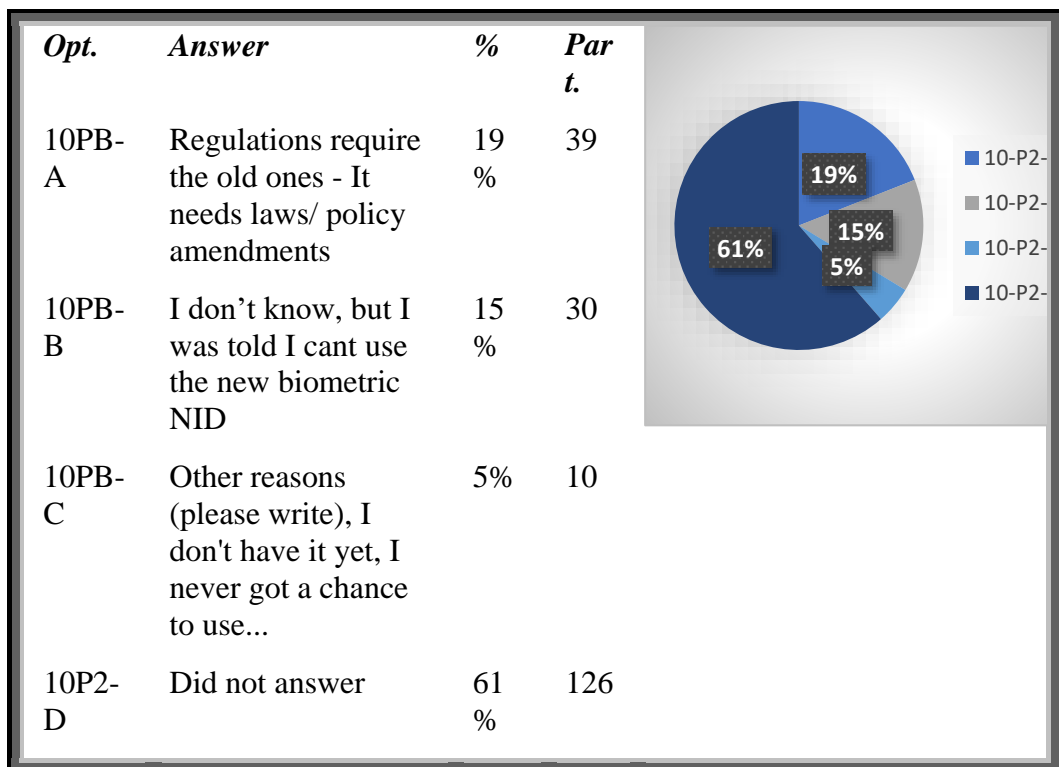
*Fig. K- 11 Iraqi National IDs*

<i>Opt.</i>	<i>Answer</i>	<i>%</i>	<i>Part .</i>
10-A	Civil Status ID – the old National ID	56%	114
10-B	Passport	17%	35
10-C	Citizenship Card	48%	99
10-D	Information Card	19%	39
10-E	Biometric Employee Card	3%	6
10-F	Biometric Voting Card	4%	9
10-G	Food Card	9%	19



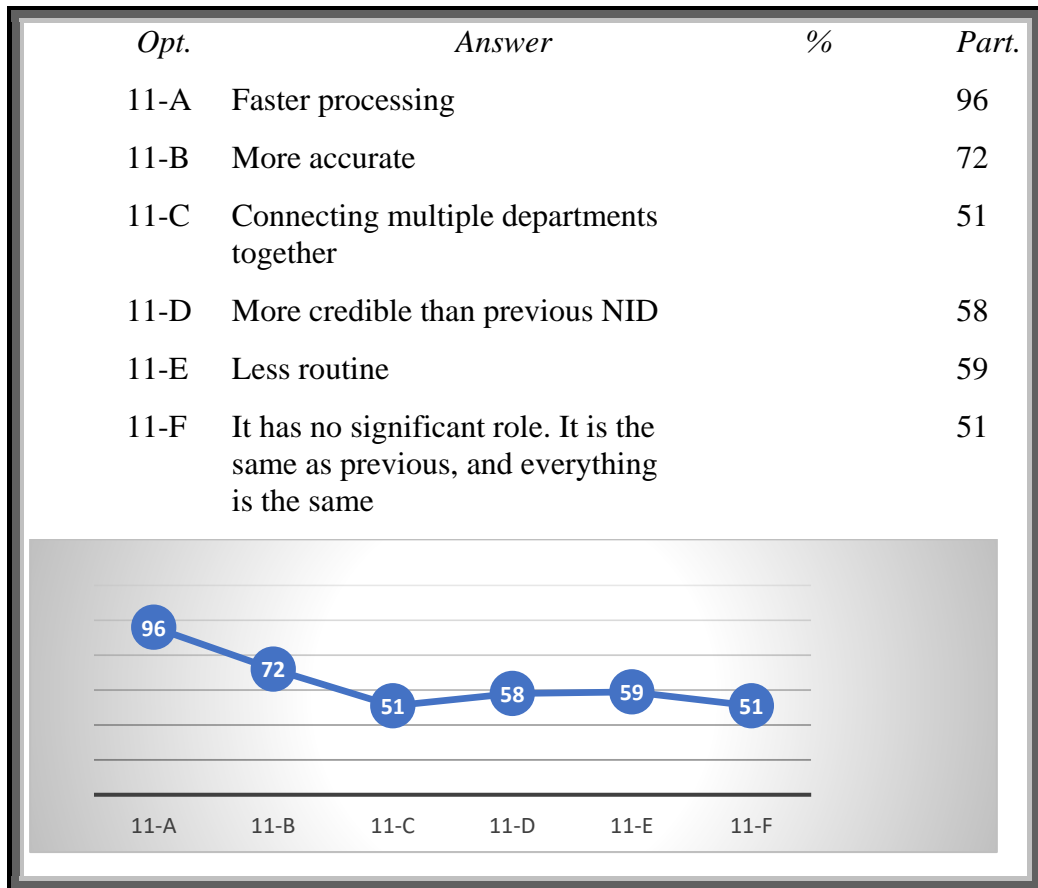
Q10-Part B- Why you can't use Instead of other IDs? Multiple answers allowed

Fig. K- 12 – Reasons for not using ENID10



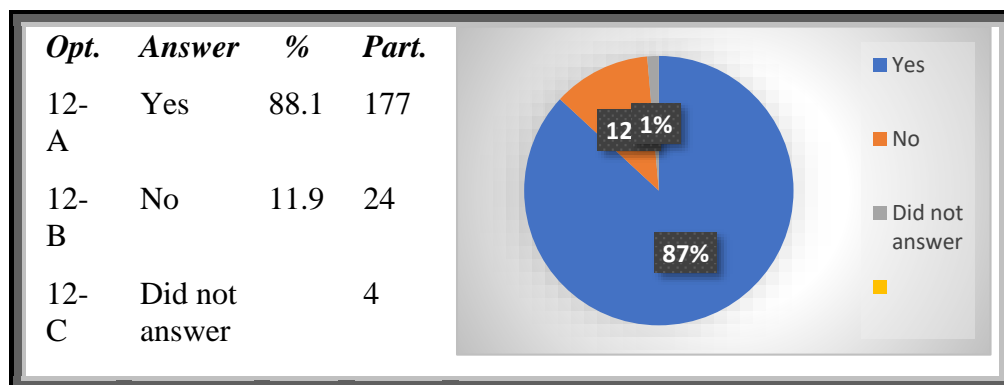
Q11- What is the role of the new Electronic NID in your opinion? Multiple answers

Fig. K- 113 – Role of ENID



Q12- Do you think this new NID is better than the old ones. One answer

Fig. K- 124 – ENID better than Old NID

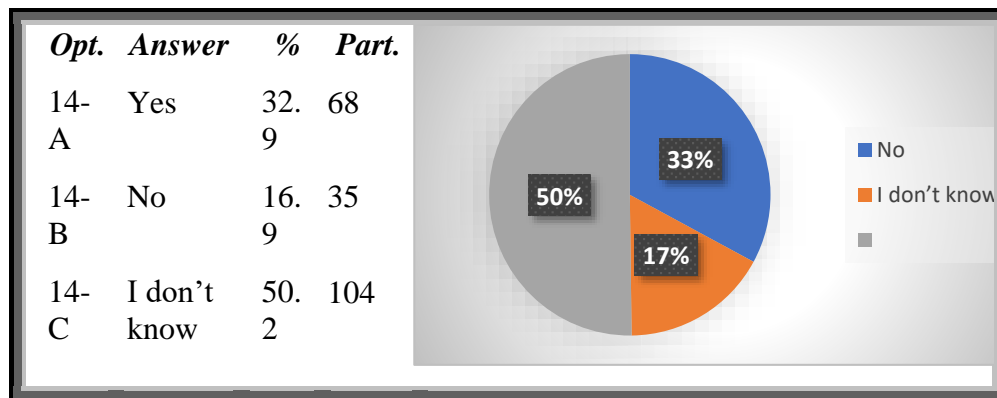


### Third Section:

About Information Security. The aim is to investigate citizens' opinions about information privacy and governmental organizations' trustworthiness.

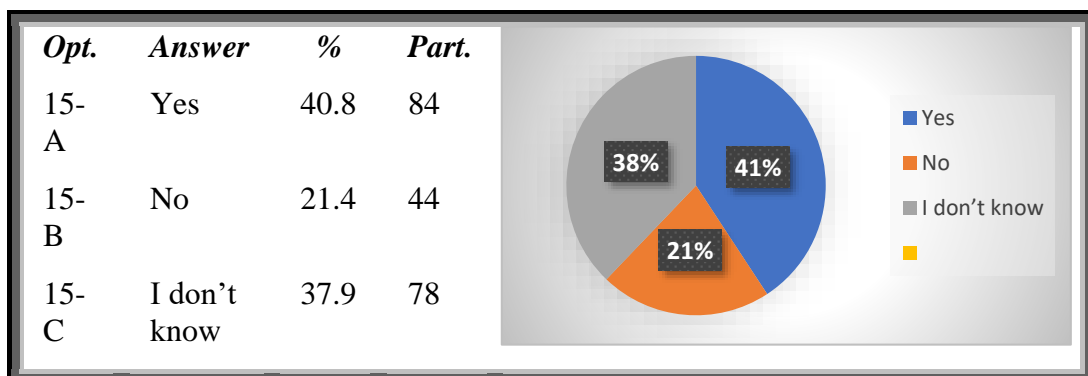
Q14- Do you think people's information is safe at governmental agencies.  
One answer

*Fig. K- 135 – Security Availability*



Q15- Does the new Biometric NID eliminate identity thefts and fraud? One answer

*Fig. K- 14*



#### 4.4 Summary of Findings for Citizen Survey – *Figure. 12*

Q1 Results: There were 205 total participants, ranging from 18 to over 66 years old.

