# EVALUATION OF INTEGRATION AND INTEROPERABILITY OPPORTUNITIES OF E-GOVERNMENT PROJECTS CONCERNING SOCIAL WORK PRACTICE: AN ACTION RESEARCH INTO MINISTRY OF FAMILY AND SOCIAL POLICIES

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## PLAGIARISM

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## ABSTRACT

### EVALUATION OF INTEGRATION AND INTEROPERABILITY OPPORTUNITIES OF E-GOVERNMENT PROJECTS CONCERNING SOCIAL WORK PRACTICE: AN ACTION RESEARCH INTO MINISTRY OF FAMILY AND SOCIAL POLICIES

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There are many Institutions and Ministries working on social welfare directly or indirectly, aiming to provide better life conditions for all citizens in Turkey. Although the center of the social policies is the Ministry of Family And Social Policies, the Ministry needs to work in cooperation with other government institutions and voluntary organizations in order to fulfill the tasks given. An effective way of coordinating the services provided by diversity of institutions is using integration opportunities presented by information technologies. Almost every institution uses E-Government systems that are convenient means of integrations, for managing and organizing their business and E-Government Gateway for serving citizens. It is regarded as a straightforward process to integrate/communicate systems. But, in practice, beyond and besides the technical aspect, there exists difficulties about implementing the official prerequisites and to "understand" and convert the information of each other due to internally complex and unfamiliar organizational business rules. Aim of this research is to expose the key points and the problems of interagency information-sharing and integrations in social service welfare besides the benefits, from the perspective of MoFSP members.



Keywords: Integration, Interagency Information-Sharing, E-Government, E-Government Gateway, Social Policy

# ÖZET

## SOSYAL POLİTİKALAR ALANINDAKİ E-DEVLET PROJELERİNİN ENTEGRASYON VE BİRLİKTE ÇALIŞILABİLİRLİK YÖNÜNDEN DEĞERLENDİRİLMESİ: AİLE VE SOSYAL POLİTİKALAR BAKANLIĞI ÖRNEĞİ

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Türkiye'de, vatandaşların sosyal refahının artırılması amacıyla, sosyal politikalar alanında doğrudan veya dolaylı olarak hizmet veren bir çok kurum ve kuruluş bulunmaktadır. Aile ve Sosyal Politikalar Bakanlığı, konumu itibariyle ülkemizde sosyal politikaların merkezinde bulunmakla birlikte, verilen görevleri etkin bir şekilde yerine getirebilmek için sosyal alanla bağlantılı olarak hizmet veren diğer kamu kurum ve kuruluşları ve sivil toplum kuruluşları ile işbirliği içerinde çalışmak durumundadır. Bir biri ile bağlantılı alanlarda hizmet veren kuruluşlar arasında koordinasyonu sağlamanın etkin yollarından birisi de gelişen bilgi teknolojileri tarafından sunulan entegrasyon imkanlarıdır. Neredeyse bütün kamu kurum ve kuruluşları iş süreçlerinin yönetimini, entegrasyonlar için en uygun araçlar olan E-Devlet projeleri üzerinden yürütmekte, E-Devlet Kapısı üzerinden hizmetler sunmaktadır. Genellikle sistemler arası bilgi paylaşımı ve entegrasyonlar basit ve hızlı bir şekilde yürütülebilecek süreçler olarak görülmekte, fakat gerçekte ise, teknik sorunlar, idari süreçler ve kurumların birbirinin verisini anlamlandırarak kullanabileceği formata dönüştürebilmesi sancılı bir sürece dönüşebilmektedir. Bu araştırmanın amacı Bakanlık personellerinin perspektifinden sosyal politikalar alanında yapılan veri paylaşımları ve entegrasyonların faydaları ile birlikte zorluklarını ve başarıya ulaşmada anahtar noktaları ortaya koymaktır.



Anahtar Kelimeler: Entegrasyon, Kurumlar Arası Veri Paylaşımı, E-Devlet, E-Devlet Kapısı, Sosyal Politika

**To**

**My Devoted and Beloved Wife Öznur,**

**My Children Fatma Zehra, Ali Berat, Zeynep Ela,**

**My Parents Zehra / Mahmut Çetin**

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## LIST OF ABBREVIATIONS

ASDEP: Family Social Support Program (Aile Destek Programı)

CMMI: Capability Maturity Model Integration

DGCS: Directorate General Children Services (Çocuk Hizmetleri Genel Müdürlüğü)

DGDO: Directorate General Disabled and Old-Aged (Engelli ve Yaşlı Hizmetleri Genel Müdürlüğü)

DGF: Directorate General Foundation(Vakıflar Genel Müdürlüğü)

DGFSS: Directorate General Family and Society Services (Aile eve Toplum Hizmetleri Genel Müdürlüğü)

DGS: Directorate General Security (Emniyet Genel Müdürlüğü)

DGSA: Directorate General Social Assistance (Sosyal Yardımlar Genel Müdürlüğü)

DGSAS: Directorate General Social Assistance and Solidarity (Sosyal Yardımlaşma ve Dayanışma Genel Müdürlüğü)

DGSW: Directorate General Statue of Women (Kadının Statüsü Genel Müdürlüğü)

EKAP: Electronic Government Procurement Program

FIS: Family Information System

FTP: File Transfer Protocol

G2B: Government to Business

G2C: Government to Citizen

G2E: Government to Employee

G2G: Government to Government

G2N: Government to Nonprofit

| | |
|---|---|
| GPI: | Government Planning Institution |
| HTML: | Hyper Text Markup Language |
| ICS: | Integrated Children's System |
| IDE: | Integrated Development Environment |
| ISO: | International Organization for Standardization |
| ILO: | International Labor Organization |
| IP: | Internet Protocol |
| ICT: | Information Communication Technologies |
| IT: | Information Technologies |
| KPS: | Identity Sharing System (Kimlik Paylaşım Sistemi) |
| MERNIS: | Central Population Management Information System |
| MIS: | Management Information System |
| MoD: | Ministry of Development |
| MoFSP: | Ministry of Family and Social Policies (Aile ve Sosyal Politikalar Bakanlığı) |
| MoFLSS: | Ministry of Family, Labor and Social Services (Aile, Çalışma ve Sosyal Hizmetler Bakanlığı) |
| MoTMaC: | Ministry of Transport Maritime Affairs and Communication |
| NJNP: | National Judgment Network Project |
| NOSEGAY: | National System for the Integration of Judicial and Public Security Information (Brazil) |
| OECD: | Organization for Economic Co-operation and Development |
| RENACH: | National Register of Driving Licenses (Brazil) |
| RENAVAM: | National Register of Automobiles (Brazil) |
| RFC: | Remote Function Call |

SAIS: Integrated Social Assistance Information System (Bütünleşik Sosyal Yardımlar Bilgi Sistemi)

SASF: Social Assistance and Solidarity Foundation (Sosyal Yardımlaşma ve Dayanışma Vakfı)

SINARM: Arms Registry System

SOYBIS: Social Assistance Inquiry System (Sosyal Yardım Sorgulama Sistemi)

SSCPA: Social Services and Child Protection Agency (Sosyal Hizmetler ve Çocuk Esirgeme Kurumu)

SSI: Social Security Institution (Sosyal Güvenlik Kurumu)

SMTP: Simple Mail Transfer Protocol

SPICE: Software Process Improvement and Capability Determination

TAKBIS: Land Registry and Cadastral Information System (Tapu Kadastro Bilgi Sistemi)

TCP: Transmission Control Protocol

TÜBİTAK: Turkey Science and Technology Research Institution

UC: Universal Credit

UN: United Nations

UNDP: United Nations Development Program

UK: United Kingdom

VEDOP: Tax Offices Automation Program

VPN: Virtual Private Network

W3C: World Wide Web Consortium

WoG: Whole of Government

WSDL: Web Service Definiton Language

XML: Extensible Markup Language

# PART-1

## 1. INTRODUCTION

As the world is constantly changing, information and communication technologies (ICT/IT) are also thriving and transforming all aspects of societies including the way of making business, governing the states and countries. Especially, the advent of the internet has resulted in radical transformation of the business world and also government services. Old style bureaucracy which heavily depends on paper work, physical locations that represent the government and civil servants having a demure manner is changing with automation of processes, online service presentation including application for services, checking the status of applications, payment of taxes and diversity of bills and so on.

Basic purposes of all countries worldwide are commonly expressed as transparency of government, time and cost efficiency at official processes, prevention of abusing by providing information integrity between institutions, high availability of government services both in terms of time and location. Institutions working on the same or related areas have begun to share their information with each other using information technologies rather than official writings and they are struggling to do more.

As information technologies have been developing over decades, concept of E-Government, as a way of utilizing information technologies for providing diversity of government services has become a hot topic which is currently being argued and its importance is emphasized in many platforms. According to the Shahkooh, et. al. (2009)

> Technological revolution has also been enabling the introduction of new services, better and faster delivery of existing ones and provides cheaper and more effective communications between different parties. Nearly all

> developed nations regard developing E-Government as a key strategy for ensuring their success in the 21st century, and are rapidly implementing major initiatives in this area. (p.54)

Implementation and presentation of the social services has also been influenced from this revolutionary change like other government services. Although there are some important and successful E-Government projects managed by government institutions in Turkey, it is hard to say that there is a thorough coordination between the projects both technically and officially. This has resulted in inefficiency about government investments. Systems developed in order to maintain the services produced by the government should not only support sharing information within the institution but also support inter-institutional sharing of information is vital. Yıldız and Polat (2012) regards as a problem that, projects related to government considered as completely separated projects and underestimated the possible integrations with other central government projects and local government project. E-Government projects developed by any government institution should be able to share information or interoperate with other E-Government applications such as MERNIS, TAKBIS and VEDOP. It is also stated by the Ministry of Development [MoD] (2013) in the *10th Five Year Development Plan* that, it is required and planned to develop mechanisms to provide interoperability between government institutions, determine common approaches and standards for consistent, integrated E-Government services. For this purpose, Interoperability Principals Guide has been prepared and published by State Planning Institution at 2009, and revised in 2012 for the purpose of standardizing and facilitating the integrations and information sharing between government institutions both from technical and organizational perspective.

In the *National E-Government Strategy and Action Plan* prepared by the Ministry of Transport Maritime Affairs and Communication [MoTMaC] (2016), it is strongly stated that there exists an urgent need for integration of information systems between the government institutions working on social area. Thereafter, integration of institutions with each other is required for supplementary social welfare. Social Security Institution had been suffering from integration of three different sub-institutions; Social Insurance Institution, Credit Union of Retirement, Institution of Social Insurances and Occupational

Pension Fund. Social Security Institution is still far away from having an integrated information system which also results in problems when sharing information with other government institutions. Similarly, general directorates within Ministry of Health own their information systems such as Public Health Information System, Central Hospital Appointment System, Hospital Management Information System and Family Doctor Management Information System that should be integrated with each other. In the report, as another problem, it is said that there is not a centralized database which contains all data about the disabled citizens although it is being worked by Directorate General Disabled and Old-Aged since 2008 via integrating the different data sources of disability reports.

Ministry of Family and Social Policies (Combined with Ministry of Labor in 2018 and reorganized as Ministry of Family, Labor and Social Services(MoFLSS)) is also a relatively new institution established in 2011, as a compilation of institutions concerning social affairs and still suffering from integration and reconstruction of the information systems. During this period, it is important to be aware of interoperability and integration with other institutions both as governmental, local authorities and voluntary organizations. It is stated by Çetinkaya (2012) that "there exists a database about social assistance area including poverty, illnesses and oldness and these data must be classified and reformed for provisioning the change of the states"(p.209).

It is not planned to have one comprehensive system to take care all social cases for Turkey. But, there are still much to do about rationalizing and integrating current information systems of government institutions concerning social issues from different perspectives such as social security, health, employment, social services, social assistance and so far. Ministry of Family and Social Policies founded in 2011 and is positioned at the center of social policies by consolidating institutions related to social issues. Many information systems have also been consolidated, including efficient and currently active ones such as Integrated Social Assistance Information System (SAIS) and problematic ones such as Management Information System (YBS). It is stated by Koç (2011, as cited in United Nations [UN], 2016) that:

> The level of integration SAIS has achieved goes beyond what has been achieved in many other countries. SAIS integrates 16 public institutions via web service and incorporates information from 1001 local social assistance offices. All social assistance processes ranging from applications to payments can be carried out in an electronic platform. Institutional arrangements for data sharing among government institutions are important for effective integration (p.10).

It is also noted by UN (2016) that, "in poverty eradication, there are notable cases where service integration has resulted in a proven track record of improved rural livelihoods" (p.10). In the area of the social services, MoFLSS has aimed to replace the legacy Management Information System (MIS/YBS) with a new "'Family Information System' (FIS). Integration opportunities with other ministries and institutions are one of the hot topics that almost every participant of the project expects to be included in the project plan. But, providing services in electronic environment and interagency information-sharing poses some barriers and difficulties to be focused and overcome which require meticulous cooperation of counterpart institutions.

### 1.1 Research Problem

MoFLSS and some of its preceding General Directorates have been experiencing and working on interagency information-sharing and integrations for last decade, especially in the area of the social assistance. In general, benefits are well known and can be understood almost intuitionally. Bureaucracy is declined, coordination and efficiency is raised and duplicity is prevented in social aids. Moreover transparency and accountability can be provided in a more consistent way with the help of integrated information systems. Social service area of the MoFLSS is expected to benefit from experiences provided by SAIS and SOYBIS projects about the interagency information-sharing and integrations. There are many implicit difficulties and key points of the interagency information-sharing. It is not always an easy and straightforward process to combine the information of two or more different government organizations and work the mechanism of organizational interoperability. Official processes and prerequisites may take more time than it should be. Technical infrastructure incompatibilities, lack of qualified personnel and also coordination problems result in latencies and failures in integration processes.

This research aims to expose the key points about the benefits and difficulties of the integrations conducted within the MoFLSS in the area of the social services and social aids. Of course all these integration and interagency information-sharing efforts are also subject of the E-Government concept and E-Government Gateway. Ministry's approach to the E-Government Gateway (G2C, G2G services, Whole-of-Government) is also going to be investigated during the research.

As this research uses the action research methodology, Researcher himself, as an employee of the IT Department of the MoFLSS is going to reflect his own ten year interagency information-sharing experience and try to contribute to the integration processes both officially and technically during the research.

### 1.2 Purpose of the Research and Research Questions

Main purpose of this research is investigating the interagency information-sharing and integration processes of the MoFLSS with other government institutions over IcT systems, in the area of the social services and social assistance. Steps of the integration processes such as official and managerial prerequisites, technical problems, interoperability in terms of both technical and organizational issues, E-Government concept and the role of the E-Government Gateway infrastructure are going to be argued in detail. Although there are some good examples yet already of such integrations that provide vision for incoming projects and integrations, many problems have been encountered during integration and information sharing processes. Purpose of this research is to contribute for enhancing and improving the integration and interagency information processes of the MoFLSS in the area of the social services and social aids by exposing the difficulties, benefits and role of the E-Government Gateway. In this context, the current and planned integrations and IT projects of MoFLSS are going to be focused as real life examples.

Research questions are:

1. What are the remarkable integrations of the MoFLSS in the area of the social services and social assistance with other government institutions? What are the expected

and acquired benefits from those integrations?

2. What are the difficulties and the problems of the interagency information-sharing and integrations with other government institutions in the area of the social services and social assistance?

3. What is the role of the E-Government Gateway about interagency information-sharing and presentation of Whole-Of–Government services in the area of the social services and social assistance?

### 1.3 Importance of the Research

In the context of the literature review, it has been noted that there exists a master thesis published by the Öngen in 2014 evaluating the information systems of the Ministry of Family and Social Policies. Although it is a good and detailed research, there is not detailed information about the integrations provided by the information systems of the Ministry. One of the important results of this research states that information systems being developed in the area of the social services should support the collaboration of all related institutions working on the social cases via information sharing and notification mechanisms. But the difficulties of these integrations and benefits are not examined in detail within Öngen's research (ibid). Another thesis published by Gövsa in 2008, concerns the technical and organisational interoperability and its usage in E-Government services by focusing on core web service technologies and their standardization works upon E-Government services. Gövsa's research focuses on technical level, but does not concern the organisational and technological difficulties in detail. In the area of the social aids, importance and necessity of interagency information-sharing has been stressed by Çetinkaya in his doctorate thesis published in 2012. But again there is not detailed information about the integrations and difficulties except the attribution to the information sharing via SOYBIS project. Additionally, many of the government official documents such as National E-Government Strategy, 5 and 10 Year Development Plans, state that there is an urgent need for integration of the E-Government projects of a diversity of government institutions working on related areas. Social policy is stated as one the most important area in which collaboration and interagency information-sharing is vital. In the

international area, Climbie case (abuse and death of Victoria Climbie due to lack of coordination and information sharing) is also one of the most notable events triggered the importance of the collaboration and information sharing. But mostly professional barriers and other factors are investigated and emphasized in literature.

This research aims to fill the gap told above by examining the integrations of the MoFLSS, factors affecting the success and benefits in relation with E-Government concept and E-Government Gateway by providing live and real examples experienced in the area of the social services and social aids.

### 1.4 Limitations of the Research

This thesis concerns mainly the benefits and the problems about the interoperability and integration, interagency information-sharing issues of the MoFLSS with other government institutions in relation with E-Government concept. At the time this research has been initiated, the Ministry was “Ministry of Family and Social Policies”. In 2018 summer, “Ministry of Family and Social Policies” and “Ministry of Labour and Social Security” has been consolidated and unified as “Ministry of Family, Labour and Social Services”. Context of this research is limited to the social services and social aids related processes that are inherited from “Ministry of Family and Social Policies”. All research activities such as observation, reflection of experience and interviews are planned to cover the central organisational units of the Ministry, but not provincial/rural units. Another limitation of this research about the interviews planned to be conducted is that, integration and interagency information is a multidisciplinary process. It contains social/business, official and also technical aspects such as network connections, requirement analysis and software development. Because of that, answers of the interviewees to each question are not expected to reflect the same perspective.

**PART-2**

# 2. CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW

In this section, conceptual framework of the subject is focused, and literature review is implemented. In this context, E-Government and interoperability, main social policy branches, MoFLSS and its information systems concerning social assistance and social services, importance of the interagency information-sharing in general in the area of the social policies are investigated in detail.

## 2.1 E-Government Concept, Benefits and Trends

There are many different definitions of the E-Government shaped by the view point of the authors. In general E-Government refers to use of technology by governments at internal processes of the state, in addition to the web-based internet applications to enhance the access to and delivery of government information and services to citizens, business partners, employees, other agencies and entities. Also Sprecher (2000, as cited in Shahkooh, Abdollahi, Fasanghari, and Azadnia, 2009) defines E-Government as "any way of technology that is being used to help, simplify and automate transactions between government and constituents, businesses, or other governments" (p.545). By using the information technologies, it is aimed to increase the efficiency of services provided by state to citizens, other institutions of government, employees and private sector organizations. Organization for Economic Co-operation and Development [OECD] (2003) defines the E-Government as use of the information communication technologies,

especially the internet, in order to reach the purpose of better governance. According to the Şataf, Çiçek, and Dikmen (2014), there exist many other definitions of the E-Government; but the focal point of all definitions is that all processes executed by the government are transformed in electronic environment that are formerly performed traditionally. Similarly, Delibaş and Akgül (2010) exposes the benefits such that "E-Government applications provide advance at accountability and transparency, rise in tax revenues, more democratic environment besides the declining the corruption, misuse of the authority" (p.106). Although the expectations of countries and citizens from E-Government applications vary, they can be summarized as such that by Kösecik & Karkın (2004, as cited in Çukurçayır & Çelebi, 2009) as:

- Transforming public services prevalent and accessible
- Paving the way for participatory citizenship by appreciating the demand of the citizens at management and service process
- Increasing efficiency and rationality of government institutions
- Implementing the coordination between government institutions and citizens
- Provide saving cost, time, and workforce at presentation of public services
- Strengthen the legitimacy of the state in the eye of the citizens by improving transparency and confidentiality
- Removing the time and location restrictions at the accessibility of public services.(p.66)

Generally, private sector leads the technology, new trends and the concepts and pioneers to the governments. Naralan(2008) states that:

> Governments are inspired by the success stories of commercial corporations that carried their business on the internet and increase their profits, so they decided to provide services for citizens over internet. Saving and accessing information quickly was the first motivation for using IT and then evolved towards providing access to the information from remote locations under restriction of some technical organizational rules. Use of IT for providing government services which usually named as E-Government became widespread all over the world due to efficiency, agility, saving of both money and time, transparency. From now on, government institutions

> regard citizens as customers to be satisfied and focus on Citizen Oriented Services. (p.3)

As the scope of E-Government capabilities has grown and the concept has evolved over years, the definition of E-Government has evolved with it. According to the Jackson & Curthoys (2001) and Löfstedt (2007), (as cited in Wade & Gerald, 2010) E-Government is no longer viewed as the simple provision of information or services via the internet, but, as a way of transforming how citizens interact with government and how government interacts with itself.

### 2.1.1 Phases of E-Government Development

Generally, governments experience four phases on the way of implementing E-Government applications (2005, Lee, Sang & Silvna, as cited in Naralan, 2008)

- Listing Phase: Developing and publishing online simple web sites containing basic information about services , let visitors downloading some application and registration forms
- Online Operations: Providing interactive operations via online forms that can be filled by visitors for specific services
- Vertical Integration: Connecting local and central systems; providing commonly useable functions for similar operations
- Horizontal Integration: Providing a single entry point for all operations of all government institutions

Similarly, a four phased classification is proposed by Delibaş & Akgül (2010) in which phases can be listed as;

- Information: Web site of the institution has only informative content and users have read-only access
- Interaction: There is a basic interaction between government and citizens including downloading forms, using search engine and asking

questions via portal and e-mail 7/24.(Şahin, 2008 as cited in Delibaş & Akgül, 2010)

- Operation: In this level, interaction has been augmented and let the citizen doing online operations such as tax payment, visa and passport operations and applying government auctions.(Uçkan, 2003 as cited in Delibaş & Akgül, 2010)
- Transformation: In this phase, diversity of information systems is integrated and citizens can access to government-to-citizen and government –to- business services from single address.

Differing from the former, the latter classification combines vertical integration and horizontal integration phases in the "transformation phase" which defines a single central portal serving on a government network backbone. In turn, 'interaction' and 'operation' phases of the classification made by Delibaş & Akgül are combined in 'online operations' phase of the first classification.

Similarly, the third stage of the model suggested by the Layne & Lee (2001, as cited in Yıldız, 2007) is the integration of government operations within same functional areas in government. Agencies working in the same functional area such as FBI, CIA, and the NSA integrate their online operations. Similarly, Ebrahim et al. (2003, as cited in Heeks, 2006), proposes a four-stage model in which third stage of model emphasizes integration: Back-office processes are altered to allow either vertical integration of different levels of government, or horizontal integration that brings together related functions/services. (p.48)

It is clear that, in various models of E-Government development, integration is generally considered as an important stage.

### 2.1.2 Critical Success Factors for E-Government

One of the critical factors of a successful E-Government initiative is changing organizational structure and processes considering information flow. It is stated by Al-Hatmi & Hales(2009) that most challenges that many public sectors face are a legacy of

rigid bureaucracy, established illogical routine tasks, time- consuming, lack of harmonizing integration and lack of coordination of different information systems. These problems have been found in IT Governance implementation in many countries. Turkey is not an exception; many government office processes still depend on heavy document flow based rather than just 'information flow' over IT systems.

In the list of 'Critical Program Management Issues', it is stated that it must be ensured that internal government structure and processes are redesigned to account for job and information flow changes (Becker et al 2004; Bhatnagar, 2002, as cited in Wade & Gerald, 2010). Ke & Wei also states that E-Government programs require changing the behaviors of both customers and civil servants involved, as well as changing the processes and structure of government. In Singapore, this required agencies and departments who had never done so before, to share information and work together (2004, as cited in Wade & Gerald, 2010).

Another critical aspect of success in the public sector environment is coordinating federal, provincial/state, and local E-Government programs (Jaeger & Thompson, 2003, as cited in Wade & Gerald, 2010). For the cases of US and Canada, importance of early planning is stated by Wade & Gerald (2010) such that:

> With respect to E-Government programs in the United States and Canada, it is crucial that all applicable governmental levels and agencies are actively engaged to ensure an effective governance system is in place and maintained; This active engagement must start early in the planning stages and continue throughout implementation and on-going operations.(p.28) .

Benefits of data sharing and integration opportunities are regarded as an important factor by government agencies concerning various services. Post September 11 environment brought changes in such a way that government's desire have promoted about information sharing among agencies and merging/sharing of government databases and reducing the safeguards against the collection, integration, and interagency sharing of private personal information, even including from the private sector (Halchin et al., 2004, as cited in Yıldız , 2007). Another good example placed in the United Nations Development Programme [UNDP] (2007) report, about integration of government institutions is the National System

for the Integration of Judicial and Public Security Information (NOSEGAY) of the Ministry of Justice from Brazil. Purpose of the NOSEGAY is the integration of public security systems of Brazilian states. The system has provided access to the registers of motor vehicles and the criminals that would be arrested and many other national security related information. The NOSEGAY enables the crossing of data of the public security systems with the National Register of Automobiles (RENAVAM), the National Register of Driving Licenses (RENACH), the Arms Registry System (SINARM) and lists of persons identified as criminals, in addition to National Network of Public Security and Criminal Justice Statistics. Technical base for the NOSEGAY is the XML web services and web based applications for consuming the data being integrated. The cost of NOSEGAY is relatively very low (BRL8.5 million) compared to approximate cost of building a single, central system (BRL4 billion).

Development of E-Government applications enhanced such interoperability and integration opportunities of government institutions for facilitating the application of citizens to the government services which has required a bunch of official papers collected from a diversity of government institutions formerly. (Government Planning Institution [GPI], 2011).

It is stated by OECD (2003) report that, E-Government has broad benefits and requires a Whole-of-Government perspective for successful implementation. Issues of co-ordination and collaboration, including issues regarding budgetary affairs, need to be addressed to maximize the benefits of E-Government.

Technological advance is the main factor that makes possible E-Government, but it is not all the story and it should be regarded more importantly as a revolution in the mentality about use of human resources, redesign of business process and change of government service style.

### 2.1.3 E-Government Subcategories

E-Government is generally regarded just as the E-Government portal, utilizing citizens for accessing the services of a diversity of government institutions, but the scope of the E-

Government goes far beyond that limitation. In the report of International Telecommunication Union [ITU] (2008), four main categories for E-Government types are listed as;

- G2C – Government-to-Citizen
- G2B – Government-to-Business
- G2G – Government-to-Government
- G2E – Government-to-Employees

#### 2.1.3.1 Government-to-Citizen (G2C)

This approach is generally considered citizen centric and main characteristic of this approach is government services being accessed by citizens via internet. In early phases of G2C web sites and services, ministries and other government institutions directly reflected their pre-existing structure of the ministry and its bureaucratic procedures. Citizens had to spend much time between the pages and links of the government web sites in order to access the right content due to the fact that citizens did not know the internal structure and operations of the institution. This resulted in dissatisfaction of the citizens and declined the popularity of E-Government services. Developers of the E-Government portals have enhanced their design approaches towards customer-centric style by taking lessons from private sector and commercial applications. (ITU, 2008) E-Government Gateway, individual web sites of the ministries and local administrations are well known examples of G2C approach in Turkey.

#### 2.1.3.2 Government-to-Business (G2B)

Government-to-Business approach mainly focuses on interactions between the government institutions and private sector companies. One of the most popular types of this category is e-procurement by which government procure goods and services via on-line processes. EKAP is the name of the portal developed in the context of law number 5812 and law number 4734 for supporting of principals and procedures of all bidding processes of government with the capabilities of information communication technologies. Since

September 2010, EKAP combined 50.000 government organization or unit with about 100.000 potential bidders providing equality, transparency, accountability and eradicating the suspicions about corruptions at government procurements and biddings. (Karabacak & Karabacak, 2013)

#### 2.1.3.3 Government-to-Employee (G2E)

Government-to-Employee focuses on relationships within government and employees to coordinate internal operations and improve the internal efficiency of business processes (ITU, 2008). As an example of G2E, the government of Kazakhstan is developing government to employee e-government services to improve the efficiency of managing the human resource information for the Ministry of Finance. The human resource department has recently implemented an intranet to interconnect all of the employees to newly implemented enterprise wide system for tracking critical data about employees (Gant, 2007, as cited in ITU, 2008). G2E is quite similar to the G2C services in general, because end users are citizens.

#### 2.1.3.4 Government-to-Government (G2G)

In the report of the ITU (2008), "G2G model focuses on providing services to governments through intergovernmental relations. This includes activities to coordinate stakeholders from the national, state/provincial, and local government as in the case of humanitarian or crisis response." (p.17). Fang (2002) states that ,G2G services provide to the government's departments or agencies online cooperation and communication, based on mega databases of government to have an impact on efficiency and effectiveness. It also includes internal exchange of information and commodities.

According to the Gövsa (2009), G2G services occur at two distinct levels: local/domestic and international. G2G services denote operations between the central/national and local governments, as well as departmental operations and operations between related agencies and offices. G2G services also enable operations between different governments and can be profitable in the international relations and diplomacy protocols.

In addition to four level model proposed by ITU above, Government-to-Non-profit (G2N) is classified by Fang (2002) as an E-Government model which is defined as communication and exchange of information between government and non-profit organizations, political parties and social organizations. In this model, government provides information and communication to non-profit organizations, political parties and social organizations. Especially in the area of social assistance branch of the social policies, good examples of G2N model have been introduced in Turkey recently.