Q2 Results: Public sector occupations accounted for 42 %, followed by private sector 36 %, jobless 10%, retired 7%, Simi-Public 4%, and advisory by less than 0.5 %.

Q3 Results: The majority of participants (76%) are married, 21% are not married, and 3% did not respond.

Q4 Results: The rate of using different identification is as follows. The Citizenship cards owned by most of the people (76%), followed by New National ID and Organizational ID (61%) for each, then the biometric government employee ID and Biometric Voting ID (60%) for each, Food Cards (54%), and driver's license (53%) and other IDs like unions, syndicates were 19%.

According to these figures, 24% of participants carry one ID at a time, 15% carry six IDs, 15% carry eight, and 11% carry nine IDs, 9% carry seven, and 5% carry carrying five or two. In addition, 3% have 11 cards, whereas 4% carry three.

Q5 Results: The majority of 96% showed that they applied physically at the directorate department, while 2% applied online and the other 2% did not answer

Q6 Results: 61% of participants waited a long time at the directorate when applying for a new national ID, 22% delayed due to internet issues, 12% found few employees in comparison to the number of people waiting in the queue, 9 % thought the issue was due to hardware problems, 8% thought employees not adequately trained, and 6% had some incompatibility, such as the officer being unable to discover the applicant's hair, eye colors, or the system being unable to scan caused to a long-term illness, such as diabetes or eye disease.

Q7 Results: 41% waited a long time at the directorate when picking up their new national ID, 30% did not receive a text message about the pickup date, 14% assumed the delay was due to software or internet issues, another 14% did not receive any confirmation about their application, 7% thought the number of employees was insufficient in comparison to the number of activities, and another 7% experienced some errors in their new IDs.



Q8 Results: The majority of participants (61%) received their new National ID in less than three months, 18% received it in 4-6 months, 11% did not answer, and 5% received it in more than a year; however, 4% stated they received it in 7-8 months, and 2% said they received it in 10-12 months.

Q9 Results: Most 65 % said they utilized their new /biometric national ID instead of other identity documents. 29% haven't used them yet, and 5% haven't responded.

Q10-A Results: The new ID was utilized by 56% to replace the previous civil status, 48% to replace the Citizenship ID, and 19 % to replace the Information Card.

Q10-B Results: For the participants that couldn't use their new ID instead of the old ones: 61% did not answer about the reasons for that, 19% thought regulations needed to amend, 15% did not know the cause, and 5% mentioned reasons like they still don't have or did not receive yet.

Q11 Results: 47% of participants believe that having a new ID makes them enquire processes faster, 35% believe it provides more accurate information, 29% believe it contributes to less routine, 28% believe it is more credible, 25% think it must connect more departments, and another 25% believe it has no significant role and made no difference.

Q12 Results: Most respondents (86%) believe that this new ID is superior to the previous one. 12% believe it isn't, and 2% did not respond.

Q14 Results: The majority of respondents (51%) are unsure if their personal information is secure at government agencies, while 33% believe it is and 17% believe it is not.

Q15 Results: Most respondents (86%) believe that biometric ID would eradicate identity theft and fraud, while just 12% think it will not do that, and 2% don't know.

Table 2- Summary of Citizen's Survey

<i>Se c. #</i>	<i>Variables per Research Model</i>	<i>Q u e. #</i>	<i>Participant Answer Maximum Rate</i>	<i>Participant Answer Maximum Rate</i>	<i>Result Maxim um Rate</i>	<i>Fig. #</i>
1 <sup>st</sup>	General questions					
		1	Age of participant – One answer	36-45 Years	23.9%	Fig. K- 1
		2	Occupation sector– One answer	Public Sector	42%	Fig. K- 2
		3	Social status – One answer	Married	76%	Fig. K- 3
	Unificatio n	4a	Names of NIDs citizen can have – Multiple choice	Passport	76%	Fig. K- 4
	Unificatio n	4 b	Numbers of NIDs	The New Biometric NID Card	24%	Fig. K- 5
2 <sup>nd</sup>	Focuses on the process of obtaining the new/ biometric National ID, challenges and period length, unification aspects and challenges, and understanding the new/ digital ID from the citizens' prospect or impact's opinion					
	Efficiency – Service delivery	5	Application method for ENID– One answer	At the Directorate - Physically applied	91%	Fig. K- 6

	Efficiency – Service delivery	6	Issues regarding application process – Multiple answer	Long queue, waiting for long hours	61%	Fig. K- 7
	Efficiency – Service delivery	7	Issues regarding receiving process – Multiple answer	Long queue, waiting for long hours	41%	Fig. K- 8
	Efficiency – Service delivery	8	Receiving ENID, waiting period – One answer	1-3 months	61%	Fig. K- 9
	Unificatio n	9	Using ENID – One answer	Yes	65%	Fig. K- 10
	Unificatio n	1 0a	Used instead of – One answer	Civil Status ID (Albitaqa Al wataniya)	56%	Fig. K- 11
	Unification	1 0 b	Reasons for not using ENID - Multiple answer	Did not answer	61%	Fig. K- 12
	Citizen Satisfaction	1 1	Role of the ENID – Multiple answer	Faster processing	96%	Fig. K- 13
	Citizen Satisfaction	1 2	Thinking ENID is better than NID – One answer	Yes	88.1%	Fig. K- 14
3 <sup>rd</sup>	Citizens' opinions about information privacy and governmental organizations' trustworthiness					
	Informatio n security	1 4	Thinking of info. Security in governmental	Don't know	50.2%	Fig. K- 15

			organizations – One answer			
	Information security	15	Eliminating identity thefts – One answer	Don't know	38%	Fig. K-14

#### 4.5 Results from One-on-One interviews with officials

Based on the question mapping structure (Appendix (F)), three (3) phone interviews were carried out by the researcher with people who works for the Nationality sub directorate in the KRG area. Two interviewees are leading the Nationality ID offices in the central city of Erbil and Sulaimani (Appendix (H)) and (Appendix (I)). In addition to an officer who leads the Passport agency that works closely with Nationality ID offices in the city of Halabja (Appendix (G)). The goal is to learn more about the biometric national ID project, including its history, structure, progress statistics, and the data sharing knowledge model. The following are the summarizing results from these interviews:

1. The history of modernization goes back to the Mid 80s, but the political situation in Iraq was a barrier. In 2003 both agencies merged to form Nationality Directorate under the Ministry of Internal Affairs
2. The Nationality Directorate has three (6) Major sub-directorates and ten (10) functional departments. This agency, which is a part of the Internal Ministry, has multiple offices in the capital city of Baghdad and other governorates; however, the number varies depending on the population and the size of the governorates.
3. Law number (3) – the Year 2016 the Nationality Identification Card.
4. Full human support and training
5. Availability of the software support with limitations
6. Availability of the hardware support with limitations
7. One national database located in the capital Baghdad, not known backups
8. Ten fingers, iris, and facial photo
9. Only unification of Citizenship booklet and Civil Status Cards
10. Fully secured: Not possible to imitate, and the reader machines do not read any card that is not registered in its database
11. No statistic was available on the whole level. Each governorate can only see its records
12. The interviewee mentioned no issues related to Organizational Structure
13. No significant issues, progress in the sub legislations amendments
14. No problems associated with Human Resources and Training

15. The directorate branch offices in KRG and other governorates' access is limited to the data entry and viewing of their location data in the system. No access to the national records nor editing license at any level
16. Lack of reader machines
17. Adding another ID to the system (Information Card), and the arrival of the reader machines
18. Entirely controlled by the main office, and data is fully centralized in one location. The knowledge management life cycle starts with branching offices, where data was entered, but beyond that point, everything controlled by the base office of the database
19. At this point, partners are departments of Citizenship and Civil Status only; passport and Information departments are within the directorate but not connected to the national database.
20. (Closed network). Only through reader machines to check the authentication of the ID with limited information reveals. No electronic connections to any other agencies
21. Limitations and lack of efficiency to use by all governmental agencies
22. Contributions to the e-Government are at the beginning steps. Like on the level of building an infrastructure and internal processes
23. Not available for external use or available at a minimal level of internal service only.

#### ***4.5.1 Summary of findings from One-on-One Interviews***

The following is the summary of findings from all three interviews based on variables discussed in the research model.