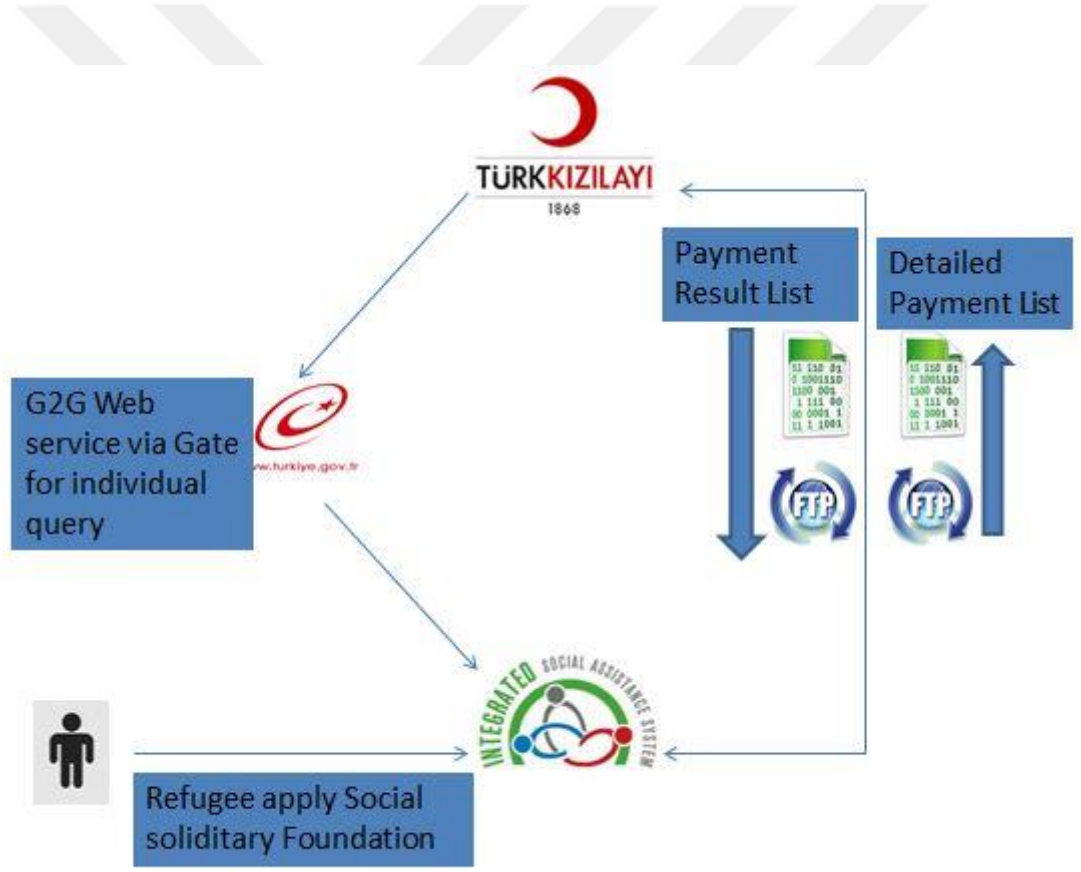



Figure 1: Turkish Red Crescent and Directorate General of Social Assistance G2N Integration (Source: Authors own creation)

DGSA and the Red Crescent have cooperated for social integration of Syrian refugees and coordination of social assistance for Turkey citizens. In the context of the program, a G2N integration and interoperability model has been established in 2016. Purpose of the project has been delivering the €3 Billion fund provided by European Union for Syrian refugees, effectively and transparently. Unfortunately, Turkish Red Crescent had not had a prevalent provincial organization all over the country for accepting and evaluating the applications of refugees. In turn, DGSA under Ministry of Family and Social Policies had a strong provincial organization distributed through all over the country; namely 1001 Social Assistance and Solidarity Foundations in every province and county. Turkish Red Crescent has begun to develop a system for reporting the aid given to the refugees, but the system is not supposed to manage all steps of the aid distribution. At this point, Integrated Social Assistance Information System (SAIS) has been accommodated in the core of the project with a newly developed module for recording and evaluating refugees' aid applications. The role of the SAIS has been configured as recording and evaluating all refugee aid applications and yielding a payment list including the details of applicants' status and details on which aid is based on due to the strict rules of European Union concerning accountability and transparency. This payment list is shared with the Turkish Red Crescent using FTP integration and supported with web service integration over E-Government Gateway enabling the Turkish Red Crescent for querying the detailed information about the aids and refugees recorded in SAIS data base. SAIS has also been integrated with the Directorate General of Migration Management for validating the identity information of refugees applying aids.

Another integration between Turkish Red Crescent and DGSA is about Turkey citizens applying aids to the Turkish Red Crescent. Information about the applicants including ownership of estate, vehicles, social security information and former social aids given by Foundations are shared with Turkish Red Crescent only if there is a record in the social assistance database. Web service integrations of the mentioned project above are implemented using the infrastructure of E-Government Gateway Government-to-Government (G2G) services. Web services are presented as proxy services to the E-

Government Gateway by SAIS and consumed by other government institutions integrated with the E-Government Gateway.

### 2.1.4 New Trends of E-Government Development

Natural desire and expectation of all citizens when interacting with either central or local government units, is to process or apply to a single point in a holistic approach; not to be redirected from one to another government unit to complete an official process. In this context, the concept of Whole-of-Government (WoG) has been emphasized by the UN (2016) in the "*United Nations E-Government Survey 2016*" report, denoting that public service agencies working together across organizational portfolio boundaries in a shared response to particular issues. There is a trend towards providing service delivery through "one-stop-shops" online, or through other systems, including call centers, allowing managing public services in interrelated areas.

> Whole-of-Government service delivery, enabled by E-Government technology, can offer people services from various public agencies bundled together as a single, joined-up service in a one-stop-shop. For people, it means that interacting with public administration becomes much simpler. Achieving such an integrated approach to public service delivery depends on the use of a common organizational and technical platforms to ensure back-office integration, so that internal processes are coordinated and run smoothly together, robust interoperability (i.e. that each system is compatible and works with other systems), and an infrastructure that supports the use of electronic identity cards and signatures. (UN, 2016, p.8)

WoG approach has also been accepted and paid attention by Turkish Government. In the context of the "*E-Transformation Process and E-Government Schedule*" prepared by MoTMaC, composition and presentation of integrated services in all functional areas via E-Government Gateway is planned to be completed up to the end of 2018. An integrated service is a service such that one online service that depend on other services presented by diversity of government institutions. An example of such service can be seen Figure-2 in which scholarship application service depend on other online government services such as military status, judicial record status and graduate status.

Another example for integrated services from the social assistance area is the 'Income Test for General Health Insurance'. Citizens just apply to Social Assistance and Solidarity Foundations for income test. Income test heavily depend on the information gathered from other government institutions' databases via web services.




Figure 2: Integrated Scholarship Application (Ministry of Transport, Maritime Affairs and Communications, 2017)

Result of the income test is sent to SSI using web service integration electronically. In old fashion, most probably, citizen would collect documents from other government organizations and finally, get the result of the test as a printed and signed official paper and take it to SSI bureau for registration which would result in lost time, effort and money.

Design, effectiveness and the efficiency are also regarded as important determinant factors about the usage and the attraction level of the e-government portals. Gasovaa & Stofkovaa (2017) states that, due to the informatisation and ICT being used citizens' daily life, pressure on governments have increased for providing public services more efficiently, transparently and diversely.

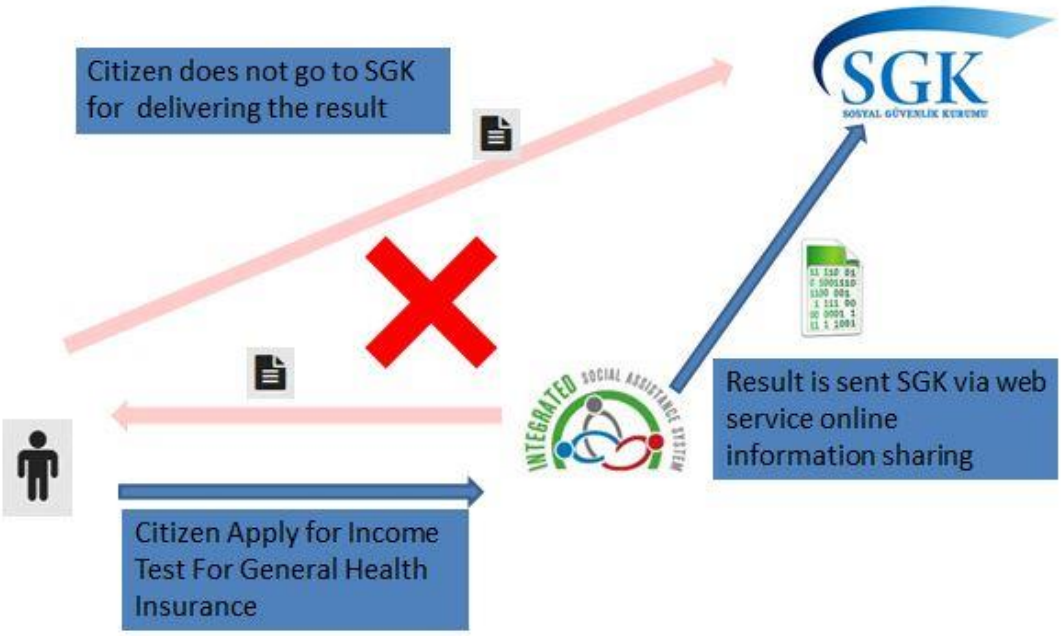



Figure 3: Income Test Result Is Sent from SASF to SSI via Online Integration (Source: Authors own creation)

Both central government, sub-institutions and local authorities have to cooperate on the development of E-Government to ensure that government services are available fully online, so that the number of E-Government services users will increase. Importance of personalization and high accessibility are also emphasized by Ayachi et al. (2016):

> Currently most governmental portals have accessibility barriers that make the access to services hard or impossible for many citizens. In order to take advantage of E-Government services and attract a higher number of citizens, government portals should exploit intelligent techniques and deliver services in a personalized citizen-centric approach. (p.681)

In this context, Ayachi et al.(2016), proposes a model by which personalization could be obtained via recommender systems such as content-based and knowledge-based recommenders that recommend products or services that fit well with the learned user's

preferences and needs which allows making governmental portals more attractive for citizens and facilitates access to services. In this model, recommenders use different data sources i.e., citizen profile, social media databases, citizen's feedback databases. Indeed, since personalization takes into account citizens preferences, their social environment and their demographic information is then able to recommend services evolving according to their needs and fitting their profiles. Such profile creation model proposal is shown in Figure 4.

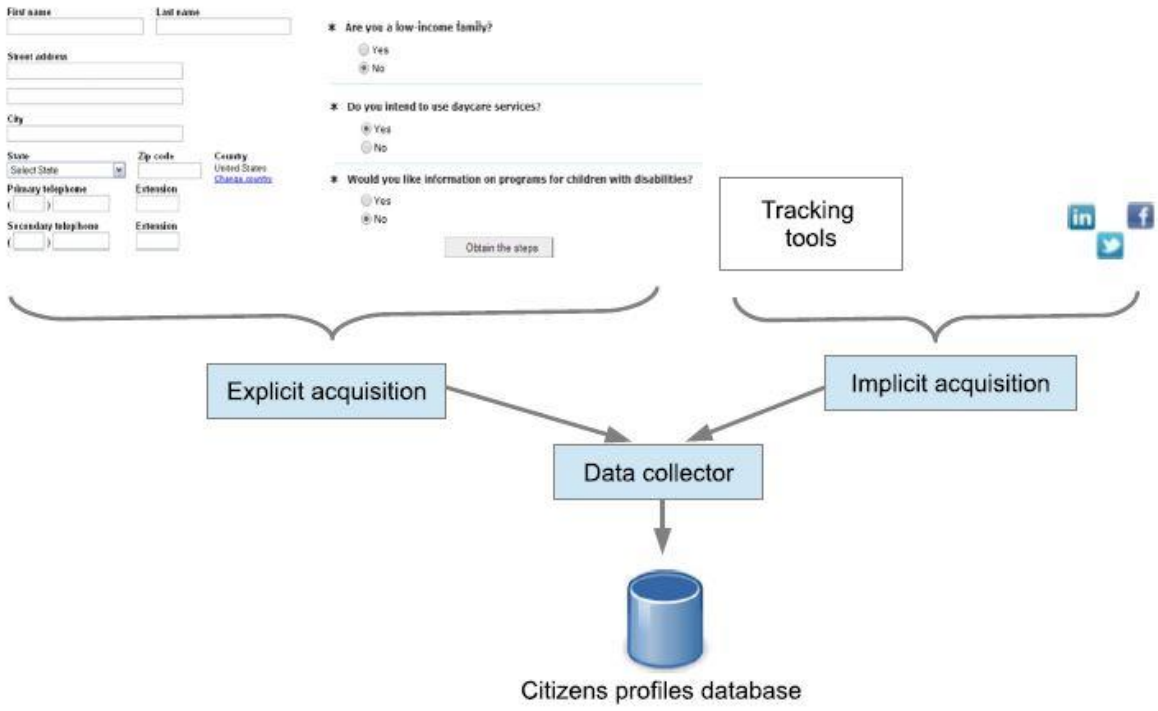



Figure 4: Citizen Profile Database. (Ayachi et al, 2016, p.688)

Research conducted by Hızıroğlu et al. (2013) in Turkey concerning the user profiles in relation with the expectations and satisfaction levels for existing services aims to suggest actions for development of new E-Government services based on the profiles of these users. It is stated in that research that there are different user groups benefiting from E-

Government services and the profiles of these groups are rather different in respect of their expectation and satisfaction levels as well as their socio-demographics attributes. These groups are briefly:

- Neutrals that are not supporters and have low expectations.
- Negatives that are not satisfied with the content and information quality of by E-Government.
- Positives that are happy with either the content and information quality provided by E-Government services.

According the research above, regarding the segmented structure of the user profiles while preparing the E-Government planning for user-oriented services is strongly suggested for better success.

Another research by Kurfalı, Arifoglu, Tokdemir & Paçin (2016) about the determinant factors when citizens decide to use an E-Government service revealed that performance expectancy, facilitating conditions, social influence and trust of internet are prominent factors.

Results of these researches may guide the government to reach more citizens via E-Government services and, potential users must be informed of the possible benefits that e-government can provide, to convince more people to use E-Government.

### 2.1.5 E-Government Works In Turkey

E-Government is a hot topic for government institutions in Turkey especially for last two decades. E-Government strategies in Turkey have been included in Five Year Development Plans since 1990's. Especially, 10th plan emphasize on coordination of E-Government projects and failures stemming from managerial and organizational flaws. It is stated by Gubbins (2004, as cited in Heeks, 2006) that, "it is a well-known secret in the computer industry that information systems projects are more likely to fail than not. An estimated US$3 trillion was spent during the first decade of the 21st century on government information systems" (p.3). Recent studies suggest that 60% (Gartner, 2002)

to 80% (UNDESA, 2003b) or 85% (Symonds, 2000) of E-Government projects fail in some way leading to a massive wastage of financial, human and political resources, and an inability to deliver the potential benefits of E-Government to its beneficiaries. (as cited in Heeks, 2006). One reason emphasized by Madyatmadja, Prabowo, & Kosala (2016) for the unsuccessful attempts is the lack of IT Governance which is supposed to play an important role for succeeding to provide better quality services for citizens, business and other government institutions besides the non-profit organizations.

Government institutions in Turkey have experienced almost all phases of E-Government mentioned in the context of this work. They have started with simple web pages at the beginning. Then, many of the government web sites and portals included citizen centric services that have been developed independently. But, according to Medeni, Kutluoglu, Balcı & Kahramaner (2010), the first attempt for creating a central government portal has started at 1998 with the name "Kamunet", (Kamunet is also the name of the currently active common network infrastructure for government institutions, but these are completely different projects). After that, in the context of "e-Europe Plus" project, Turkey prepared its own action plan named as *e-Türkiye initiative* in 2001. Based on numerous feasibility studies and intensive interactions among various government agencies and public institutions, a government gateway & portal has been developed in the light of the *Information Society Strategy Document* published by the Government Planning Institution in 2006, and officially launched in December 2008. Medeni et al. (2010) states that, E-Government Gateway is a major milestone for transforming into the Information Society and achieving the related strategic goals set by Turkey.

Since 2008, project evolved to a strong single entry point for almost all government services named as E-Government Gateway. Hızıroğlu et al. (2013) noted that, by 2013, E-Government Gateway had been providing approximately 700 services from 90 institutions to 15 million citizens. By 2017, the E-Government Gateway combines services from 333 government institutions 2.183 Services and 33.223.266 users. (turkiye.gov.tr, 2017). Of course, this strong single point government portal is fed by a diversity of E-Government

projects and web services in the background, sponsored by both central government agencies and local agencies such as municipalities.

There is also network infrastructure level planning concerning integrations of government institutions in Turkey. In the context of Official Journal published by the Turkish government, on 20.10.2012 with 28447 number and the law number 5809 concerning Electronics and Communications, MoTMaC has been charged with the duty of coordinating and implementing cyber security related work and issues within government institutions. In this context, Kamunet project has been initiated by the MoTMaC, in order to constitute the government network back bone mentioned above, for the purpose of increasing security and minimizing cyber security risks of data communications and integrations within government institutions. Accordingly, Prime Ministry of Turkey has issued a circular at 03/12/2016 requiring all government institutions to be included in the Kamunet network infrastructure. Government institutions are strictly checked for adopting the Kamunet until the end of 2017.

Kamunet and the E-Government Gateway G2G services are not the alternatives for integration of government institutions; in contrast, they are complementary projects of each other. TÜRKSAT which is responsible for developing and maintaining the E-Government Gateway is also supposed to be included and preparing for adopting the Kamunet. G2G services and Kamunet together are expected to constitute a powerful hub for government institutions, local administrations and non-profit organizations about inter-organizational information sharing and organizational interoperability. At the final stage, any government institution that requires the information of another institution will be able to access the required web service technically just in a few minutes following the official prerequisites such as signing data sharing protocol.