Table 3- Summary of Findings One-on-One Interviews

	<b>Focusing sections</b>	<b>Goals</b>	<b>Question Area</b>	<b>Results Findings</b>
1	OV	Background	To understand history, visions of the government from the prospective of (OV), planning, and motives	The project of modernization and digitization goes back to Mid 80s but the political situation in Iraq was a barrier. In 2003 both agencies merged to form Nationality Directorate under Ministry of Internal Affairs
2	New Iraqi National ID Project	Infrastructure	Organizational Structure	The Nationality Directorate has three (6) Major sub-directorates and ten (10) functional departments. This directorate has multiple offices in the capital city of Baghdad and other governorates; the number varies depending on the population and the size of the governorates.
			Legal support	Law number (3) – Year 2016 the Nationality Identification Card.
			Human Resources and Training	Full human support and trainings
			Technology Support - Software	Availability of the software support with limitations
			Technology Support - Hardware	Availability of the hardware support with limitations
		National Database		One national database located in the capital Baghdad, not known backups
		Biometric Scheme		Ten fingers, iris, and facial photo

		Unification aspect		Only unification of Citizenship booklet and Civil Status Cards
		Security measures		Fully secured: Not possible to imitate and reader machines cannot read any card that not registered in its database.
		Statistics		No statistic available on full level. Each governorate can only see its own records.
		Challenges	Issues related Organizational Structure	No issues related Organizational Structure
			Issues related Legal support	No major issues, progress in the sub legislations amendments
			Issues related Human Resources and Training	No issues related Human Resources and Training
			Issues related Technology Support- Software	KRG offices access limited on the data entry and viewing of its own location data in the system. No access to the national records nor editing license at any level.
			Issues related Technology Support - Hardware	Lack of reader machines
		Future plans	Upcoming plans of government	Adding another ID to the system (Information Card), and the arrival of the reader machines
3	Knowledge Management	Cycle/ Model	Model	Entirely controlled by the main office and data is fully centralized in one location. Knowledge management life cycle starts with branching offices where data entry performed but beyond that point, everything is controlled

				by the main office of the database.
		Partners	Network/ involving agencies	At this point partners are departments of Citizenship and Civil Status only, passport and Information departments are with in the directorate but not connected to the national database.
		Data sharing	Data sharing points and connections	(Closed network) Only through reader machines to check authentication of the ID with limited information reveals. No electronic connections to any other agencies.
		Challenges	Issues	Limitations and lack of efficiency to use by all governmental agencies.
4	E-gov.	Contributions to E-gov.		Contributions to the e-government is at the beginning steps. Like on the level of building an infrastructure and internal processes
5	Paperless Gov.	Contributions to Paperless Gov.		Not available for external or available at a minimal level of internal only.



#### **4.6 Results from the Evaluation of the Nationality Directorate website Appx. (M)**

The researcher visited the directorate of Nationality Card Affairs website (<http://www.iraqinationality.gov.iq/index.php>, n.d.), and found the following points. Although the website design was updated in 2020-2021 and improved in appearance, however it still lacking certain critical aspects that visitors may need:

1. Language differences: Kurdish and English are lacking, which are vital to foreign tourists and the KRG residents.
2. No project data concerning important donors like corporations and their origin
3. There is no sign of progression or essential data/statistics on the registration rate
4. There are no financial reports available at all.
5. Many un-functional buttons or re-directions to the same content
6. Un updated content and dates of postings
7. News is mostly about people, not organizations
8. Unstructured listing as Sub directorates and services are listed together and repeated headlines
9. In terms of viewing, more photos, and graphics than substance
10. Missing telephone numbers to contact – at least for the governorate offices
11. No links to any other governmental organizations, including the Ministry of Internal Affairs

It is also worth mentioning a few reasonable measures that the researchers identified:

12. The presence of a polling option for rating the directorship
13. A complete video about the registration process is available
14. The existence of primary laws
15. The complete history of the national identification system of Iraq

## CHAPTER V

### Discussion

This chapter discusses findings within the contextual hypothesis frame that the researcher built its research upon and connects data collected from both quantitative and qualitative approaches. The primary topic of this section is concerning the New Iraqi National ID will be highlighted, and, in the end, all hypotheses will conclude.

#### 5.1 The e-Government, G2G, and G2C dimensions

E-Government is the fruit of e-governance, which is a part of the government's strategy for social presence, improving IT, and assisting people in improving their lives. It involves delivering a selection of services via the internet, telephone, community centres, or government departments to transform the government from a 'procedure and power-centered mechanism to a 'citizen and service-centred platform' (Mishra, S.S. Pain, N. & Sadhu, B.SC., 2004).

The (G2G) is about internal governmental procedures; according to (Kumar 2011), e-governance comprises lowering government expenses, improving performance, forming strategic government relationships, and empowering citizens.

The (G2C) aims to bring people closer to governments by talking to citizens, promoting accountability, listening to citizens, promoting democracy, and enhancing public services. It entails providing improved services to residents through a single-point delivery mechanism in sectors (Kumar 2011), which means more interactions with people and accuracy, efficiency, and speed of delivery for their inquiries. However, based on this study's findings, the Iraqi citizen has not yet seen many improvements in the overall governmental performance of this new ID. The following topics are contributing factors of the e-Government success or failures:

##### 5.1.1 *The importance of the national biometric ID for Iraq for e-Government*

The new Iraqi Nationality ID is the first innovative solution, including the entire population and governmental agencies. Every citizen needs a national ID, and every governmental organization deals with it. According to this study's findings, 100% of governmental organizations use National IDs. Furthermore, 78.3% of them use this information for internal and external purposes, 17.4% use it for human resources, while 4.3% stated that citizens inquire only.

### **5.1.2 Electronic Data Management of the New Iraqi National ID (ENID)**

In terms of the data management model of the Iraqi new or electronic identification system and its benefits for both governments and citizens, the following conclusions are facts that this project is facing:

- The data management cycle is not fully developed and shared for this solution. This study re-assures that all governmental organizations share citizen's identification information with another (as many as 16 organizations/ departments sometimes) in an old-fashioned, papery method.
- The national database holds citizens' information locked in the national database center, not connected to other departments. However, reading machines can verify someone's identity authentication only. Beyond that, no electronic information is available to continue instead of paper copies. And this is the only reason that 74% of respondents believe that the biometric ID is more credible.
- At this point, 78% of organizations still deal with a paper base method for sharing identification information, and 64% uses the old traditional ways of disposing of copies of identifications like Trashing and shredding
- About 74% of samples employ the traditional technique like keeping them in an archived boxed file to safeguard national ID information. Only 9% referred to an organizational server for security, and 4% said they do not see the reason for keeping them safe!

### **5.1.3 Legal Supports for the ENID**

To promote the e-Government, governments need to have explicit legislation, especially the secondary regulations and policies. With 96% legal gaps in processes, an employee cannot perform at their best.

The primary laws are confirmed, posted online and based on interviews, survey questionnaires, and the directorate's official website. Still, the Iraqi ministries did not amend their secondary legislations like regulations and policies to cover their entire processes. This was the main reason the directorate approved citizens' collections of their old nationality IDs submitted at the time of retrieval of the new ones.

The lack of procedural legislation has a significant impact on performance efficiency. Although 74% of respondents said they work with the primary law, federal law, organizations also need secondary laws, such as rules and regulations, when implementing new solutions. The majority or 83% of respondents say regulations amendments are needed for this new ID, and 96% believe there is a legal gap.

### **5.1.4 The Data-center Establishment in Iraq**

Establishing a national database is an excellent step toward establishing the e-Government to store people's data and safeguard their information; it is the most critical need for the infrastructure – *Fig. (3)*. It will create efficiency when governmental agencies can quickly search data from legitimate sources and verify

one's identity when individuals engage in any transactions or inquiries (Ogochukwu, 2019). However, contributing to e-Government depends on measures of accessibility and transparency. Based on findings from qualitative and quantitative results, this project lacks both aspects. People have no access to view their data from this system. Furthermore, this national database is inaccessible to all governmental agencies; further, it blocks its sub-directorates. This point is why clear answers from 87% of governmental employees when they said “No” about making a difference in the department.

#### ***5.1.5 The Performance Efficiency Factors***

Although 100% of participants exchange ID copies with other agencies/departments, they do not have access to the central database, including all KRG administrations. Moreover, reader machines are minimal to the number of administrations; 61% of respondents from the government referred to the lack of reader devices as challenges they face concerning the National IDs when processing citizens' enquires.

Almost all governmental agencies store the national ID information for more than a year, and 78% create paper copies. In comparison, just 18% produce paper and digital copies, and only 4.3% deal only with digital. Accessing the national database eliminates all these issues and sets permanent solutions.

Although 65% of respondents did not react to the question concerning the new national ID's efficiency and speed contribution, they were not familiar with the differences as they do not have access. However, the remaining 35% appears to know the difference. And only 17% of this 35% confirmed its positive influence, while 8.7% confirmed no difference.

#### ***5.1.6 Citizen's Opinion and Satisfactions***

Based on interviews, this project's length was for five years, but it is not near finishing soon. People wonder how this will affect the financial status if it goes so slow! On the other hand, several media articles refer to this project's outcome if it keeps going in this direction!

The formal website is the primary channel people visit when looking for information. However, the Directorate of Nationality Card (DNCA) website shows no statistics about the national registration progress. Furthermore, it shows no details of the project progress. However, the application process and national laws are available on the DNCA website. In addition, there is no active chatting section, no contacting phone numbers to call.

Although Iraqi citizens haven't seen the actual impacts of this new electronic ID, it is worth mentioning that most respondents (86%) thought it was superior to the previous ones. This favorable response leads us to believe that people favor modernization and are looking forward to keeping up with technology like the rest of the world.

#### **5.1.7 The Security Aspects of ENID System**

It is assumed that issuing national identity cards to all the citizens would help governments combat social malice such as terrorism, illegal immigration, fraudulent activities and accelerate the social service delivery mechanism (Rahman Khan, 2018). Furthermore, governments worldwide realize the need for national identification systems because of the increasing rate of threats of terrorism and kidnapping (Kika, 2019). And respondents seem to believe in these theories as 86% of them said that the biometric ID would eradicate identity theft and fraud, while just 12% think it will not, and 2% don't know.

In the meantime, people seem to be unsure of their information security as 50% of respondents stated that they are not sure if their personal information is secure with the governmental agencies. In comparison, 33% believe it is safe, and 17% believe it is not safe, and this leads us to think that the government of Iraq did not work hard to make the public know more about the performance, benefits, and details of this project.

#### **5.1.8 The Unification Aspect of the ENID**

Iraqi citizens own more than eleven (11) Identifications; six (6) most important ones included having a passport and voting ID. At this point, three (3) of them have biometric recognition. People were under the impression that this ID would replace at least the primary four (4) Civil Status, Citizenship, Food ID, and Information card. In reality and proves from this literature's findings, a unification process covered only two (2) IDs: the Civil Status and Citizenship ID. Based on the history of the national identity of Iraq, these two identifications were one before 1981 - Appendix (A).