In the area of the social assistance, almost all phases of the E-Government can be clearly seen during the development of the SAIS project. In the context of the project, integration with many other government institutions has been planned and established. A portal module has been planned for citizens by which they would be informed for all types of social assistance, application for social assistance and checking the status of the current

applications. But later, with the advent of the E-Government Gateway, project plan has been changed by the authority and services have been integrated on the E-Government Gateway rather than an independent portal. This change of plan constitutes an explicit example of how the steps of E-Government are experienced by government institutions.

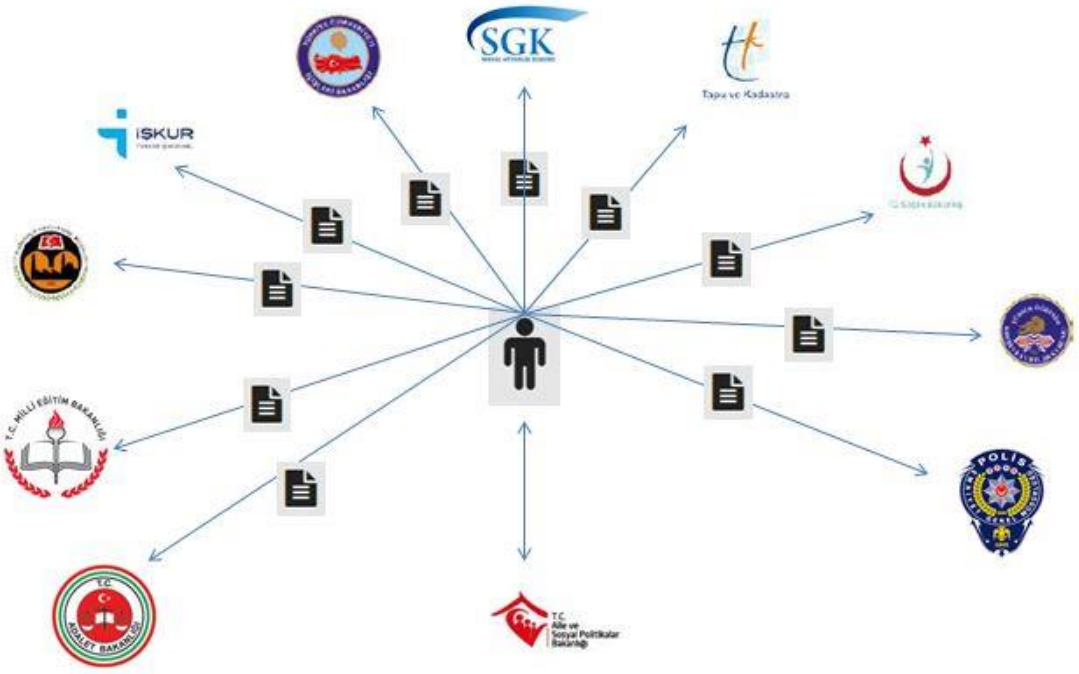



Figure 5: Citizen Visiting Diversity of Government Office for Retrieving Documents (Source: Authors own creation)

Figure 5 and 6 shows that, citizens had been collecting documents from many other government organizations for applying social aids. After the back-office integrations with other government organizations either with direct VPN or over E-Government Gateway, citizen does not have to collect many documents. Next step is to provide as many G2C services as possible over E-Government Gateway with a Whole-of-Government approach.

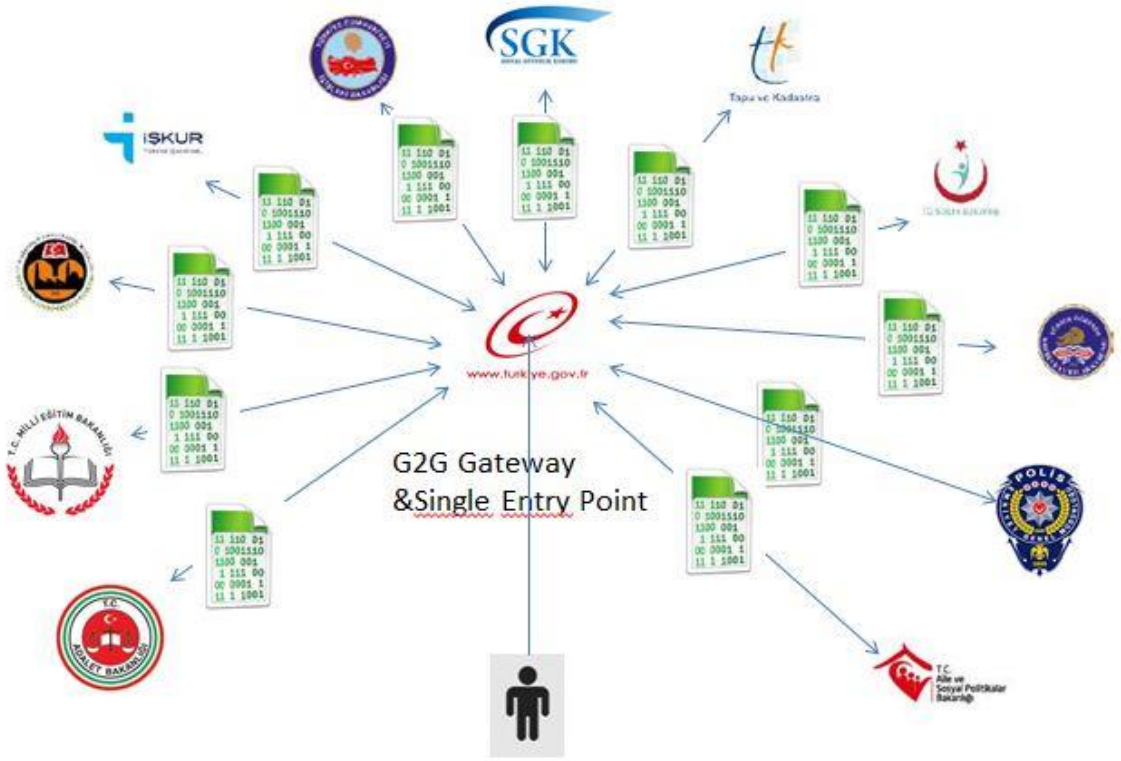



Figure 6: Citizen that is Applying to E-Government Gateway and Government Offices are interconnected via G2G Back-office Integrations. (Source: Authors own creation)

## 2.2 E-Government Interoperability

One of the most important qualifications of E- Government process is regarded as sharing and integrating the information across other government organisations, business and non-profit organisations. According to Pardo et al. (2012), concept of E-Government interoperability representing a set of diversity of capabilities is a key concept about delivering seamless services to the citizens in a complementary and integrated manner by facilitating system integration cross boundary collaboration. Pardo et al. (2012) also states that E-Government interoperability is accepted as a maturity level indicator.

E-Government interoperability is defined by Lallana (2008) as “the ability of constituencies to work together. At a technical level, it is the ability of two or more government information and communications technology systems or components to exchange information and to use the information that has been exchanged to improve governance” (p.1). Another definition for interoperability made by European Public Administration Network E-Government Working Group is such that “the ability of using the information and/or functionality of another systems”. (as cited in, Interoperability Principals Guide v2.1, 2012). Definitions of interoperability generally base on the sub-category type of the interoperability; more technical perspective emphasize the systems that interoperate base on technological standards, whereas the organizational perspective focuses on higher levels in which technical level is used as a step for organizations to interoperate under some business rules. Scope of the interoperability may extend to lower level at which sub-organizations under same roof, such as General Directorates of a Ministry, or may extend to upper level at which different countries working on the same project or purpose as international interoperability.

E-Government projects can be regarded as an important means of interoperability. Widely accepted definitions of the organizational interoperability states that it is the ability of organizations to effectively communicate and transfer meaningful data (information) even though they may be using a variety of different information systems over widely different infrastructures, possibly across different geographic regions and cultures. Organizational data and information is stored and shared in digital environment by developing and effectively using E-Government systems. The success of the organizational interoperability is correlated with the success of the E-Government project being conducted by any government institution starting from planning, implementation and application. As the proportion of the processed and owned data and information is transformed into digital form, beginning from back-office processes to automation systems and decision support systems, it is more possible to share the information with other government institutions as part of organizational interoperability process. Within the social area, approaches such as Collaborative Case Management can be achieved best under the light of E-Government interoperability rules. Even without such a structural case management approach,

government institutions working at social policies directly or indirectly require each other's document, data and information about the cases they are working on. For example, protection and secrecy judicial sentences given by Ministry of Justice are an input for social service initiation for Directorate General of Child Services and Directorate General of Statute of Women. Latencies about delivering those sentences to the agency that would apply them increase the risk for the emergence of unwanted results.

In the report of *E-Government Interoperability: Guide* (2007), published by UNDP, it is stated that governments should strive for interoperability for a number of reasons. Firstly, in many countries policy makers are facing with lots of unstandardized and overlapping data sources which lead to loss of time and money. Interoperability would make possible to compile data from different data source agencies. Secondly, interoperability increases access government data internally within the government agencies. This provides better planning and coordination of e-government projects and increase efficiency. As third point, interoperability means the foundation of a citizen-centric, one-stop delivery of services through a variety of channels. Finally, interoperability saves money of the governments by providing access to the other systems and removes the need for building a new system. Cooperation of Turkish Red Crescent and DGSA for refugees is a good example of this last point. Turkish Red Crescent has not developed a new system that would probably cost millions for supporting to manage all aid application processes. Applications and evaluation are implemented over SAIS of DGSA and payments are made via Turkish Red Crescent's system under the light of interoperability principles.

Mainly there exist three types of interoperability;

- Technical interoperability
- Syntactic & Semantic interoperability
- Organizational interoperability

### 2.2.1 Technical Interoperability

According to the Veer & Wiles (2008), "Technical interoperability is usually associated with hardware/software components, systems and platforms that enable machine-to-

machine communication to take place. This kind of interoperability is often centered on communication protocols and the infrastructure needed for those protocols to operate." (p.5). Technical interoperability is generally a high level issue and generally is the subject of technology companies, scientist from an infrastructural perspective.

### 2.2.2 Syntactic & Semantic Interoperability;

Syntactic interoperability is generally related with the syntax of the data being exchanged between the systems. HTML, XML and XML based WSDL standards can be given as well known examples for understanding and implementing syntactic interoperability. According to the XML standards, data that will be shared between the systems are formatted with tags composed by "<" and ">" signs. An XML document should abide these rules;

- Every tag that is opened should be closed
- Every XML document should have a root element
- Attributes that are describing the elements should be placed in quotes.
- Every XML document should contain at least one node.

Such rules make possible the interoperability between the systems and prevent ambiguity. Semantic interoperability focuses on the meaning of exchanged data for humans between the applications and systems. Data and information should be shared with an understandable manner which is a main role of semantic interoperability.

### 2.2.3 Organizational interoperability

Veer & Wiles (2008) defines the organizational interoperability as the "ability of organizations to effectively communicate and transfer meaningful data (information) even though they may be using a variety of different information systems over widely different infrastructures, possibly across different geographic regions and cultures" (p.6). According to the Veer & Wiles (2008) organizational interoperability depends on successful technical, syntactical and semantic interoperability.

According to the Gövsa (2008), interoperability provides the opportunity of working independently from physical boundaries; self-operating systems without human intervene if required, and helps organizations both in public and private sector in coordination by sharing and reusing existing data to achieve common goals.

As an example for the self-operating systems, batch queries implemented by MoFLSS from other government agencies are scheduled processes to start at a specific time of the day, usually mid-night time for preventing saturation of network and data base systems.

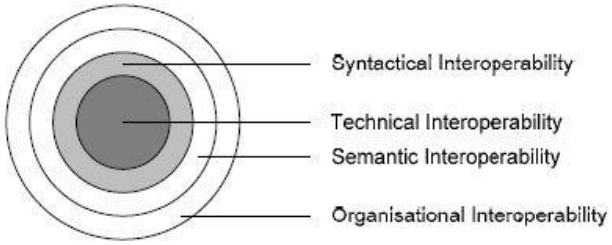



Figure 7 : Interoperability levels (Veer & Wiles, 2008, p.6)

As it is clearly seen in the Figure 7, the types of the interoperability are strictly related with and depend on each other. It would be impossible to implement organizational interoperability without semantic, syntactic and technical interoperability. The rules and standards of technical and syntactical interoperability are determined by high level word wide technology companies and consortiums like W3C. When it is decided to share their data and information and interoperate between two governments organizations, usually they do not have to deal with low level interoperability levels, but they have to focus on semantic and organizational interoperability for establishing and maintaining a seamless integration. Data format and the data that will be shared should be planned and decided from the beginning phase of the whole process. For example when it is decided to share some data concerning citizens using web services, XML and WSDL standards are readily available, but the structure of the XML document and the data that will be transferred should be decided and designed carefully also regarding the security issues.

### 2.2.4 Interoperability Studies by Turkish Government; Interoperability Principals Guide

Interoperability is regarded as an important issue of E-Government process by Turkish Government which aims the transformation to information society. Being aware of the importance of the standards and norms that makes possible interoperability, a circular has been published on Official Journal on 28.02.2009 with number 27155 concerning a guide about interoperability principals that should be adapted by all government institutions when establishing new information systems. In this direction, Interoperability Principals Guide has been prepared and published by State Planning Institution at 2009, and revised by Information Society Department of Ministry of Development at 2012. Many other government institutions like TÜBİTAK, TÜRKSAT, Central Bank, Turkey Information Union, Turkish Standards Institution and others have contributed to the preparation of the Guide.

Subjects issued in the Guide, aim to increase the effectiveness of the E-Government Gateway by facilitating the integration of back-office processes, and constitute the interoperability base of government institutions for presenting of E-Government services.

While preparing the Guide, the documents of "European Interoperability Framework for Pan-European e-Government Services", "European Interoperability Framework for European Public Services" and the experiences and interoperability documents of countries which have made comprehensive work in this area have been used as guide. Within the Technical Standards section, essentials and standards to be used are included in six basic titles. These titles are;

- File Presentation And Exchange
- Interconnection
- Data Integration And Content Management
- Security
- Geographical Information Systems
- Development And Management Of Information Systems

#### 2.2.4.1 File Presentation and Exchange

In the “File Presentation and Exchange” section, standards are listed that are required when sharing, presenting and exchanging files. Basic points taken into consideration when determining the standards are minimizing the requirement for new software for using presented file, using tools based on open standards, and accessibility of file from diversity of platforms. Additionally, formats about official correspondence between government institutions are included in this section.

#### 2.2.4.2 Interconnection

“Interconnection” section concerns interconnection and network standards such as IP, TCP, SMTP and RFC. Many of the standards listed in this section are readily used commonly and accepted as industry standards. Nevertheless, it is allowed to use another standard not contained in the list provided that counterpart institutions reach an agreement.

#### 2.2.4.3 Data Integration and Content Management

“Data Integration and Content Management” section focuses on content management and inter organizational data integration steps and technologies/standards that make possible such integrations. Content management part is heavily related with organization of metadata which makes possible definition, searching and discovery of information resources. Context of the resource discovery metadata presents information about resource, convenience and accessibility of data.

#### 2.2.4.4 Security

Under this section, design and implementation of Information Security Management Systems and related certification (TS ISO/IEC 27001), international common criterion (TS ISO/IEC 15408) and electronic sign related issues are emphasized. Additionally, table of security standards that should be conformed are enlisted.

#### 2.2.4.5 Geographical Information Systems

Under this section, internationally accepted standards and services related with web services, metadata, accessing data, data interchange and publishing data are explained for the purpose of geographical information sharing between government institutions.

#### 2.2.4.6 Development and Management of Information Systems

Standards presented under this section aim to increase quality of software being developed for government institutions and packaged software that is procured. CMMI and SPICE are well known examples of software process quality standards. Management issues and operational processes are as much important as the development of the software for success of the project. Software and system life cycle standards TS ISO/IEC 12207 and ISO 15288 respectively are included in the Guide.

Standards briefly told above are all essential for flourishing a robust E-Government environment with all aspects. In the context of this thesis, issues related to Data Integration and Content Management titles are mostly being investigated in the field of social welfare practice.