Based on the Citizen Survey results, the new ID was used by 56% to replace the previous civil status, 48% to replace the Citizenship ID, and 19 % to replace the Information Card. Therefore, although the unification only covers the first two IDs, people are under the impression that an Information card is involved; this leads us to believe that the government of Iraq was unsuccessful in creating a complete understanding of this project among the public.

#### **5.1.9 Organizing Vision (OV) and the ENID project**

As explained by (Duodu 2018), the Organizing Vision (OV) theory of Swanson & Ramiller helps explain governments' decisions to adopt Information Technology (IT) innovation such as the pursuit of biometrics in national identification programs. Therefore, this study needs to evaluate all three main aspects of the Organizing Visions (OV) with respect to the Iraqi new or electronic identification

system. Elements like Interpretation, Legitimation, and Mobilization. Although we have no precise data of initiating steps of the New National ID project, nor having statistical data about it, but this literature's findings lead us to believe that the Iraqi leadership did not fully understand this innovation for its implementations up to this point. Otherwise, the national database would have given full benefits to all governmental agencies to boost their efficiency level and served Iraqi e-Government to the tallest by now.

#### ***5.1.10 The ENID Project and Knowledge Management Life Cycle***

According to M. Sağsan, the central aspect of any Information base technology project is the considerations of a knowledge management system. Five basic procedures considered by the knowledge management cycle may defined as creating, sharing, structuring, using, and auditing, in turn, called the "knowledge management life cycle" model (Sağsan, 2006). Based on the performance of the Iraqi new national identification project, its lifecycle has not reached the second step so far. To be complete, it needs a whole network and preparations of supporting infrastructure to perform and serve the basic needs of the e-Government.

## 5.2 Finalizing Discussion Statements based on Hypothesis H0-H3

The following are finalizing statements in support or disagreements of this study's hypothesis based on findings generated from quantitative, qualitative research approaches.

H0: The new Iraqi Unified Electronic National Identification card project under this circumstance is not considered a successful transformation step toward the Iraqi e-Government practice but considered a successful step in the infrastructure building for an e-Government. The researcher findings full agreement with this statement as results shown some elements of this project to be in the beginning steps toward building an infrastructure but not full e-Government. Because data is not shared with governmental organizations and the data-centre is not connected.

H1: The new Iraqi Unified Electronic National Identification card did not contribute to the efficiency level of governmental performance - (G2G). The researcher in agreement with this statement because up to this point, the governmental agencies dealing with the new ID exact same way they deal with previous one. The only difference is the reader machines that can recognize legitimate ID from the illegitimate one.

H2: The new Iraqi Unified Electronic National Identification card project does not positively affect the Governmental - Citizen Service process (G2C). The researcher's findings does not agree with this statement as it shows some signs of G2C like the website availability and the availability of the digital forms, in addition to the availability of reader machines at some locations.

H3: The new Iraqi Unified Electronic National Identification project did not contribute to the trust-building relations between an Iraqi government and Iraqi citizens. The researcher's findings does not agree with this statement as it shows majority of citizen do believe this initiation to be trustworthy.

H4: The new Iraqi Unified Electronic National Identification project is not serving the purpose of a unification idea. The researcher discovered the intention of the Iraqi government about the unification through this study and realized that it is merging only two identifications, but people were under impression that they can get rid of several identifications with this digital system. However, at this stage considered a beginning step toward adding more identifications under its wings.

## CHAPTER VI

### Conclusion and Recommendations

This chapter presents conclusions based on the research findings according to the research's objective and sub-objective (s) and gives recommendations to decision makers around the new Iraqi national identification system.

#### 6.1 Conclusion

According to the study's results, a comprehensive, robust, and accurate national identity, system needed to enable the government to manage and develop the country's agencies performances effectively and efficiently. This outcome is not achievable unless the government considers the necessary infrastructure with full knowledge management procedurals alone with its supporting legislations and works diligently to meet the success elements of the e-Government. G2G and G2C are innovations of this century. These solutions founded to offer better services to governments and citizens and bring them closer to each other. Accuracy, speed, excellent service delivery, and transparency are the ultimate goals of e-Government. It is good to have one less ID, but one less ID from eleven (11) IDs do not make much difference, other nations were able to unify several identifications in one, so the Iraqi government can do that too.

The national data center is the heart of the e-Government, and it is the center point of all activities that link all governmental agencies together. It is the first and the most critical body to collect and store an entire nation's information. Furthermore, it can provide the most authenticated, accurate information faster than any other method has approached in the history of public service management have seen. Governments should not forget to consider accuracy, speed, good service delivery, transparency, and information security in their strategic plans when thinking about any innovative projects. Because these are the ultimate goals of the e-Government, these are fundamentals of satisfaction from citizens' point of view.

This study proves what can go wrong when innovation does not serve its purpose. The Iraqi national identification system is created and supported by a national data center like in any developed country with the same (if not more) financial costs for a similar project. Still, it fails to serve all governmental agencies because it is not connected and is failing to create required efficiency in these agencies' performances. As a result, procedures are the same; they are still paper-based and offer the same service delivery as the previous ones (non-digitals). This study also proves Iraqi citizens' forgiveness, as they are ready to give (two thumbs –up) before seeing differences and knowing what an actual biometric identification can do.



## 6.2 Recommendations

Governments around the globe are racing to develop creative techniques and tools for running their nations and setting up an environment where the majority of efficiency achieved to meet their citizen's requirements. However, it is not possible to get to this point without a complete understanding of the nation's needs and expectations. The e-Government wheel is spinning faster every day and cannot wait for countries to get on board at their own pace. On the contrary, governments should act faster to get on board and walk the line! Swanson and Ramiller used the (OV) concept to highlight the differences between 'mindful' and 'mindless' innovations. Mindless innovation arises when organizations or societies pursue new technology like biometrics because others are doing so. In contrast, organizations and societies that innovate mindfully do so "with reasoning grounded in organization facts and specifics."

It is unclear if the new identification project in Iraq is 'mindless' at this stage, but so far, results don't show much of the 'mindful' signs!

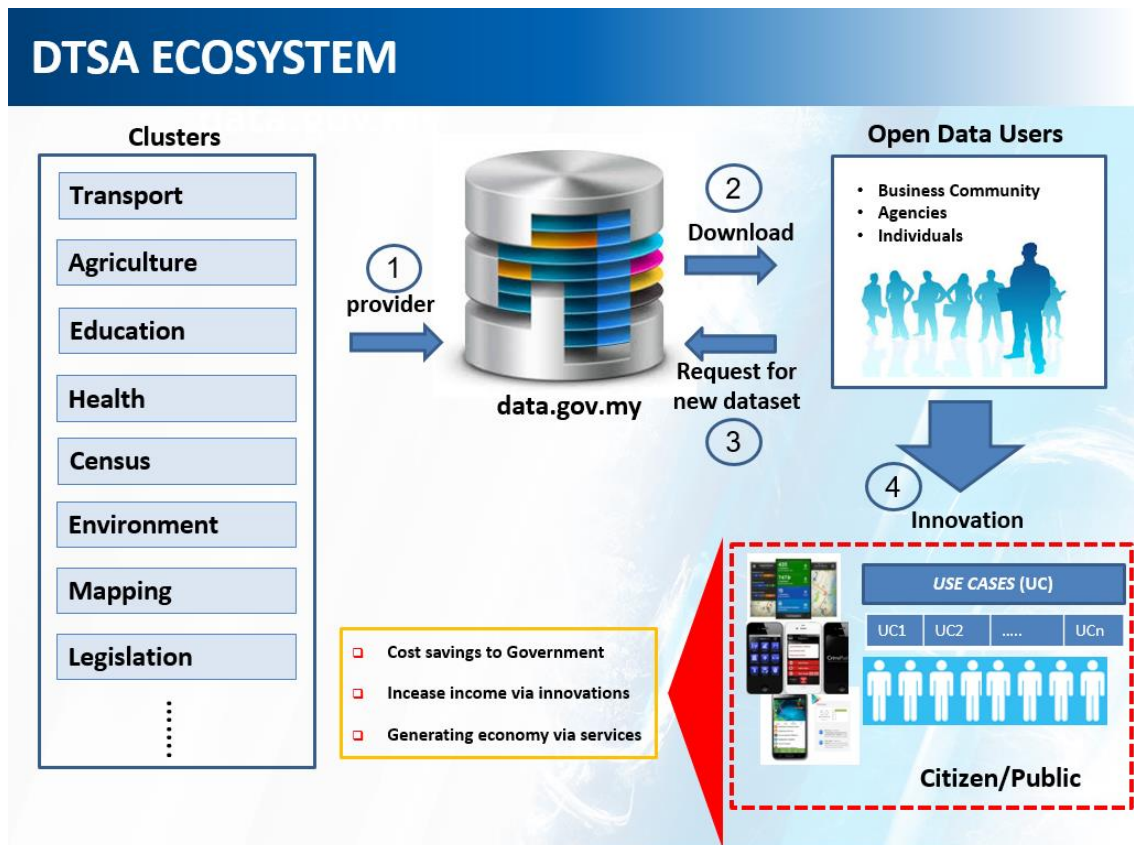
Iraqi citizen calls this new identification a 'Unified ID,' thinking this will save them from the hassle of proving legitimacies, multiple identifications, and requesting approvals from one agency to submit it to another agency, but it turned out to be a unification of only two IDs which was initially one before 1976! The ideal unification system for an Iraqi citizen will be a unique digital number with biometric signs (with age considerations) from birth that links a person to everything else. Although the Iraqi government has already taken this step in the new identification system, it should not stay at this level.

The ideal scenario for the ENID system is to build a data center with the maximum capacity to collect the entire nation's identity information and to support data sharing based on the specific agency's need in the form of specific solutions – similar to *Fig. (11)*. In addition, the Iraqi government should support their organizations with full human capacities, physical resources, different levels of legislation, and security measurements for each solution. The National Identification is one solution that works as a central tool for all governmental functions. However, all other critically needed solutions for governmental functions also needs the same data, so what is the point of not using the same source!

In the end, building a digital solution on a national scale while limiting its capabilities is unrealistic and a (sin)! The national Data-center has a great potential to serve entire governmental agencies and citizens to the maxim level. Iraq's new national identification ID project is a significant national treasure and must be treated as such!

Figure 11- Open Data Center for Malaysia Government

Source <https://www.malaysia.gov.my/portal/content/30024>



### 6.3 Further Directions

This research addresses a knowledge gap in Iraq's new/ electronic/ biometric national identification system and its impacts on government performances and citizens' prospects. This national initiative progresses despite its perceived period and un-clarity of finishing. The researcher recommends encouraging scholars to do further studies to cover similar or different aspects of this project and keep track of its development and outcomes.

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- <https://www.youtube.com/watch?v=0cN-JX6HP7c> – Adding a table of content to Word document
- (<https://www.youtube.com/watch?v=-EkANfvvtXY>, n.d.) – for data analyzation
- <https://www.youtube.com/watch?v=DRL4PF2u9XA&t=321s>.

### List of Appendixes

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Appendix (F)	On-on-One Interview Questionnaire Mapping
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## BİLİMSEL ARAŞTIRMALAR ETİK KURULU

14.12.2021

Dear Shobo N. Shali,

Your application titled “**The Impact of the Unified New/ Biometric National ID on the Governmental Performances and Citizen's Prospects – IRAQ- KRG Case Study**” with the application number NEU/SS/2021/1143 has been evaluated by the Scientific Research Ethics Committee and granted approval. You can start your research on the condition that you will abide by the information provided in your application form.

Assoc. Prof. Dr. Direnç Kanol

Rapporteur of the Scientific Research Ethics Committee

**Note:**If you need to provide an official letter to an institution with the signature of the Head of NEU Scientific Research Ethics Committee, please apply to the secretariat of the ethics committee by showing this document.

## Appendix X

### Similarity Report

The screenshot displays a similarity report for a document titled "The Impact of Biometric National Identification on Governmental Performances and Citizen's Prospects - Kurdistan Region - Iraq". The report is generated by a plagiarism checker and shows the following results:

**ORIGINALITY REPORT**

Category	Percentage
SIMILARITY INDEX	2%
INTERNET SOURCES	2%
PUBLICATIONS	0%
STUDENT PAPERS	0%

**PRIMARY SOURCES**

Rank	Source	Percentage
1	ugspace.ug.edu.gh Internet Source	1%
2	neu.edu.tr Internet Source	1%

At the bottom of the report, there are settings for the search: "Exclude quotes" is On, "Exclude bibliography" is On, and "Exclude matches" is set to < 1%.



### Appendix (A) - Historical background of the legal system- Iraqi National ID

<i>Year</i>	<i>Legislation</i>	<i>Details</i>
- 1869	Citizenship Law	By Ottoman Empire
- 1917	Establishment of the Passports and Residence Department	Under the Criminal Investigation Directorate. limited to the travel of people and the control of the entry of foreigners
- 1923	Passport Law No. 3 - 1923	After the formation of the national government in Iraq
- 1923	Residence law	to regulate the entry and residence of foreigners in the country
- 1924	Citizenship Law No. 42 - 1924	the first legislation regulating the citizenship
- 1930	Directorate of Travel	moved under General Police Directorate
- 1957	Establishment of Directorate of General Citizenship	And Linked with Directorate of Travel
- 1980	Establishment of Directorate of Residence	This service moved to the Intelligence Service
- 1981	Passport Directorate disengaged and moved to the Public Security Directorate	after restricting Iraqis' travel abroad
- 1981	Directorate of Citizenship and General Civil Status	Directorate of General Citizenship was merged with the Directorate of General Civil Status to issue Unified Civil ID (Hawiyat ahwal almadaniya)
- 2003	Directorate of Nationality Civil Status, Passports, and Residency (DNCPR)	Passports and Residence Directorates were re-linked with the Directorate of Citizenship. After the fall of the previous regime
- 2016	Law number 3 - 2016 the (National ID)	
- 2017	Law number 1 - 2017 the (National ID Instructions)	

### Appendix (B) -The Governmental Agencies Survey Questionnaire

*We are inviting you to participate in this study titled (The Impact of Biometric National Identification Card on the performance of governmental agencies and Citizen's trust - Iraq case) from the NEU. This study conducted to complete a master's thesis dissertation successfully. Therefore, this questionnaire's sole intent is to collect empirical, quantitative data to facilitate the researcher's investigation.*

*The questionnaire should take less than 10 minutes to complete, and your participation will appreciated. All your responses will be confidential. Your personal information will not requested and will not be shared with third parties.*

Sec. 1		GENERAL NATIONAL DOCUMENTATION
1	<b>Please write your Ministry or Directorate name. Different organizations use different procedures, so please mention your organization name.</b>	
	Write your organization here:	
2	<b>How does your department deal with citizens' NID?</b>	
	2- A	For internal use. Human Resources
	2- B	For citizen's inquiries
	2- C	For both purposes, the internal use and citizen's inquiries
3	<b>For which inquiries/ process/ programs in your department require the citizen's NID? Multiple answers allowed</b>	
	3- A	Application for ownership/ status change at gov. organizations (property, business, vehicle, ... etc.)
	3- B	Application for obtaining (Passport, visa to travel, information card, food card, voting card, employment card)
	3- C	Newborn/ child registration under my name
	3- D	School admission
	3-E	Employment with government, retirement, long-term leave... etc.

	3-F	Employment with the private sector		
	3-G	Contracting, supplier.... Etc.		
	3-H	Health sector inquiry (vaccine, long-term leave if worked with government...etc.		
	3-I	Driving license		
	3-J	Open a Bank account, credit card, ATM Card		
	3-K	Court inquiry		
	3-L	Others (please write the type of a inquiry)_____		
<b>4</b>	<b>Which NID was precisely used? For which process/ program?</b>			
	4-A	Biometric NID Card		
	4-B	Passport		
	4-C	Citizenship Card		
	4-D	Information Card		
	4-E	Biometric Employee Card		
	4-F	Biometric Voting Card		
	4-G	Food Card		
	4-H	Driving license		
	4-I	Organization employment ID		
	4-J	Others		
<b>5</b>	<b>Do you share these documents or copies of these documents with other departments?</b>		<b>YES, continue Q6</b>	<b>NO, only my</b>

				dept. Go to Q13
<b>6</b>	<b>How many other department/s are taking part in this process? Please write the number</b>			
	Write numbers:			
<b>7</b>	<b>Do you store copies of citizens' NID or its info.? If No, skip to Sec. 2</b>	<b>YES</b>	<b>NO</b>	
<b>8</b>	<b>How do you deal with this information from people's IDs? One answer</b>			
	8- A	Keep original until the inquiry is made then returned to the owner		
	8- B	Keep paper copies		
	8- C	Make digital copies - scan and store		
	8- D	We keep digital copies and hard copies		
<b>9</b>	<b>How do you store copies of these documents? One answer</b>			
	9- A	Keep on individual computer		
	9- B	We keep hard copies in department files		
	9- C	Keep on department/ organization's server		
<b>10</b>	<b>How long do you keep until disposing of these hard copies or digital copies? One answer</b>			
	10- A	Up to 3 months		
	10- B	3-6 months		

	10-C	6-12 months
	10-D	One year
	10-E	More than one year
<b>11</b>	<b>How do you dispose of these hard copies or digital copies? One answer</b>	
	11-A	Shredded
	11-B	Trash
	11-C	Delete from Computer
	11-D	Burning
<b>12</b>	<b>How do you maintain data security? What are measures of Security in your department? One answer</b>	
	12-A	Locking hard copies in file keepers in a safe place
	12-B	Professional server security
	12-C	No security needed
<b>Sec.2</b>	<b>New Iraqi Biometric National ID</b>	
<b>13</b>	<b>What is the role of the new Electronic NID in this process/ program? - Multiple answers allowed</b>	
	13-A	Faster processing
	13-B	More accurate
	13-C	Connecting us with the central database, we have a reader machine

	13-D	More credible than previous NID
	13-E	It has no significant role; it is the same as previous
<b>14</b>	<b>Can you use this new Electronic NID instead of the NIDs mentioned before in the process/ program? One answer</b>	
	14-A	It replaces only one card - Only instead of the previous NID
	14-B	It replaces two cards - Old NID + AI-Citizenship Card
	14-C	It replaces more than two cards
<b>15</b>	<b>Is the use of new NID speeding your processes? If yes, by which rate? Measures - One answer</b>	
	15-A	1- 25%
	15-B	2- 50%
	15-C	3- 75%
	15-D	4- 100%
	15-E	No, it did not speed our processes
<b>16</b>	<b>Is the use of new NID contributing positively/ more efficiency to process? If yes, by which rate? - One answer</b>	
	15-A	1- 25%
	15-B	2- 50%
	15-C	3- 75%

	15-D	4- 100%
	15-E	No, it did not contribute to any efficiency
<b>17</b>	<b>In your opinion, how does the use of the new NID speed the process and more efficient?- Multiple answers allowed</b>	
	17-A	Fewer people are involved in processes because of having electronic readers-Information inclusiveness
	17-B	fewer departments involved in processes - Less routine
	17-C	Electronically processed - information security and transparency
	17-D	Work facilitation for employees - Online work from home
	17-E	Facilitation for people - Online application and inquiry
	17-F	It is a little bit better - only because more legitimate
<b>18</b>	<b>Have you experienced any issues with the new NID process/ program/ inquires? - Multiple answers allowed</b>	
	18-A	No, I did not experience any issues
	18-B	Unavailability of the reader machines)
	18-C	Hardware issues (lack of computer, internet, Wi-Fi, ....etc.)
	18-D	Software issues (Not connected to the national database, program issues, ... Etc.)
	18-E	Lack of employees with experience in this project
	18-F	Lack of training on the project