### 2.3 Social Policies

After the Industrial Revolution, there has been enormous change at working and manufacturing style. Starting with the manufacturing in factories with a mass production style, working conditions and human labor have changed dramatically. This change has also affected social order and introduced a new point of view to the social and financial systems. Social order of the today has been formed by the Industrial Revolution at 19th century.

Yazıcı (2016) defines the social policy as:

> Social policy is the complement of public organization activities that aims the social sharing, social development, synchronizing the benefits of individual and society, gaining social solidarity and accommodation of social layers that cannot reach to social fairness and equality. The purposes

> of the social policy from this definition are prevention of poverty, providing the right of health and education rights to every single member of the society, fighting against to unemployment and unfair income distribution.( p.7)

Seyyar (2006, as cited in Özdamar, 2007) relates the economic activities and the result of those activities on the society. According to the Seyyar, as the science of the economy works on the financial activities and how income is distributed within the society; the social policy focuses on the policies and activities related with how the economic activities and the distribution of resulting income is fairly conducted.

Definitions and issues concerned by the social policies, social sciences and their branches vary in a wide range and may change based on the country. Buğra & Keyder (2006, as cited in Özdamar, 2007) lists the context and the constituents of the social policy as, social protection and social security concerning unemployment and retirement, social services such as disability support, social care, health, education, food and shelter, policies for equality of opportunity and against discrimination, poverty and social exclusion, public health, working conditions, regulation of industrial relations, family and children policies.

Indeed, social policy is very broad and comprehensive. It must be approached with a holistic approach, but, generally it is not possible to comprehend all related institutions under the same roof.

### 2.3.1 Three Main Branches of Social Policies

In the context of this thesis, two main branches of social policies, social services and social assistance will be focused. These two branches of the social policies are in the task list of the MoFLSS. But, branches of social policies and related government institutions are far more than just two. Social services and social assistance are naturally related and base on the social security, health policies, justice and criminal/security issues. Under this title, three main branches are explained that are subject of interagency information-sharing processes of the MoFLSS.

#### 2.3.1.1 Social Services

Social service is defined by International Federation of Social Workers [IFSW] (2018) “as a practice-based profession and an academic discipline that promotes social change and development, social cohesion, and the empowerment and liberation of people. Principles of social justice, human rights, collective responsibility and respect for diversities are central to social work”. Also Sütçü (2015) defines the social services as a complement of activities and services conducted by social services experts containing social, economic, psychological, supportive, formative and educative services besides the investigation of individuals within his/her family and environment and removal of domestic problems by providing access for citizens to the related organizations.

Historical bases of the social services lay beyond the Ottoman and Seljuk period affected by the religious factors imposed by İslamic tradition and rules such as protection of orphans and zekah (distribution of one fortieth of one's income as alms, one of the five pillars of the Islamic faith).

In the Ottoman period, foundations such as “Darül-ziyafe”, “Misafirhane”,”Tabhane”, “Şifahane”,”Darüş-şafaka”, “Darül-aceze”, “Darül Hayrı Ali” and “Darül Eytam” had been constituted for social welfare. During the construction of the modern Republic of Turkey leaded and founded by Mustafa Kemal Atatürk, “Türkiye Himaye-i Etfal Cemiyeti” which will be named later as Child Protection Agency, has been founded by the directive of Atatürk in 1921. (Türkmen, 1987) Name of the Agency has been changed to “Çocuk Esirgeme Kurumu” in 1934. Even in the severe conditions of the Existence War of the nation, the importance of the children as a wealth and basic entity for the future of the nation had been clearly understood and paid attention.

The first legislation on child protection and related dormitories had been made on 1949 with law number 5387 by Ministry of Health and Social Assistance. (Saçan, 2010). Due to the insufficiency at details of implementing the service and lack of provisioning, the Law of Child to be protected had been issued in 1957 and kept active for 24 years. According to the Türkmen (1987), many other laws not directly related with child protection had also

contained issues related with child protection during this period such as Village Law, Turkish Civil Law and Municipality Law.

The law for the establishment of the Social Services Institute was accepted in 1959 and lasted for 24 years. In 1983, child protection and social service related laws have been consolidated. Kartal (2008) states that 'The Law for the Social Services and Child Protection Institution' was adopted on 24 May 1983 with law number 2828 in order to centralize the governance of diversity of institutions. Four institutions (Child Protection Associations, Social Services Directorate, Social Services Institute and the Turkish Child Protection Society) which had been administered separately until then have been unified. The name of the new institution became Social Services and Child Protection Agency (*Sosyal Hizmetler ve Çocuk Esirgeme Kurumu*), and with this law, capability to prepare its own regulations was bestowed, and budgetary regulation of the institution became independent.

It was also stated by Kartal (2008) that, despite the law 2828 was a step towards the centralization of social services, yet, budgetary status of the SSCPA had been structured as a supplementary budget supported by donations and businesses operated by Agency, apart from central budget. This situation has reflected the fact that the social services still have not completely regarded to be under the support of the government. But in turn, this statue has given independence in terms of decisions taken on the budget, yet, the institution is supposed to use its own resources primarily to finance itself.

Although the best known service type of the SSCPA is the protection of children by the means of institutional care, boundaries of services presented by SSCPA goes far beyond. Besides protection of the children by providing shelter, rehabilitation services and psychological support was given to the children as required. Additionally, children have been returned to their own families with economical support if possible. Protective Family Service model has been introduced in which volunteer families are assisted economically. Adoption of children by families is also coordinated and implemented by SSCPA.

Similarly, services to the disabled & old-aged age people have been provided by SSCPA both as sheltering and also financial aid for families caring elders at home. Providing shelter for battered women has been another service of SSCPA.

Up to the foundation of Ministry of Family and Social Policies, institutions for policy making and conducting research on social policies, especially concerning social services had been structured as separate from those directly serving to the citizens. Family Research Institution founded in 1989 and later in 2004 became a directorate general for implementing law number 41 stating the importance of protection, prosperity and planning of the family and children. In 1997 Institution of Disabled People was founded for coordination and cooperation of organizations and institutions working for rehabilitation education, accessibility, employment and adaptation to the society. Directorate General Statue of Women (DGSW) was founded in 1990 in order to empower the women economically, cultural and politically at each level of society and gaining to the women the statue they deserve. With the foundation of MoSFP in 2011, policy and research based government institutions have been united with the ones that are directly serving to the citizens in order to increase the efficiency of the services presented to the citizens.

#### 2.3.1.2 Social Assistance

Poverty is defined by Çetinkaya (2012) as "the situation of nonexistence of income, salary or property for sufficient to make a living of individual with the family including wife, children and parents in the environment that they live, especially due to unemployment, disability, illness or oldness" (p.6). Naturally, poverty and the social aid and assistance are very closely related with each other. Kalağan (2009) defines the notion of the social assistance as a set of public activities including public relief, financial aid and income generating funds/projects for supporting people in order to re-gain the power of maintaining the subsistence as soon as possible, to whom not capable of subsistence currently even at a minimum level due to the reasons that they do not have the control. One of the most notable key points stressed by the Kalağan (2009) is that "final purpose of the social assistance is not only supporting financially but to provide the beneficiaries to get a point that they can get economic independence". (p.218)

Social assistance and the social security are separated from each other with a key determinant. It is stated by Taşcı that, in contrast to the social security that is characterized by payment of insurance charge, mechanism of social assistance does not expect and include any payment back. Payments are funded by tax income and because of that sometimes called as non-insurance premium, so it is conceptualized in relation with social protection. By this way, social assistance constitutes social protection together with social service (Taşcı, 2007).

Historical roots of the institutions about social assistance in our country date back to the pre-republic era. In the Ottoman era, social assistance had been conducted by the foundations with an autonomous structure. In 1877 Red Crescent Society has been founded inspired by the Red Cross Society of European countries, primarily for assisting to soldiers and civilians that are wounded during war. (Baytal, 2009). Ministry of Health and Social Services (*Muavenet-içtimaiye Vekâleti*), which had been the most superior social aid institution of the state, have been founded at 1920 after the constitution of the Turkish Grand National Assembly during the War of Independence (Taşcı, 2007). In the term of Atatürk, these three institutions had made social assistance in the form of shelter support, orphan children and widow women support, oldness supports, poor soldier family supports, payments to the martyr families and veterans. (Baytal, 2009) As can be seen clearly, continual wars up to the 1922 affected deeply the types and format of the social assistance for decades.

According to the Yılmaz, the first social assistance law issued by the Government is known as the 65 Age Pension in 1976 by law number 2022. Similarly with law number 1005 in 1980, civil servants died or disabled in public work has been given pension as a social assistance. But the first comprehensive social assistance law has been issued in 1986 with law number 3294, Social Assistance and Solidarity Incentive Act. (Yılmaz: 2006).

In the context of the law number 3294, a new fund called" Social Assistance and Solidarity Fund" has been founded in order to provide supply to the social assistance. Fund is managed by the Fund Council incorporated in Prime Ministry and leaded by the Prime Ministry Counselor or up to the 2004 (Doğan,2008). Directorate General Social Assistance

and Solidarity has been founded in 2004 with law number 5263, as an extension and transformation of Fund Council Secretariat in order to gain an organizational identity and empower the structure based on specialization for fighting against poverty (Biçer, 2009). For making use of the resources of the fund in social assistance activities all over the country and facilitating citizens for applying social assistance, Social Assistance and Solidarity Foundation has been founded in each and every county and province under the secretariat of Administrative Chief (Kalağan, 2009, p.217). Administration of the Foundations contained government managers, local administrates, beneficent citizens and non-governmental organization representatives (Kaya, 2009).

Kobak (2006) states that, in addition to the central government activities, local government institutions, primarily municipalities, also conduct many activities in the area of social assistance base on the law number 5216 published on 23.07.2004.

#### 2.3.1.3 Social Security

Social security can be defined briefly as a system for making working people save the money that they earn for providing prosperity in their retirement term in addition to the labor safety and health services. In the definition of the International Labor Organization [ILO], social security is defined as a set of protection, health and child assistance services to the citizens in case of decrease of income based social and economic problems due to illness, birth, labor accident, unemployment, disability, oldness and death (1995, as cited in Baykara, 2014). Social security is considered as a tool of social policy for diminishing poverty and inequality of income distribution. In general basic characteristics of the social security can be listed as (Aydın, 1999, as cited in Altın, 2010);

- Providing economical assurance to the individuals
- Protecting all individuals against to the risks and minimizing and removal of negative result
- Providing improvement of personality
- Covering all individuals equally without any discriminations
- Application based on laws and rules regulated by government
- Carrying the property to a level of life standards with honor.

Tunçomağ states that;

> First and most important development about social security is the constitution of Social Security Legislation created by Otto van Bismarck from Germany. Bismarck stated that the State not only has the protection mission but also promoting the prosperity and goodness of all its citizens particularly weak and disadvantaged section by utilizing the convenient institutions and social tools it owns. (1990, as cited in Ölmez, 2007, p.30).

According to the Dilik, up to the 1929, the year of the Economic Crisis, many of the European states had gained admission to social security system followed by Russia, US of America and South America and Japan. But World War 2 was a turning point for many other countries for constituting a social security system (1992, as cited Soydemir 2013).

In Turkey first social security related initiative has been founded with name "Workers Union" in Ereğli Coal Basin in 1923 which would process within insurance methods in order to meet economic and social requirements of coal workers. (Ekmekçi, 2005, as cited in Soydemir, 2013).

First government institution named as 'Workers Insurance Institution' concerning social security has been constituted in 1945 by law 4792 which was later, in 1964, changed to 'Social Insurance Institution' (SSK). Well-known *Credit Union of Retirement* (Emekli Sandığı) and *Institution of Social Insurances and Occupational Pension Fund* (Bağ-Kur) have been founded respectively in 1950 (with law 5434) and 1971 (with law 506). (Özkan, 2010).

These three institutions had been operating separately which resulted in difficulties and problems about coordination. One of the biggest problems emerging was one person would be insured by different institutions separately. Girgin (2015) states that, in order to eliminate such problems and boosting the coordination, the three institutions serving depending on five different laws has been united under the roof one institution called Social Security Institution under the Ministry of Labor and Social Security in 2006, with law 5502 issuing the establishment ,tasks and authority of Social Security Institution.

## 2.4 Social Policy Coordination, Cooperation and Consolidation in Turkey

Definitions of the concepts in the context of the social policies and their boundaries vary and generally it is not possible to draw solid and clear borders separating the branches of the social policies. As can be seen above, from the definitions and concepts covered by the social service, social assistance and social security, all of them concern improving the prosperity of society somehow from closely positioned perspectives. Similarly, institutions and organizations for serving social service, social aid and social security either voluntarily or established by governments have been conducting activities and targeting the sections of the society highly overlapping with each other. It is stated by the Soydemir (2005) that, social services differ from social assistance for its relevance of any section of the society even if they do not need to social assistance stemming from poverty. But as in the case of the SSCPA, which was constituted for social service purposes, social assistance is provided to the poor people for supporting social services. Social services and social assistance should be presented with a holistic approach in many cases because; risks rooted from unemployment and inequality of income touch to not only social aid but also social service related institutions.

Similarly, Credit Union of Retirement established as a social security institution had also been responsible for applying the law number 2022 concerning the "Pension Payment for Those Over Age 65, Poor and Helpless People" as if it is a social assistance institution.(Yılmaz, 2006). Another institution actively functioning in the area of social aid and scholarship for students is the Directorate General of Foundations.

Health sector is also closely related with the social services for some aspects. "Law number 2022 disabled people pension" and 'disabled care at home' salaries paid by MoFLSS for disabled people, based on the proportion and the kind of the disability stated on the Disability Reports given by the licensed government hospitals of Ministry of Health.

Social service is a profession as a complementary of health services at home due to the psycho-social support, social assistance consultancy and case management roles. Because of that, social service requirements of the citizens that are beneficiaries of 'health service at

home' should be determined, provided and improved (Aydemir, 2003). In order to increase the coordination of social services concerning care at home and home health services, MoFSP and Ministry of Health have signed a protocol in 2015.

Another example of the multi-attribute services which can be both qualified as social service and social assistance is the green card. In this case, poor citizen is not directly given money but, health expenditures are paid in the name of the poor citizen (Yılmaz, 2006). After the last changes in the legislation in 2012, determining the income level is a task of Social Assistance and Solidarity Foundation; social security insurance registration is made by Social Security Institution and health services are presented by Ministry of Health as free of charge.

One of the main problems about social assistance and social services in Turkey is the repetitiveness of social aids for the same beneficiaries, which means helping the same people or family by different institutions. Diversity of the institutions that are responsible for social services and assistance complicates the coordination of the social services against the repetitiveness. As it can be seen from the Table-1 many institutions have roles related with social services and assistance by 2012.

Table 1: Institutions Concerning Social Services and Aids

| | |
|---|---|
| Ministry of Health | Green Card Application |
| Ministry of Education | Dormitory, scholarship, free book and other social aids |
| Ministry of Justice | Social service and assistance for prisoners and convicted. |
| Ministry of National Defense | Health support for poor families of soldiers. |
| Disabled Affairs Administration | All Activities |
| Statue of Women Directorate General | All Activities |
| Family and Social Research Directorate General | All Activities |
| State Planning Institution | GAP(South Anatolia Project) Social support and European Union Education and Social Support Program |
| Ministry of Work and Social Security | Activities for working children |
| Ministry of Agriculture and Rural Issues | Direct income support and Social service and assistance activities for disasters |

| | |
|---|---|
| Ministry of Public Work and Settlement | Social service and assistance activities for disasters. |
| Security Directorate General | Refugees, outlaw immigrants and children |
| Higher Education Credits and Dormitories Agency Directorate General | All Activities |
| Foundations Directorate General | Social service and assistance activities |
| Youth and Sport Directorate General | Youth and scouting activities |
| Universities | Social service and assistance activities for students. |
| Mass Housing Administration | Settlement activities for low level incomers. |
| Municipalities | All social service and assistance activities |
| Province Private Administrations | All social service and assistance activities |

Source: Çetinkaya, 2012, p.119

Any institution being applied by citizen for social aid or social service firstly determines the income level of the applicant. Determination of income level basically is based on the salary/pension, ownership of vehicle and real estate property. This information is generally based on the official documents requested from the related government institutions such as Social Security Institution and General Directorate of Land Registry and Cadastre.