<b>Sec. 3</b>		<b>Legal Support for Biometric National ID</b>		
<b>19</b>	<b>Do you have new policies, rules, procedures concerning the new NID use?</b>	<b>Yes</b>	<b>No</b>	
<b>20</b>	<b>What are new policies, rules, procedures concerning the new NID use?</b>			
	20-A	We have internal legislations (On the level of ministry/ directorate/department)		
	20-B	We have external legislations (general instructions from the council of ministries/ higher level)		
	20-C	There is a new law - National level		
	20-D	There is a new law - Federal level		
<b>21</b>	<b>Do you think there is a legal gap concerning the new NID use?</b>	<b>Yes</b>	<b>No</b>	
<b>22</b>	<b>Do you have legal policies in regards to security measures?</b>	<b>Yes</b>	<b>No</b>	
<b>23</b>	<b>Do you have legal policies in regards to the fraud measures?</b>	<b>Yes</b>	<b>No</b>	
<b>24</b>	<b>Have you experienced any issues in regards to security breaches and fraud?</b>	<b>Yes</b>	<b>No</b>	
<b>Sec. 4</b>		<b>e-Gov. Culture and Biometric NID Innovation</b>		
<b>25</b>	<b>Did the new NID make any difference in your department? If you deal with new NID.</b>	<b>Yes</b>	<b>No</b>	
<b>26</b>	<b>Are there new physical resources obtained concerning this project, Like computers, the internet, servers,...etc?</b>	<b>Yes</b>	<b>No</b>	
<b>27</b>	<b>Did you develop different procedures and/or policies concerning this project?</b>	<b>Yes</b>	<b>No</b>	
<b>28</b>	<b>Did you get the training concerning this project?</b>	<b>Yes</b>	<b>No</b>	



<b>29</b>	<b>Are you familiar with e-Gov.?</b>	<b>Yes</b>	<b>No</b>	<b>I know, but we have no measures for it</b>
<b>30</b>	<b>Are you familiar with paperless Government?</b>	<b>Yes</b>	<b>No</b>	<b>I know, but we have no measures for it</b>
<b>Sec. 4</b>	<b>Technical Aspects - For IT department</b>			
<b>31</b>	<b>When did this new NID project start for your department? One answer</b>			
	31-A	Since 2016		
	31-B	Since 2017		
	31-C	Since 2018		
	31-D	Since 2019		
	31-E	Since 2020		
	31-F	Since 2021		
<b>32</b>	<b>What is your department's role in the new NID project? One answer</b>			
	32-A	Main role/ Admin and data entry in the central database		
	32-B	Secondary role/ Only reader or viewer		
	33-C	No role at all		
<b>33</b>	<b>How is the data sharing at your Organization/ agency/ department/ unit...etc.?</b>			
	33-A	- Not Centralized. We keep our data in our department		

	33- B	- It is centralized in _____
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**Thanks for taking the time to fallout this survey**

### Appendix (C) - The Citizen Questioner

We invite you to participate in this study titled (*The Impact of Biometric National Identification Card on the performance of governmental agencies and Citizen's trust - Iraq case*) from the NEU.

- This study conducted to complete a master's thesis dissertation successfully. Therefore, this questionnaire's sole intent is to collect empirical, quantitative data to facilitate the researcher's investigation.

The questionnaire should take less than 10 minutes to complete, and your participation will

- appreciated. All your responses will be confidential. Your personal information will not requested and will not share with third parties.

Sec. 1	General			
<b>1</b>	<b>What is your age?</b>			
	1- A	Under 18 Years		
	1- B	18-25 Years		
	1- C	26-35 Years		
	1- D	36-45 Years		
	1- E	46-55 Years		
	1-F	56-65 Years		
	1- G	Above 66		
<b>2</b>	<b>What is your occupation status or sector?</b>			
	2- A	Public Sector		
	2- B	Private Sector		

	2-C	Simi Public			
	2-D	Not working			
<b>3</b>	<b>Are you married or single? If Yes, how many children do you have?</b>		<b>Yes</b>	<b>No</b>	
<b>4</b>	<b>What are the national documents or identifications that you have? If family- Multiple answers allowed</b>				
	4-A	Biometric NID Card			
	4-B	Passport			
	4-C	Citizenship Card			
	4-D	Biometric Employee Card			
	4-E	Information Card - Proof of the address			
	4-F	Biometric Voting Card			
	4-G	Food Card			
	4-H	Driving license			
	4-I	Organization/ employment ID			
	4-J	Others (please write the type of document)			
<b>5</b>	<b>How many National identifications - Governmental Documents do you have? If Family, please write the total</b>				<b>Number</b>
<b>Sec.2</b>	<b>THE ROLE OF BIOMETRIC NID</b>				
<b>6</b>	<b>How did you apply for Biometric National ID? Single Answer</b>				
	6-A	At the Directorate - Physically applied			

	6-B	On-Line			
<b>7</b>	<b>Did you experience any issues concerning the application at the directorate during the process? - Multiple answers allowed</b>				
	7-A	Long queue, waiting for long hours			
	7-B	Software issues like frozen programs, problems with the internet, not being able to connect ... Etc.			
	7-C	Hardware issues, like old/bad computers, scanners, etc.			
	7-D	Too little employee			
	7-E	Untrained employee			
	7-F	Incompatibility like, they did not have my eye color, hair color, skin tone color, nationality name, religion name ... etc.			
<b>8</b>	<b>Did you experience any issues concerning receiving your National Biometric ID? - Multiple answers allowed</b>				
	8-A	Long queue, waiting for long hours			
	8-B	Software issues like frozen programs, internet issues, inability to connect ... etc.			
	8-C	Too little employee			
	8-D	Errors with my information at the card			
	8-E	I did not get any phone messages about the confirmation of my application			
	8-F	I did not get any phone messages about when I should pick it up			
<b>9</b>	<b>How long did it take to receive the actual Biometric ID? One Answer</b>				
	9-A	1-3 months			

	9- B	4-6 months			
	9- C	7-9 months			
	9- D	10-12 months			
	9- E	Over one year			
<b>10</b>	<b>Have you recently used Biometric NID instead of any other documents? If Yes, Choose below. If No, go to Q11.</b>		<b>Y es</b>	<b>No</b>	
<b>11- P1</b>	<b>Instead of which ID? Multiple answers allowed</b>				
	11- P1- A	Old Biometric NID Card			
	11- P1- B	Passport			
	11- P1- C	Citizenship Card			
	11- P1- D	Information Card			
	11- P1- E	Biometric Employee Card			
	11- P1- F	Biometric Voting Card			
	11- P1- G	Food Card			

	11- P1- H	Driving license			
	11- P1- I	Others (please write the type of a document) _____			
<b>11- P2</b>	<b>Why couldn't you use Biometric NID instead of the old one? (Select one)</b>				
	11- P2- A	Regulations require the old ones - It needs laws/ policy amendments			
	11- P2- B	I don't know, but I was told I can't use the new biometric NID			
	11- P2- C	Other reasons (please write) _____ -			
<b>12</b>	<b>What is the role of the new Electronic NID in your opinion? Multiple answers allowed</b>				
	12- A	Faster processing			
	12- B	More accurate			
	12- C	Connecting multiple departments			
	12- D	More credible than previous NID			
	12- E	Less routine			
	12- F	It has no significant role. It is the same as previous, and everything is the same			
<b>13</b>	<b>Do you think this new NID is better than the old one?</b>		<b>Yes</b>	<b>No</b>	

Sec. 3	INFORMATION SECURITY			
14	Do you think people's information is safe at governmental agencies in general?	Yes	No	I don't know
15	Does the new Biometric NID end identity thefts and fraud?	Yes	No	I don't know

Thanks for taking the time to fill out this survey



Appendix (D) - Government Survey Questionnaire Mapping			
Sec. #	Questions	About	Aim
<b>1<sup>st</sup> Section</b>	1-12	<u>The general use of IDs by organizations and knowledge management cycles.</u>	to collect information about the type of administrative services, types of processes that require national IDs, and the name of IDs required by their processes cycles
	1-4	focus on governmental organizations and their general uses of National Identifications in the KRG – Iraq	
	5-12	focuses on the knowledge management cycle regarding the NIDs, collection processes, storing process, data sharing, and data disposing of in governmental organizations	
<b>2<sup>nd</sup> Section</b>	13-18	<u>New Biometric National ID</u>	
	13-17	focuses on the role of the new/ Biometric Iraqi National ID, unification aspects, contributed efficiency, speed rate, and accuracy of processes	
	17	focus on the key factors supporting positive impacts	
	18	focus on challenges facing negative impacts	
<b>3<sup>rd</sup> Section</b>	19-24	<u>The legal aspects of the new Biometric National ID as the foundations</u>	The aim is to investigate challenges and legal supports, to understand the legal framework and law amendment gaps and levels of the amendments in different organizations

<b>4<sup>th</sup> Section</b>	25-30	<u>The culture of e-Government and Innovation Aspects</u>	The aim is to investigate employees' reactions to the innovation and e-Government processes contributions
	25	focus on comparing Old NID Vis new/ Biometric NID process efficiencies	
	26-30	focuses on the infrastructure of ICT technologies/ e-Government requirements that support employees in these organizations	
<b>5<sup>th</sup> Section</b>	31-33	<u>The Technical Aspects – for Technical Employee in ICT</u>	to know the direct involvement, level of implementation speed of a particular organization
	31	Asking for the time/ year of starting this project	
	32-33	focuses on the role of the technical department in this project and understanding types of involvement in the data management cycle	

### Appendix (E) - Citizen Survey Questionnaire Mapping

Sec. #	Questions	About	Aim
<b>1<sup>st</sup> Section</b>	1-5	<u>General questions</u> - about the person like age, occupation sector, and marital status, as well as the name of National IDs in positions	
<b>2<sup>nd</sup> Section</b>	6-13	<u>New/ Biometric National ID</u>	
	6-9	Focuses on the process of obtaining the new/ biometric National ID, challenges, and period length	
	10-11	Focuses on unification aspects and challenges	
	12-13	Focuses on understanding the new ID from the citizens' prospect or impacts opinion.	
<b>3<sup>rd</sup> Section</b>	14-15	<u>Information Security</u>	The aim is to investigate citizens' opinions about information privacy and governmental organizations' trustworthiness

### Appendix (F) - Qualitative Approach - Questionnaire Mapping

Sec	Focusing	Goals	Question Area
1	OV	Background	To understand history, visions of the government from the perspective of (OV), planning, and motives
2	New Iraqi National ID Project	Infrastructure	Organizational Structure Legal support Human Resources and Training Technology Support - Software Technology Support -Hardware
		National Database	
		Biometric Scheme	
		Unification aspect	
		Security measures	
		Statistics	
		Challenges	Issues related Organizational Structure Issues related to Legal support Issues related Human Resources and Training Issues related to Technology Support- Software Issues related to Technology Support - Hardware
		Plans	Upcoming plans of government
3	Knowledge Management	Cycle/ Model	Model
		Partners	Network/ involving agencies
		Data sharing	Data sharing points and connections
		Challenges	Issues
4	E-gov.	Contributions to E-gov.	
5	Paperless Gov.	Contributions to Paperless Gov.	

## Appendix (G) – Interview SR

**Interviewer:** Shobo Najim Shali (SS)

**Interviewee:** The Head of the Passport Agency (SR)

**Date and Time:** Sunday 25/11/2021 at 10:35 AM

**Method of Interview:** Over the Phone interview

---

SS: *Good morning, Mr. Rasheed. Thank you for agreeing to this interview*

SR: *You are welcome.*

SS: *Can you please tell me a bit about your organization*

SR: *I work for the Nationality Directorate, which is centralized under the Ministry of Interior of the central government of Iraq. I mean the Iraqi government. This directorate has branches, or sub-directorates in every city, including Kurdistan Regional Government, cites. We provide four (4) significant services like Nationality ID, Passport, Residency ID, and Information Card ID, and I lead one of these services agencies.*

SS: *Do you mean the unified national ID (Bitaqā Al-Wataniya in Arabic and Karti Nishtimani in the Kurdish language) or the new ID when you say the “National ID”?*

SR: *Yes, exactly. We used to have Civil Status ID and Citizen ID previously. These combined into one card and called the National ID.*

SS: *The biometric one?*

SR: *Yes, the electronic one, which scans your fingers and eyes.*

SS: *Is it full biometric?*

SR: *I don't know about that, but it is an electronic*

SS: How does this system work? I mean, you must have a database somewhere with connections to branches or departments!

SR: *Yes, there is a national database located in Baghdad. All branches are connected to this national database.*

SS: What is your sub-directorate role in that? Do you have access to the whole or part of this database?

SR: *No, we only supply information or, let us say, data entry and coordinating issuance.*

SS: How is the process? How can a person apply for a national ID?

SR: *It is a simple process. You fill out the form and come to the agency with your previous IDs. Our officers will scan your ten (10) fingers, your face can, and your iris scan at the agency. They enter your complete address, telephone, family information in the system and give you the slip. Then you will be waiting for the text message on your phone with the date of retrieval.*

SS: Ok. Do you have full access to the national statistics like total participants and city total participants? Or the percentage of the population participating in that database?

SR: *We do keep our statistics. I mean what is being done in our branch but not total or the national statistics.*

SS: I checked the official website for statistics and realized no data available.

SR: ...

SS: Can you tell me a bit about data management. How is connected? On what level?

SR: *I lead passport services, my agency is fully connected, and we do have national-international database access to see data and enter new applications, and we have readers at the airports and borders. But I believe it is not the same with the Nationality directorate. Their reader machines are located only in specific branches.*

SS: So, this is supposed to be a digital recognition identification, and people no longer deal with paper copies. Is there an availability of reader machines in any ministry/is that process citizens enquires?

SR: *Not, as far as I know. Only at branches of National ID are they involved in the issuance applications or renewals.*

SS: It is a bit strange when you see a project of that magnitude implemented on a national level and still lacking basics like statistics and still not working or *performing the way it should be. Do you by any chance happen to know about the initiation process of this project or how it started?*

SR: I was not involved back then, but as far as I know, based on the new law amendment and the merger of both agencies, I mean the Civil Status ID and Citizen ID.

SS: This is what I mean by unified? Because we do hear people are calling it a unified ID card.

SR: *Yes, it is*

SS: So, not even the Information card data is included!

SR: *No, we still have the Information Card Agency that collects residential information. Nevertheless, people's addresses and telephones are also collected.*

SS: Based on your information, is it true that electronic data is gathered in the national database, but as far as citizens' enquire processes go, they depend on the paper base like previous IDs. For example, when I am going for any governmental agency and need to present my ID, it will be manually processed. The officer/s will look at my ID (no matter the new or old). I still have to make a paper copy, and they keep it in my file or send it to other agencies – exactly like before.

SR: *Yes, it is like that.*

SS: Where do you get instructions? KRG or Iraqi?

SR: *We work with Iraqi legislations in regards to all four (4) services*

SS: Do you think there is a legislation gap regarding this new or Digital ID?

SR: *Yes, we noticed some issues, but I work for the passport agency, as I mentioned. I don't know about the details.*

SS: I know that is a big issue because I was told that some processes, including ownership regulations, are not amended yet. So, you still have to show the previous IDs, and, I know the agency gives back old IDs now, which were confiscated when the directorate handed the new ID.

SR: *Yes, we did notice that.*

SS: Do you happen to know when this project should finish? I mean, the entire population should have this new National ID?

SR: *I believe the initiation aim was four years initially, but I am sure it will extend.*

SS: Thank you very much for your inputs. I appreciate it

SR: *No problem. I hope I was helpful to you.*

End of the Interview



## Appendix (H) - Interview AS

**Interviewer:** Shobo Najim Shali (SS)

**Interviewee:** (AS) Nationality ID Agency - Erbil

**Date and Time:** Wednesday 01/12/2021 at 03:50 PM

**Method of Interview:** Over the Phone interview

---

SS: Good morning, Mr. Kareem. Thank you for agreeing to this interview

AK: *You are welcome.*

SS: My name is Shobo Shali, and I study Knowledge management. I perform this interview to collect information for my research thesis about the Iraqi new ID or the National Identification ID. Would you please tell me a bit about your organization?

AK: *I am heading the Nationality ID agency in one branch of Erbil Nationality Directorate. We issue the new Nationality ID to people. It is a sub-directorate of the Iraqi Nationality Directorate under the Iraqi Ministry of Internal Affairs. But since we are located in the KRG, we have full coordination with both ministries. We provide four (4) significant services like Nationality ID, Passport, Residency ID, and Information Card ID.*

SS: How many offices available in total? At KRG area?

AK: *We have two (2) significant offices in the East and West of the city of Erbil and 28 smaller offices in surrounding towns. The total is thirty (30) in Erbil only. I believe it is about fifty (50) in KRG.*

SS: When did this project start? Do you have any idea when the new Iraqi National ID started accepting applications?

AK: *It started in 2016, and the Eastern branch in Erbil was the first office to open its door to take applications from the citizen.*

SS: You mean the first branch office for the city or entire Iraq?

AK: *For Iraq.*

SS: Was there a deadline for completion?

AK: *I believe in the beginning there was, but due to the ISIS war, the implementations took more time. Believe it or not! Just recently, the town of Shwan opened its doors to receive applications from people. So it is an ongoing process, and it will not end soon.*

SS: Is it correct to call it a biometric ID?

AK: *People commonly call it a "National ID," if you call it a "biometric,"; they might get confused with the biometric governmental employee ID.*

SS: It is still biometric since biometric signs are taken from people like fingerprints, facial photos, and iris scans. Precisely like the Voting ID. But is it correct to call it fully biometric?

AK: *It is readable by reader machines. It has a sim, which makes it readable. That is how it will be recognized for legitimacy. We did not have that feature in the previous ID cards.*

SS: So, all branches connected to the National Database, are you able to access the database information?

AK: *We can do the data entry and see some basic information about any ID. For example, if I enter the serial number or a code of your card, I can see where it has been issued, which means where your file is located but not complete information. You have to go to the same branch that gave your ID for complete details.*

SS: So, can you make changes?

AK: *We send changes to the central office, which manages the database.*

SS: Do you physically make the National ID cards?

AK: *No, we only do data entry and coordination; the physical cards are made in Bagdad.*

SS: How about connecting? I mean branches.

AK: *As I mentioned, I can only see what the system allows me to do.*

SS: How about with other governmental agencies? Can any department or ministry have access to or read these new national IDs?

AK: *This is one of the issues. Only two (2) directorates own reader machines.*

SS: What is the problem? Why are readers not available?

AK: *It costs too much because the organization should buy them. The economic situation is not affordable. The central government is not supplying it.*

SS: So, this project is the minimum use, even for sharing knowledge. It is electronic, but you can't connect.

AK: *We only have control over our part.*

SS: I was hoping to see the statistics. Do you have full access to the national statistics like total participants and city total participants? Or the percentage of the population participating in that database?

AK: *We keep our statistics, and I can ask other office managers to send me theirs within the city. But it is hard to collect all.*

SS: What do you mean the unified national ID (Bitaqā Al-Wataniya in Arabic and Karti Nishtimani in the Kurdish language) or the new ID when you say the "National ID"?

AK: *Yes, exactly. We used to have Civil Status ID and Citizen ID previously. These combined into one card and called the National ID.*

SS: When I think of unification, I think of multiple-use in one system. For example, in the US, Social Security is the state's number, which you don't show at all. Still, it is connected to the driving license, so the primary National ID is the driving license and holds your information. Is there any intention to merge any other cards with this system?

AK: *Nothing except for the Information card.*

SS: What about the Information card? Why is it not included if it is for the residential status only!

AK: *It has been mentioned to include this agency from the beginning, and this card's information is available in the National ID system. All they need is to add the number and connect. But I guess it will take more time and effort. It was supposed to be a graduate process, but it is not difficult.*

SS: Have you experienced any legislation issues? I heard about some legislation gaps like property registrations laws that have not been amended yet. Are there more issues similar to this?

AK: *There are no issues like these anymore. This new ID is official and officially replaces The Civil Status and Citizenship IDs. The main problem for people will be not having a new ID. Because when they go to register a property, they will be asked to bring the National ID not the earlier IDs. We used to get lots of enquiries from property registration department regarding legitimacy of IDs in the past. However now, it is a minimal due to owning a reader and they are able to check the ID for fraud. The only request we get from them is when the reader cannot read the card due to scratches or breakages.*

SS: So, do you think this card made any improvements in the total performances of governmental agencies?