Secondly, information about the aids and services given previously by other government institutions to the citizen is an important parameter. According to Çetinkaya (2012) distributed structure of the social assistance and social services including many government institutions, non-profit and private institutions in addition to local governments and municipalities makes it difficult to prevent repetitiveness due to the lack of coordination.

Besides the social aids, some types of the social services require specific official documents or official records that are produced by another government institution due to the legislation. For example, services presented by MoFLSS for children and women to be protected require working together with the Ministry of Justice and Directorate General of

Security. Some types of services such as shelter for women provided by MoFLSS depend on the verdict of the court for those to be protected. That is explicit that there are good opportunities and requirement for coordination and interoperability between social service, justice and security related institutions.

In brief, social policies have a complex and comprehensive structure with all components of it, both in terms of academically and organizationally. So, it is strictly required to flourish the coordination, cooperation and integration of the participants of the social policies**.**

### 2.4.1 Ministry of Family, Labor and Social Services: Constitution, Tasks and Information Systems

Approach and the participation of the government in the area of the social policies and its sub components have been evolutionary during the last century. Many laws have been issued and renewed concerning different aspects of the social policies. Similarly, institutional structure has been re-organized many times. One of the notable steps of the near past is the establishment of the Ministry of Family and Social Policies in 2011.

Diversity of the government institutions which are mainly responsible for conducting social policy related issues have led to ineffectiveness of the services, decline in the service quality, rooted from the lack of coordination of services and policies. MoFSP has been founded in 03.06.2011 in the context of the Decree In the Power of Law 633, for the purpose of increasing the coordination and effectiveness of services in the area of the social policies by aggregating the government institutions, general directorates and managerial units under the same roof for developing, applying and monitoring to the polices and strategies concerning social aids and social services.

In 2018 summer, “Ministry of Family and Social Policies” and “Ministry of Labour and Social Security” has been consolidated and unified as “Ministry of Family, Labour and Social Services”. Central units of these two Ministries are almost same in size, in terms of number of central unit personnel and general directories. But, the provincial units of the

"Ministry of Family and Social Policies" had been quite large. About 50.000 personnels and 2000 foundations have been inherited to new Ministry.

General directorates and departments directly related with social services and social assistance, tasks given to them and the services provided by these units can be classified mainly in six groups explained below.

Directorate General Family and Society Services (DGFSS) has been constituted in order to determine the national strategies and policies for protection of structure and integrity of family against the social and cultural erosions, inheritance to the next generations in a healthy way and increase the prosperity of the family. Some of the activities conducted by DGFSS are Family Training Programs via online platform and publications, Social Service Centers and Family Social Support Program (ASDEP). In the context of the ASDEP project, it is planned to visit families in their homes and closely taking care of the problems of the family with a dedicated ASDEP expert to the family similar to Family Doctor of Ministry of Health. (Ministry of Family, Labor and Social Services, Directorate General Family and Society Services, 2018)

Purposes and the tasks of Directorate General Child Services (DGCS) are; preparation of laws and strategies concerning protection of the children from every kind of abusing and negligence, assuring the children growing healthy. Main service type of the DGCS is the Care at Dormitory Services, but the purpose is declining the number of children staying at dormitories by developing new service models which encourage the children stay and cared at family environment. For this purpose, Social Economical Support is given to the families for caring their children in their own home. Similarly, 'Adoption of Children' and the 'Protective Family Service' that base on economic support service models are presented for supporting children cared at home. (Ministry of Family, Labor and Social Services, Directorate General Child Services, 2018)

Directorate General Statue of Women (DGSW) has been constituted for determining the national strategies and policies aiming the protection and improvement of the human rights of the women, fighting against the sexual discrimination, providing the women equality at

rights, opportunity and facilities in the all aspects of the society. In this context, daytime and shelter services are provided by the General Directorate. (Ministry of Family, Labor and Social Services, Directorate General Statue of Women, 2018)

Directorate General of Relatives of Martyrs and Veterans has been constituted for determining the national strategies and policies for maintaining the memories of our martyrs, protecting martyr relatives and veterans from any deprivation and victimization. Application and assessment processes of the employment of the veterans and the martyr relatives as civil-servants by law number 3713 and distribution of the cost-free travelling cards are conducted by this department besides cultural and social activities such as tours and dinners. (Ministry of Family, Labor and Social Services, Directorate General of Relatives of Martyrs and Veterans, 2018)

Directorate General Disabled and Old-Aged (DGDO) has been constituted for developing strategies and policies for protecting the rights of disabled and/or old-aged people against negligence, exclusion and discrimination in the society. Similar to the children services provided by the DGCS, shelter and rehabilitation services are provided to the disabled and old-aged people. Additionally, Disabled Identity Cards are given by DGDO for free travel right and other rights. (Ministry of Family, Labor and Social Services, Directorate General Disabled and Old-Aged, 2018)

Directorate General of Social Assistance (DGSA) is responsible for making regulations, developing and applying strategies for conducting social assistance and aid activities regularly and efficiently to the citizens and refugees requiring social assistance. DGSA actively conducts diversity of social assistance programs covering many disadvantaged and poor sections of the society by providing financial resource. Citizens apply to the Social Assistance and Solidarity Foundations constituted in each and every district governorate. DGSA provides to the SASF's financial source and web based centralized information system, SAIS. Some of the aid types can be listed as (Ministry of Family, Labor and Social Services, Directorate General of Social Assistance, 2018):

- Food aids and food houses

- Coal aids
- Shelter aids
- Health aids
- Education material aids
- Conditional health and educational aids
- Project support for employment
- Social residence aids
- Disabled & Old-Aged People Pension with law 2022
- General Health Insurance Support
- Disabled Care At Home Pension

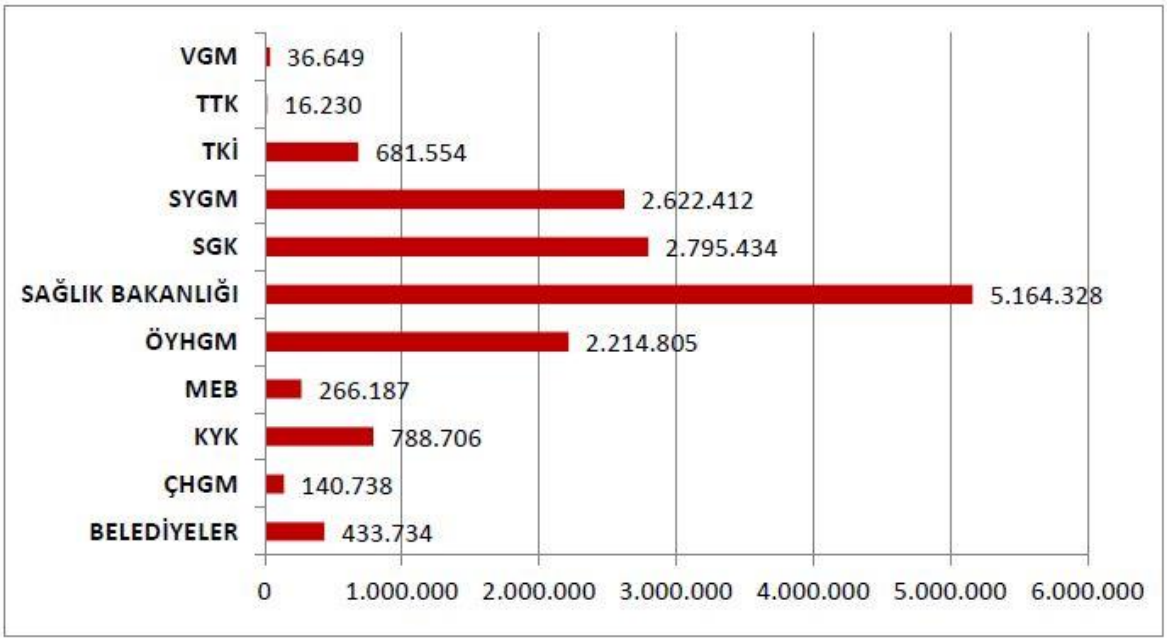



Figure 8: Social Aids Conducted by Government Institutions During 2011(İncedal, 2012)

As it can be inferred from the tables, DGSA has the most important role after the constitution of the MoFSP. Great difference between the years 2011 and 2012 is rooted from the General Health Insurance payments formerly implemented by Ministry of Health

in addition to Disabled and Old-Aged People Aids by Law 2022 formerly implemented by the Social Security SSI (İncedal, l2012).

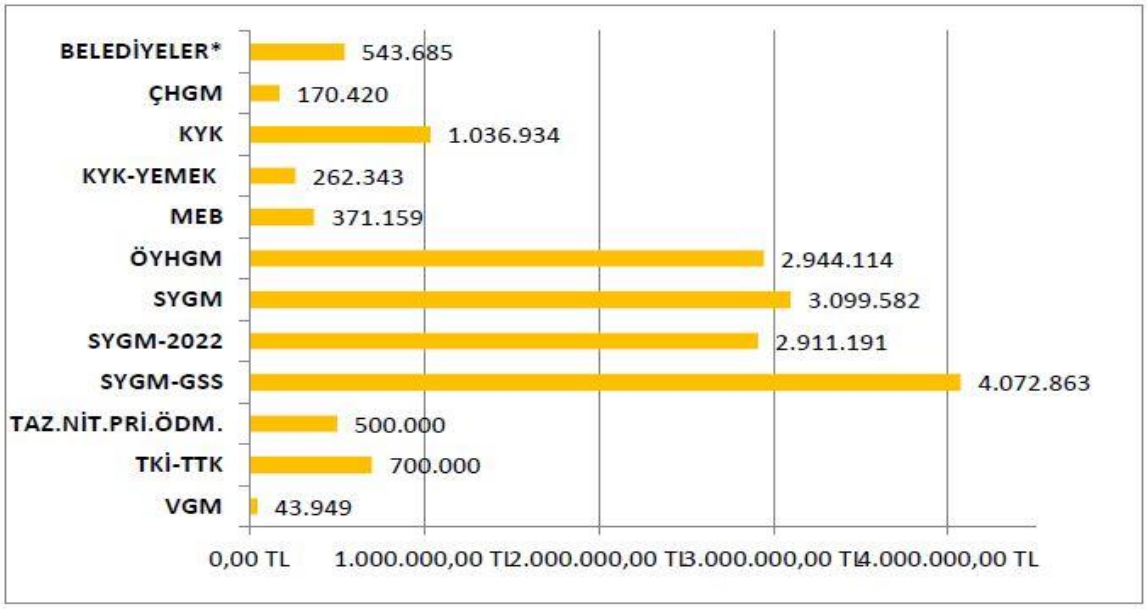



Figure 9: Social Aids Conducted by Government Institutions During 2012 (İncedal, 2012)

MoFLSS have many services that citizens can apply and benefit. There is not a web portal currently which contains all services of the Ministry, but many of the public relief and financial aids are listed in the web site of the DGSA and can be accessed via "https://www.ailevecalisma.gov.tr/sygm/programlarimiz/sosyal-yardim-programlarimiz/". Services that are provided by other general directorates of the Ministry can also be accessed over their web sites.

Besides providing social services and assistance, all of the General Directorates named above are assumed to coordinate the activities and operations of other government and voluntary organizations that are providing services in the context of social policies and cooperate with them. This means it is strongly required to implement the rules of the interoperability particularly, organizational interoperability for coordination and cooperation. Information systems are strong means of establishing and empowering the integrations and interagency information-sharing.

### 2.4.2 Information Systems of Ministry of Family, Labor and Social Services

Information systems are configured in order to support different levels of organizational requirements for planning and decision making processes. These levels are categorized as high, middle and low level management. (Caputo, 1988, p. 19-20 ; Laudon & Laudon, 2011, p.18-19, as cited in Öngen, 2014). Anameriç (2005) states that high level is the strategic level representing the long term planning and decision making by top managers of the organization. Tactical level corresponds to the mid-level management concerning current operations and decisions. Operational level focuses on decisions about planning and the application of current operations in daily and weekly basis.




Figure 10: Planning Types and Management Levels (Anameriç, 2005)

Different type of management levels and planning types requires different types of information, so information should be managed efficiently in order to provide access to the required information. This yields different types of information systems to be used for diversity of planning and management purposes. Ministry of Family Labor and Social Services has a number of Information Systems in the area of the social assistance and

social services having variety of characteristics such as size, complexity, technology and versatility.

#### 2.4.2.1 SOYBIS

SOYBIS project has been developed as an E-Government project by DGSAS for the purpose of prevention of unfair distribution of social assistance by querying the income and wealth factor related information of the citizens applied for social assistance from the data bases of other government institutions. First integration has been established with Identity Information Sharing System (KPS/MERNIS) of Ministry of Domestic Affairs in 2008. After that, many other government institutions have been integrated with SOYBIS using XML Web services. In order to accelerate the integrations, official prerequisite of data integrations, process of signing the protocols has been conducted as parallel with technical process including secure network connection between data centers and development of software code. Software development phase of the project has been implemented by IT human resources of DGSAS. Especially due to the devoted struggle and support of the top level managers up to the Ministers, progress of the project has been very fast and within 2 years about 10 other government institutions has been integrated with SOYBIS project. Some of the government institutions integrated can be listed in the table below.

Table 2: Integrated Government Agencies by SOYBIS

| | |
|---|---|
| Population And Citizenship General Directorate, | Identity and address information |
| Social Security Agency | Social security and pension information |
| Income Agency | Ownership of vehicle |
| Employment Agency | Unemployment salary |
| Social Services and Child Protection Agency | Care At Home and Socio-Economic Support |
| Ministry of Health | Green Card information |

| | |
|---|---|
| Ministry Of Food, Agriculture And Livestock | Farmer economical monetary support |
| General Directorate of Land Registry and Cadastre | Ownership of land and estate information |
| General Directorate of Foundations | Poverty pension information |
| Credit and Dormitory Agency | Scholarship information |

Source: Yeşilırmak, 2010

Reputation of the SOYBIS project have gone beyond its scope and size; even the project is considered as a comprehensive Social Aid Database, in fact the project consisted of snap queries to the data bases of other government agencies. Yet, it was a visionary project due to the number of integrations and gained interest of other government institutions. Some of the government agencies listed above have started to use the SOYBIS by signing protocols with DGSAS. "Service via Single Step Bureaus constituted in 2006 for facilitating application for social services from single point has been transformed to the "Service via Single Button" with the advent of the SOYBIS" (Yılmaz & Bozkurt, 2014, p.305).

#### 2.4.2.2 Integrated Social Assistance Information System

An action named as "Integrated Social Assistance Services" has been included in the 2006-2010 Action Plan of Information Society Strategy prepared by Government Planning Institution [GPI] (2005). In the context of this action, social aids given by Government would be unified, databases related with social aids would be integrated including disabled people data base and household approach would be applied when distributing aids for citizens. Guidance to the social aid related information would be accessed from single point.

At the beginning of the 2009, Integrated Social Assistance Information System Project (SAIS) has been initiated by the Turkey Science and Technology Research Institution [TÜBİTAK] and DGSAS. It is planned to complete the project by the end of 2013, but

during the development phase, original contract has been modified in accordance with new module requirements due to changes of the law and new tasks given to the DGSAS/DGSA.

SAIS is an information system by which social aid applications of citizens are accepted, 'house record files' are composed, income, wealth factors and socio-economic information are inquired from central data bases of other government institutions, reports of social investigation derived from house visits are recorded, decision of poverty level and aids given by 'Board of Trusties'(*Vakıf Mütevelli Heyeti*) within each SASF, bank payment orders are given and all payments are accounted by the system automatically. System is a means of transparency and accountability, because any of aid detail can be inquired from the system based on National Identity Number. Integrations with other government institutions contributed the prevention of repetition of the social aids and ensured legitimacy and fairness about distribution of social aids in addition to providing efficient use of public resources due to the removal of official writings. Çinar (2013) stated that, by 2012 February, 9 million aid applications has been taken by the system and 3.5 million of applications have been accepted and concluded by 4800 active system users. As the system used actively by SASF's, robust social assistance data base has been composed providing statistics for development of social policies.