AK: *Yes, of course. People can carry one plastic card instead of two significant IDs. And information is accurate, readable, and error-free.*

SS: How about other benefits like paperless systems? It is not supposed to help with that aspect since it is electronic. If I have any enquire at any agency, I still have to give a paper copy of my new card instead of the old one, so the paper system has not changed in that matter.

AK: *Not yet. That part is linked to the reading machines and complete system connections.*

SS: Thank you very much for your time. I appreciate it

AK: *You are welcome.*

End of the Interview

## Appendix (I) - Interview SH

**Interviewer:** Shobo Najim Shali (SS)

**Interviewee:** (SH) The Head of Nationality ID - Sulaimani

**Date and Time:** Wednesday 03/12/2021 at 09:15 PM

**Method of Interview:** Over the Phone interview

---

SS: Good evening, Mr. Sherko. Thank you for agreeing to this interview

SH: *You are welcome.*

SS: My name is Shobo Shali, and I study Knowledge management. I perform this interview to collect information for my research thesis about the Iraqi new ID or the National Identification ID. Would you mind telling me a bit about your organization?

SH: *I am heading the Nationality ID agency in one branch of the Erbil Nationality Directorate. We issue the new Nationality ID to people. It is a sub-directorate of the Iraqi Nationality Directorate under the Iraqi Ministry of Internal Affairs.*

SS: How many offices are available in Sulaimani?

SH: *We have thirty (31) offices in Sulaimani and surrounding towns.*

SS: When did this project start?

SH: *The background of this project goes back to 1982-1983 when the earlier Iraqi government planned to modernize nationality identification, but every discussion faced heard reactions from earlier leadership at that time. So, the project was put on the shelf until after the regime's fall and the new era. In 2014 this bill was submitted to the new Iraqi Parliament and voted on in 2016. The first office was established in Sulaimani in 2015 and started to accept applications in 2016.*

SS: What was the procedure of establishment?

SH: *We had multiple pieces of training abroad and inside Iraq. I was one of the first officers involved in this project. Later on, we had started training others.*

SS: May I know how many biometric features are included in this system.

SH: *10 fingers and iris as well as the facial photo.*

SS: My main interest is knowledge sharing. How is this done in this system? Obviously, all branches connected to the National Database, are you able to access the database information?

SH: *We can do full data entry and see some basic information about other locations' accounts if I check by the ID number. I can see where it was issued, which means the office of the file issuance but not complete information. But we have continuous access to request details from the central database. I mean the main National Database in Baghdad. Full licensing control is there; we only have access to our locations.*

SS: What do you mean by the unified national ID?

SH: *It means the collection of Civil Status ID with Citizenship ID in one card, which is called (Bitaqa Al-Wataniya in Arabic and Karti Nishtimani in the Kurdish language). However, we have accumulated more information than these two identifications hold. Therefore, we have also added The Information Card's details on the top of biometric signs.*

SS: Then, isn't it logical to include the Information Card as well? I was informed that this was a plan from the beginning.

SH: *The beginning plan was to include Information Card and Food Card, but it seems the plan was changed. As far as the Information Card is concerned, it is more realistic to keep because you have to renew it every time you change your address.*

SS: Do you practically involved with the National ID card process?

SH: *No, we only do data entry and coordination; the physical cards are made in Bagdad. But there is a project presented to establish a few locations in the governorates for printing actual identification cards instead of waiting a long time to be printed in Baghdad and coming back to us and delivered to citizens.*

SS: I was hoping to see the statistics. Do you have full access to the national statistics like total participants and city total participants? Or the percentage of the population participating in that database?

SH: *We have our statistics, and I can ask other office managers to send me theirs within the city. To obtain complete statistics, you have to be at the central location of the database.*

SS: Can any department or ministry have access to or read these new national IDs?

SH: *No. KRG governorates received only thirty-two (32) readers from the directorate. Our allowances were seven (7) readers in the city of Sulaimani. We distributed them to the governmental agencies that work as service providers like Police, Property Registration, the Court, and the Municipality Directorates. They need to check for people's IDs to make sure they are legitimate before accepting any inquiries. I trained two (2) employees from each directorate on the use, updating them every three (3) months.*

SS: How about the rest of the governmental agencies? Why are readers not available?

SH: *There is a plan for another shipment with more readers. We will get more. At that time, we can supply more agencies based on their needs.*

SS: Can you tell me about your method/s of communication with other governmental agencies?

SH: *We communicate with our database center electronically and classical way with all other agencies*

SS: Do you mean even with Passport agency, which is another branch of your directorate?

SH: *Yes*

SS: Do other branches of the Nationality directorate have any access to your national database?

SH: *No, the passport agency has its database. Not connected to ours.*

SS: Is there any branches of government in the KRG region that owns any electronic system to provide services to citizen electronically?

SH: *There are small networks for specific agencies, like the court in the Sulaimani governorate, police and property registration, and car registration. They have some online services but are not complete.*

SS: How can this project help the e-government establishment and paperless government?

SH: *This is an excellent e-government project but, unfortunately, has not been as effective as it is supposed to be. The issue is not about the availability of reader machines only, but the lack of technology-based processes. Our administrations are still running in a classical paper system. This is why submitting a paper copy even after checking the ID by a reader to be attached with your inquiry.*

SS: Have you seen or faced any challenges in this process?

SH: *The system has no significant issues, plus we have good coordination with the technical team at the Database Center. We inform them of problems, and we update them every three months. But we face some issues when someone's biological signs cannot be scanned, like diabetic patients' irises and people working with their fingers.*

SS: So, how do you solve these issues?

SH: *We take what we can get and make notes in their accounts about the issue. The reason will show in the database any time it is viewed.*

SS: How is the security measures for this ID? Have you noticed any issues in this regard?

SH: *The card by itself is fully secured and has multiple layers of plastic with an embedded sim. It is not possible to read unless you scan it with a reader. It cannot be duplicated or imitated because the reader will not read them. I have seen several false ones; they look awful and recognizable from a distance. And the system is also fully secured too. It will detect duplication directly. We had some cases where people tried to register in two different locations, the system detected it right away, and now they face fraud charges.*

SS: Thank you very much for your time. I appreciate it

SH: *You are welcome.*

End of the Interview



### Appendix (J) - One on One Interview Results

	<b>Focusing sections</b>	<b>Goals</b>	<b>Question Area</b>	<b>Results Findings</b>
1	OV	Background	To understand history, visions of the government from the prospective of (OV), planning, and motives	The project of modernization and digitization goes back to Mid 80s but the political situation in Iraq was a barrier. In 2003 both agencies merged to form Nationality Directorate under Ministry of Internal Affairs
2	New Iraqi National ID Project	Infrastructure	Organizational Structure	The Nationality Directorate has three (6) Major sub-directorates and ten (10) functional departments. This directorate has multiple offices in the capital city of Baghdad and other governorates; the number varies depending on the population and the size of the governorates.
			Legal support	Law number (3) – Year 2016 the Nationality Identification Card.
			Human Resources and Training	Full human support and trainings
			Technology Support - Software	Availability of the software support with limitations
			Technology Support - Hardware	Availability of the hardware support with limitations
		National Database		One national database located in the capital Baghdad, not known backups
		Biometric Scheme		Ten fingers, iris, and facial photo

		Unification aspect		Only unification of Citizenship booklet and Civil Status Cards
		Security measures		Fully secured: Not possible to imitate and reader machines cannot read any card that not registered in its database.
		Statistics		No statistic available on full level. Each governorate can only see its own records.
		Challenges	Issues related Organizational Structure	No issues related Organizational Structure
			Issues related Legal support	No major issues, progress in the sub legislations amendments
			Issues related Human Resources and Training	No issues related Human Resources and Training
			Issues related Technology Support- Software	KRG offices access limited on the data entry and viewing of its own location data in the system. No access to the national records nor editing license at any level.
			Issues related Technology Support - Hardware	Lack of reader machines
		Future plans	Upcoming plans of government	Adding another ID to the system (Information Card), and the arrival of the reader machines
3	Knowledge Management	Cycle/ Model	Model	Entirely controlled by the main office and data is fully centralized in one location. Knowledge management life cycle starts with branching offices where data entry performed but beyond that point, everything is

				controlled by the main office of the database.
		Partners	Network/ involving agencies	At this point partners are departments of Citizenship and Civil Status only, passport and Information departments are with in the directorate but not connected to the national database.
		Data sharing	Data sharing points and connections	(Closed network) Only through reader machines to check authentication of the ID with limited information reveals. No electronic connections to any other agencies.
		Challenges	Issues	Limitations and lack of efficiency to use by all governmental agencies.
4	E-gov.	Contributions to E-gov.		Contributions to the e-government is at the beginning steps. Like on the level of building an infrastructure and internal processes
5	Paperless Gov.	Contributions to Paperless Gov.		Not available for external or available at a minimal level of internal only.

### Appendix (M) Web-search Results

The researcher visited the directorate of Nationality Card Affairs website <http://iraqinationality.gov.iq/index.php> and found the following points:

	<b>Aspects</b>	<b>Availability</b>	<b>Short coming</b>
1	<b>Design and Appearances</b>		People driven, not projects and services
			More photos and graphics than contents
2	<b>Structure</b>		Many un-functional buttons
			Re-directions to the same content
			Unstructured listing as Sub-directorates and services are listed together
			Repeated headlines
3	<b>Contact</b>		Missing telephone contact
			No links to any other governmental organizations including the Ministry of Internal Affairs
		Email available and answered - tested	
4	<b>Language covering</b>		Kurdish and English are not available
5	<b>Information Content &amp; Details</b>		Project details missing
			Financial reports are missing

			Private party involvements, national or international companies....etc.
			Not much of content updates, most of news are very old
			News mostly about people not organizations
			Progressing statistics about participation & locations
		Availability of full video regarding the registration process	
		Availability of the application form	
		Good overview of the Iraqi history of National ID	
		The presence of main laws	
6	<b>Evaluation by people</b>	The presence of a polling option for rating the directorship	