In the research of the Öngen (2015) concerning the information systems used in MoFSP, 87% of the users accepted the SAIS as a facilitating factor to overcome their work load and they could do their job fast and efficiently using this single integrated system.

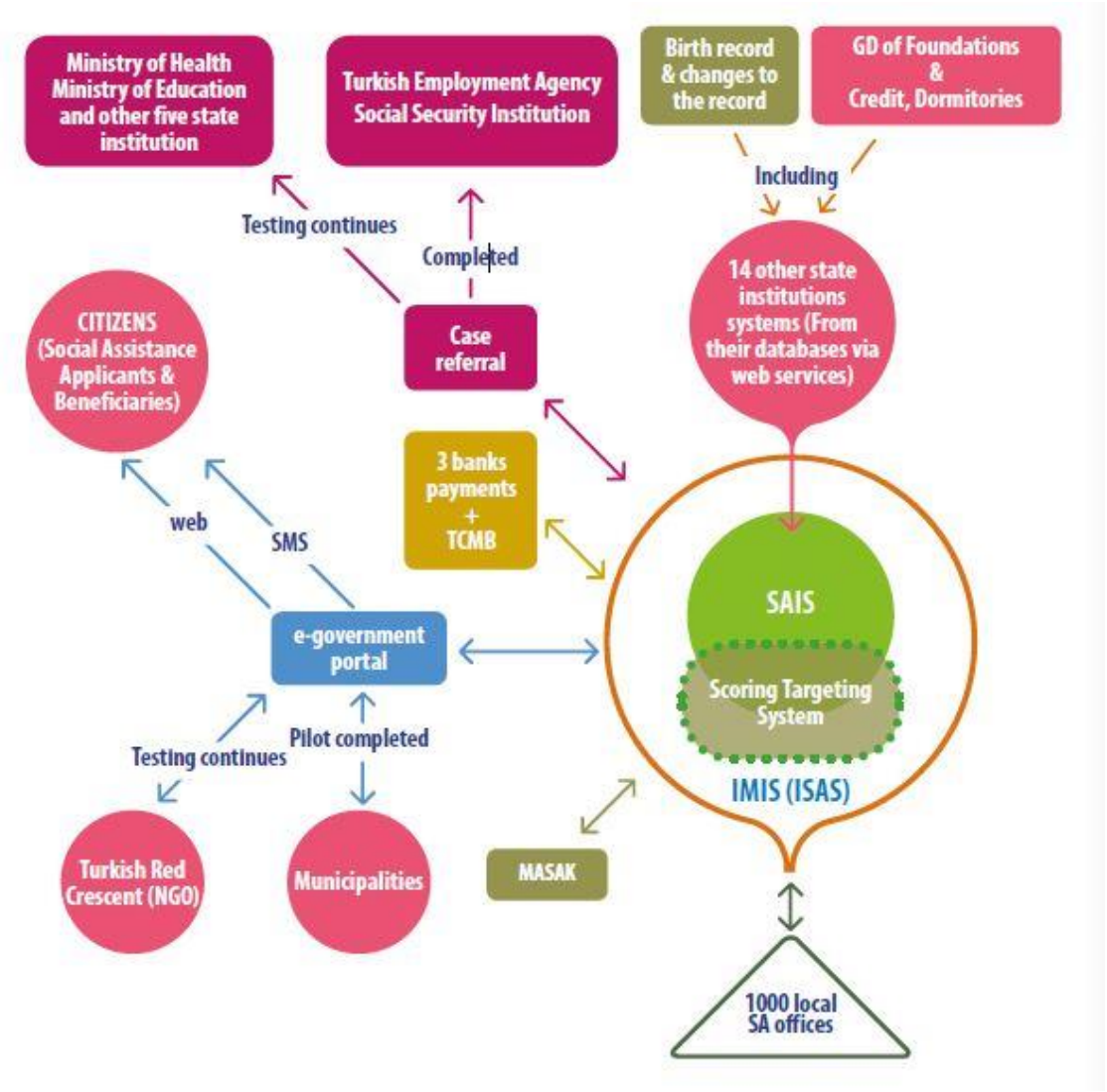



Figure 11: Data Flow Between Different Institutions (SAIS Report, MoFSP & World Bank, 2016)

### 2.4.2.3 Management Information System (MIS)

Management Information System (MIS) is the name of the specific information system developed for SSCPA. (Name is same as the general concept of *Management Information Systems*, but this is a concrete system). Development of the MIS project has been started at year 2000 for the purpose meeting the requirements of the SSCPA consisted of both enterprise resource management such as personnel affairs, official writings, audit, law,

financial management modules and social service specific processes. In this context, social service specific modules being developed are;

- Children to be Protected Module
- Disabled Citizens Module
- Old-Aged Citizens Module
- Women, Family and Society Module
- Public Relief and Financial Aid Module

After the establishment of the MoFSP, which is mainly based on the SSCPA, some of the modules have been re-organized in order to meet the new requirements until the advent of planned FIS. Besides, Personnel and the Official Writings Modules has been excluded from the project and newly developed for MoFSP with relatively new web technologies.

In the analysis document of the TÜBİTAK (2012), it is stated that the success and effectiveness of the MIS project has been affected by two main problems; user unfriendly and relatively old technology, complex end user screens and hard development process due to lack of an advanced IDE for software development. Moreover using the web services presented by other government institutions was not straightforward and required tricky and hard to implement techniques. Another problem stated in the TÜBİTAK analysis document about MIS was about analysis process and determining the requirements. The structure of main processes had been requested to change by mid to top level managers that resulted in inconsistency about collected data by the system. MIS was mainly configured for meeting the constantly changing statistical requirements of the central units of the General Directorate and too much data entry was requested from Provincial Organizations that is being considered by end user as useless staff.

Consequently MIS has been considered as an insufficient solution for both General Directorates for accessing right statistical data for policy making and auditing purposes. Additionally, provincial organizations of MoFLSS cannot use MIS effectively for managing and organizing their daily back-office operations.

#### 2.4.2.4 FIS & ASDEP

MIS, as the main information system of the MoFSP, have been insufficient about meeting the requirements of the MoFSP including producing healthy and reliable statistical data and covering the business processes operated by the central and provincial managerial and service units. Development of the FIS had been planned by the SSCPA, even before the establishment of the MoFSP in 2011. After the establishment of the Ministry in 2011 based on the SSCPA as the core institution of MoFSP on the social service side, requirements and planning phase have been rearranged and a preliminary analysis project have been conducted by TÜBİTAK in 2011-2012. But due to the managerial issues and some other factors, project has been initiated in 2015.

Main purposes of the project are monitoring the social services from 'single point', conducting all social service specific processes of the diversity of managerial units including provincial institutions, combining the social service based processes with enterprise resource management processes of the MoFSP, increasing efficiency and producing reliable statistical data for strategic and tactical policy making and planning purposes (TÜBİTAK, 2012). During the 2016, requirement analysis of modules, development of software infrastructure and main service modules were implemented.

Main difference of the FIS from MIS is that, FIS is expected to provide strong integrations and interoperability with other government institutions using the means of information technologies. It is expected that the heavy work load of the end users about data entry will be diminished by appropriate use of the integrations and this will increase both data quality and reliability of data acquired by system and give more time to end users that are mainly constituted by social workers to focus on the human and social service presentation rather than "fighting against" the information system. By 2017 summer, development stage has started and is to continue.

ASDEP (Family Social Support Project) module of FIS is planned for supporting and facilitating the field work of social workers which have been assigned families for social services, similar to the "Family of Doctor" structure of Ministry of Health. ASDEP is

planned as a mobile platform based project in the technical side and will provide the social worker all information required about the family visit, based on the integrations and formerly collected data via other modules of FIS. Çinar (2013) states that, after the establishment of MoFSP, three pilot works has been applied for the project with different technical bases. Finally, tablet based solution has been considered as the best option.

In 2016, ASDEP module was implemented technically for the fourth time as a survey-like, web based mobile application proper for tablets. By 2017 summer, test and pilot was completed and the System is planned to be in use by the end of 2017.

#### 2.4.2.5 Women Violence Database

DGSW and the Software Department of the MoFSP have started a project for constituting the Women Violence Database at 2012. In this context, a web application has been developed for recording the protective and preventive verdicts given by courts, Law Enforcement Forces and Governors. Just after the development of the system, an integration process has been started with the Ministry of Justice for querying the court verdicts automatically using web services. Verdicts given by courts constitute the highest ratio of the verdicts given by all Authorities, so it is expected to facilitate and decline the workload of the social service expert and social workers to provide them more time for social work rather than manual data entry which is also prone to error. Moreover, this integration would accelerate incredibly (from weeks to hours) the delivery of the Court verdicts to the MoFSP for taking precaution for emergency cases. Integration processes has taken much more time than the planned and finally close to be qualified as mature enough. Second phase of the integration with Directorate General Security (DGS) has been initiated after the completion of Ministry of Justice integration. This data which is manually gathered by 2017 is also actively being used by DGSW for policy making and reporting purposes. The next phase of the project is planned as delivering the Confidentiality Verdicts to all other government institutions via web services over E-Government Gateway. Currently all process about delivering those important verdicts is implemented via official writings resulting in considerable latency. Development of this system has been initiated as an independent project, but, by 2018, project is included in the FIS.

#### 2.4.2.6 Martyr & Veteran Affairs Information System

Employment of veterans and martyr relatives in government institutions and 'Free of Charge Identity Card' application and delivery services are two main services of the MoFLSS. Both of these services are operated using the "Martyr & Veteran Affairs Information System" since 2013. Rights given to the veterans and martyr relatives by the MoFLSS are based on the information that whether there exists a pension payment by SSI to veteran himself or at least one relative of the martyr. These conditions are queried from the data bases of SSI and MERNIS system. In case of the exceptional cases such as change at identity register which cannot be easily detectable from the services provided by MERNIS, citizens are redirected to the related government institutions for manual application.

#### 2.4.2.7 National Disabled Citizens Data Base

Disablement rate of the citizens is decided by the Health Council Reports prepared by authorized hospitals, but there is not any central data base within the Ministry of Health that holds the data of all disabled people in Turkey. Institution of Disabled People has initiated a project for combining the disability data from a diversity of government institutions such as SSCPA, SSI and Ministry of Health presenting services to the disabled citizens and gathering their disability data.(Candemir,2012) Yet, it cannot be claimed that there exists a reliable data base containing all disabled citizens due to the possibility of citizens which have never applied to Disability Report or used his/her report for any state service.

After the constitution of MoFSP, most of the source databases of the project have been included in the context of MoFSP except the disability reports data gathered from Ministry of Health. In fact the project has not been accepted as successful and never been used for facilitating the lives of disabled citizens in practice except some statistical purposes.

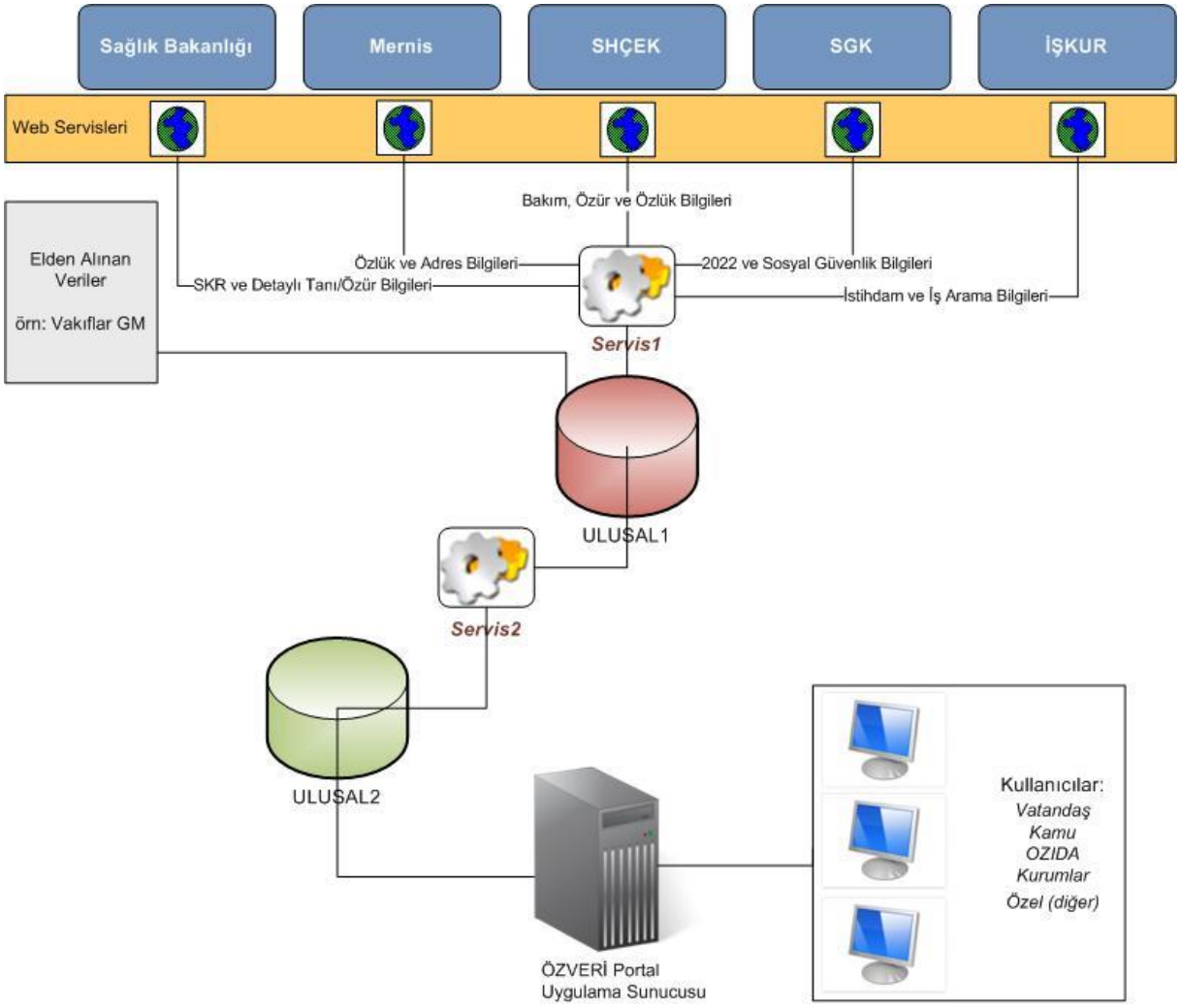



Figure 12: National Disabled People Database Architecture (Candemir, 2012)

Main obstacle in front of the disabled people for benefiting from government services that depend on disability report via E-Government Gateway is the lack of the reliable database including all disability reports. Ministry of Health has a database that is compiled from the information systems of hospitals that are authorized to give disability reports. But even the Ministry of Health does not regard those records reliable enough to be attributed for official processes such as 'Disability Care Pension'. Because of that reason, it has not been possible to deliver an integrated service on the E-Government Gateway. But it is planned by Ministry of Health to implement a new system supported with E-signature to create a reliable Disability Database before the end of 2017(Ministry of Health).

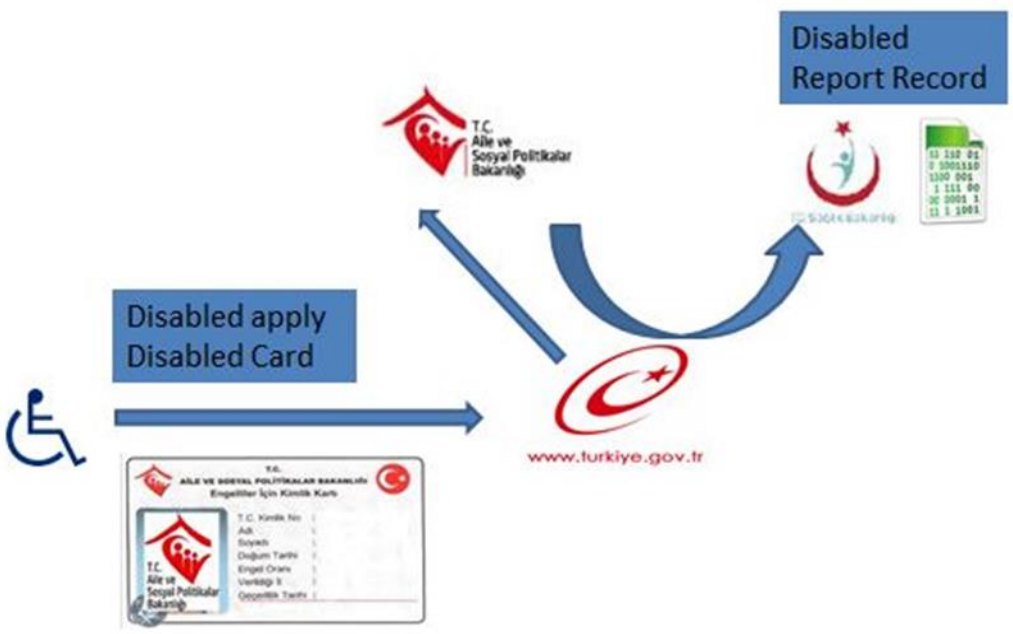



Figure 13: E-Government Gateway & Integrated Services For Facilitating Lives Of Disabled Citizens (Source: Authors own creation)

During 2018 National Disabled Citizens Database project has been reorganized and developed within the FIS and also included the data of the Ministry of Health with web service integration. But it is still not possible to verify the validity of the Disabled Report with this system with 100% certainty, unless Ministry of Health would provide verified and e-signed data. This data has not been provided by Ministry of Health by the end of the 2018.

### 2.5 Interagency Information-Sharing In the Context of Social Policies

Use of ICT within social service agencies is no longer the issue. Rafferty (1997) states that ”the extreme positions of whether ICT should or should not be used within social service agencies are no longer the issue. It is clear that social welfare work requires the support of ICT to progress in an information rich environment. The concentration now is on how this can best be achieved“. Social services and aids differ from many other sectors; because it touches to the human. Moreover target section of the society is generally socially excluded.

### 2.5.1 Collaboration at Child Care and Other Social Areas

Since the beginning of the new millennium, collaborative case management has become a hot topic in the context of social services. Complex nature of the social problems and policies require the collaboration of many government agencies, each responsible for a different section of the problems such as health, poverty, social security, education, employment and so on. According to the Kunkel & Yowell (2001) collaborative case management is the cooperative delivery of social services to common clients. In this sense, collaborative case management which means working in coordination and closely implies that every institution working on a case of an applicant should share information about the case in order to build a monolith approach. It requires a fundamental shift from policy-based decision making to information-based decision making. Information sharing is a critical tool for collaboration and cooperation and most elegant way of information sharing is integration of the well-structured information systems.

Kunkell & Yowell (2001) explain the vision and the future of the collaborative case management using a fictional social worker and the daily working schedule. Besides the other IcT stuff such as scheduling and time management, eligibility determination and other tools including hardware and software, it is strongly emphasized that it is very important accessing and using the information that are kept on the collaborative partner agencies' databases including legacy systems related with the cases on which social worker is working. In this way, it is expected to increase efficiency both in time and effort for social worker and citizen to be served. Collaboration requires a strategy for sharing information among existing information systems. When the social worker was given the capability of viewing information across agency lines, she was both encouraged and concerned. Increased accessibility to information allows a holistic approach to providing services to a family.

Sensitive and touching to the disadvantaged portion of the society necessities sensitive work both in practice and academically. But, sensitive work should not mean share any information with any other partner. Richardson & Asthana(2006) emphasize the

overlooked importance of the interagency information-sharing in the area of the social services such that:

> A substantial body of work has explored the role of different barriers to partnership working both professional and organizational at different stages of the collaborative process, from joint decision making to commissioning and provision. However, within this field surprisingly little attention has been paid to the specific issue of inter-organizational information exchange. Following a number of high profile cases in which inadequate information sharing across public service organizational boundaries has contributed to the death of individuals, issues around the keeping and sharing the service user information have come to the fore. Indeed there has been a tangible sense of urgency about the need to improve the way information is exchanged. Against this background a better understanding about the factors enabling and constraining inter-organizational information exchange is required. (p. 659)

As stated by the Öngen (2014), one of the most well-known high profile cases is the Victoria Climbie Inquiry and the related report prepared by Lord Laming in 2003. Death of Victoria Climbie who was abused and then killed has become a striking example which inflamed the debate concerning collaboration and information sharing between different Government Agencies and resulted in development of integrated systems such as Risk of Offending Generic Solution (RYOGENS) and Integrated Children's System (ICS). Child care is one of the most sensitive areas of the social services in which cooperation and information sharing is inevitable.

Expectations from collaboration is quite high, but the planning and the implementation phases should be designed carefully both from managerial aspect, official infrastructure and also technical infrastructure. Van & Baum (2002) states that "Interagency collaboration has many challenges such as trust, for being a new concept. Besides the other factors, mostly based on human relations and professional barriers, poor information flow and sharing of information are critical barriers in front of collaboration." (p.264) In fact, information technologies provide many opportunities in the era of the internet for some of those challenges. But, benefiting from IT opportunities has also its own difficulties and critical points.

### 2.5.2 Legal Issues and Drawbacks about Privacy and Information Sharing

ICT is an enormous potential facilitator mechanism for cooperation, collaboration and particularly information sharing. It is stated by Hudson that, 'integration of services clearly requires a freer sharing of data between agencies' and it is here that ICT's are fulfilling a crucial role.(2002, as cited in Garrett 2002, p.525). But, risks and reluctances are also considerable. According to the Keymolen & Broeders (2011), besides the explicit advantages and issues that make almost compulsory, there are some controversial points about use of ICT for storing and information sharing between agencies. In the UK, scholars have critically analyzed the introduction of information sharing and reporting systems, especially since the 2004 Children Act.

In general, interagency information-sharing and cooperation require a legal basis such as laws and protocols. On the other side, information and the way information stored are also criticized issues.

As stated by Garrett(2005), in the context of the "Every Child Matter " green paper published by UK Government , the aim is for every locality to have its own database or electronic 'hub' which will include 'a list of all the children living in their area' and other 'basic details'. However, the plan for 'local information hubs', a new system that will facilitate electronic collating and sharing of information about children and families, has been subjected to a good deal of criticism from children's rights groups and organizations as diverse as the Women's Aid Federation and the British Medical Association. Indeed, one respected child care organization, the British Association for Adoption and Fostering (BAAF) has claimed that the databases will amount to the 'virtual electronic tagging of families'.

In Turkey, every Ministry and institution hold its own child database depending on the service it provides. For example, Ministry of Education has its own student database. MoFLSS also records the children for paying periodic conditional education aids. Success and attendance information continuously flow between two Ministries for checking whether the aid conditions are met.

For UK, Garrett (2005) states that;

> The 'long term vision' is that information will be stored and accessed electronically by a range of agencies. The databases will be based on national data standards to enable the exchange of information between local authorities and partner agencies, and be capable of interacting with other data sets'. (p.537)

In Turkey, Law for the Protection of Personal Information is a hot topic and claimed to be a preventive factor for interagency information-sharing between related agencies.

According to the Wallace (2007), cases such as Climbie led UK government to legislate to improve inter-agency co-operation and hence, implicitly, information sharing and inter-agency reporting arrangements. Section II of the Children Act (2004) for example, created a new statutory duty for a range of bodies to safeguard and promote the welfare of children. In giving effect to this, the Government has created the legal capacity to develop information sharing databases.

In Turkey laws regulating social service area does not explicitly or strongly emphasize the interagency information-sharing and reporting. In general, institutions send an official document to the related government organizations. But all those statements are as if just to "inform" the counterpart organizations officially rather than taking action in a collaborative way.

Wallas (2007) notes that "about the legal infrastructure for sharing information, some of the countries like USA, Australia and Canada have mandatory reporting laws about child protection and abuse. Some other countries including Denmark, Finland, Sweden and Israel have been working on adopting such mandatory reporting legislation". (p.4)

Opportunities provided by the Information Technologies enormously facilitate to access the private and sensitive data especially when not designed accordingly. Data is not stored anymore in vaults or well protected secure rooms at a specific single location. Keymolen & Broeders (2011) state that "using ICT in social policy is not just a power-neutral digitalisation of existing processes, but that it alters the character of these processes and brings along unforeseen functions and risks".(p.58)

### 2.5.3 Information Sharing Model Proposition by Richardson & Asthana (2006)

Four level information sharing model has been proposed by Richardson and Asthana (2006) in order to find a compromise between the pressures for exchanging information in the interest of service user and the pressure to protect the privacy lead to four possible outcomes with regard to information sharing. In the 'Ideal Model', information is exchanged and shared appropriately and when there is a good reason, but equally withheld if necessary. This level provides low risk of breaking confidentiality and low risk of neglecting to pass on important information. 'Over-open Model' implies that the information is withheld appropriately when there is a good reason but shared without requiring a good reason. This model may cause the high risk of breaching confidentiality and low risk of neglecting to pass on important information. In the 'Over-cautious Model', information is shared when there is a good cause, but withheld without o good reason, resulting a low risk of breaking confidentiality but high risk of neglecting to pass on important information, in contrast to the 'Over-Open Model'. Finally, in the 'Chaotic Model', neither the important information is shared appropriately with a good reason, nor it is withheld when required due to a good reason which results in breaching confidentiality and neglecting to pass on important information.

Implementation of these models is affected by many factors including, legislation, professional culture, information system infrastructure, organizational structure of the government.

### 2.5.4 Social Exclusion, Digital Exclusion

E-Government, digital and the social inclusion & exclusion are closely related concepts. Phillips defines 'social inclusion', in contrast to social exclusion, the degree to which citizens are, and feel, integrated into the different relationships, organizations and sub-systems that constitute everyday life. (2006, as cited in Chirara, 2016). Seale, Draffan & Wald (2010, as cited in Chirara, 2018) defined 'digital inclusion' as a phenomenon where marginalized citizens have equal access to and meaningful participation in social and civic activities using digital technologies.

According to the Chirara (2018), it is argued that E-Government adoption improves and contributes to the broader goal of improving social inclusion through digital inclusion. It is also noted that the link between digital and social exclusion was more pronounced when a citizen was poor or lacked the requisite skills to use the Internet. Taşcı (2007) also relates the social exclusion with poverty via social assistance by stating that: social assistance is regarded as a means of the prevention of social exclusion. In the definition of the social assistance, one of the constituents of the target groups of social assistance is stated as "people who has the danger of socially exclusion".

Chirara(2018) exposes the risk of digital & social exclusion such that:

> In the UK, there is a Digital by Default (DbyD) strategy where the government aims to deliver public services through the Internet. One such DbyD services is the Universal Credit (UC) that is UK government's Social Welfare Reform where social welfare benefits are claimed online. For those offline citizens, this has the potential to reinforce social exclusion due to the unintended consequences of digital inclusion (p.15)

Turkey is also struggling to provide social services in a digital way over E-Government Gateway, exposing the risk of augmenting social exclusion. Although it seems still far away such a scenario that citizens can access some government services only via E-Government Gateway, trends are going towards such a point within the Turkey. This may reinforce social exclusion due to the unintended consequences of digital inclusion.

Target groups of the MoFLSS are more prone to be socially excluded. MoFLSS tries to find ways of providing its services to the disadvantaged citizens using IcT opportunities. Two of the ways of realizing this goal are integrating with other government institutions and using E-Government Gateway for providing Government-to-Citizen services. In the area of the social policies, interagency information-sharing via system integrations are prone to errors that would result in failures about distribution and delivery of social aids and other rights given to the citizens. In many cases, citizens that are socially excluded cannot 'understand' and object to such a 'system failure' resulting cutting off their aids. That is why, it is critical to be more and more meticulous while working on integrations

both for G2G interagency information-sharing and also G2C services provided over E-Government Gateway.

### 2.5.5 A Superficial Glance on Situation in Turkey

Especially for last two decades, government agencies in Turkey have been very eager to use opportunities presented by Information Communication Technologies. They all have been developing information systems for a diversity of purposes including boosting efficiency, accountability and transparency and decreasing the bureaucracy. In the context of the social policies, information systems for health and social security have been used for many years. In the area of social services, there has been a partially unsuccessful attempt for planning and developing MIS since 2000's. In turn, social assistance area has a strong, central information system that is being used extensively and successfully by every SASF all over the country for last decade. One of the most important factors that made the difference between failure and success is that MIS was designed as a 'closed system' in which almost every data entry should be made manually and there exists any connection and information sharing with other government agencies related with social policy. In turn, Social assistance IT system has many connections over 15 other government agency information systems. .

In our county, there is no collaborative case management approach yet for solving social cases and problems, but, interagency information-sharing has been used in an increasing fashion for better and fair delivery of social services and aids. Main concerns of this research are current status, problems and expectations from the information sharing processes in the area of the social policies. E-Government concepts, role of the E-Government Gateway about information sharing, data protection laws, and contribution of those integrations to a collaborative case management approach are also mentioned.

# PART-3

# 3. RESEARCH SECTION

This section is mainly dedicated to discuss research methodology and analysis of research results. At the beginning of this section, limitations, methodology, data collection methodology of the research is explained. After that, results of the research and evaluation of the collected data via interviews are explained.

## 3.1 Methodology of the Research

Action Research is selected as the primary methodology during the research. Action research methods have been accepted as valid research method in many applied fields such as organisational development, health and education. According to the Gilmore et al. (1986), Action Research aims to contribute both to the practical concerns of people in an immediate problematic situation and to further goals of social science simultaneously. Thus, there is a dual commitment in action research to study a system and concurrently to collaborate with members of the system in changing it in what is together regarded as a desirable direction. "Researcher, unlike in other disciplines, makes no attempt to remain objective, but openly acknowledges their bias to the other participants. The term 'Action Research' covers a number of related research approaches but all have in common that they should 'effect desired change as a path to generating knowledge and empowering stakeholders" (Bradbury, 2010, p.3)

As the information science related researches are more relevant to practice, Action Research methodology is convenient for information systems related researches (O'Brien, 2002). Research by Bolivar, Munoz and Hernandez states that Action Research

methodology has been used in technological innovation and modernization in public administration management, e-services and accountability, transparency and dissemination of information subjects related to E-Government (2010). Information technologies and Action Research methodology are expected to converge; IcT is a facilitator for action research for providing better work group opportunities and also being used for employing Action Research techniques to facilitate large-scale changes to their information systems.

In this research, Researcher and the other actors included in the research are also member of the MoFLSS. Researcher has the title of head of software department during the research and also is one of the developers of SOYBIS project. Researcher have also participated and contributed the integrations of the SAIS and Family Informayion System. Total experience of the Researcher about integration is about 9 years starting from 2009 and covers the terms of DGSAS(2008), DGSA&MoFSP(2011) and MoFLSS(2018). Other participants of the research have all participated in the integration processes either with managerial/business or technical roles.

### 3.2 Data Collection and Analysis

Action Research does not limit or impose a specific data collection technique. Different methods can be used by the researcher to solve the problem that action research concerns. According to the O'Brien, these various methods, which are generally common to the qualitative research paradigm, include keeping a research journal, document collection and analysis, participant observation recordings, questionnaire surveys, structured and unstructured interviews, and case studies (1998). During this research, qualitative data collection techniques will be used. According to the Yıldırım & Şimşek "qualitative research is defined as a technique in which qualitative data collection techniques such as observation interview and document analysis are used, events and perceptions are revealed in their natural environment in an integrated and realistic way." (2008, p.39, as cited in Karataş, 2015). In this research, data has been collected via in-depth interview technique by using the semi-structured interview form including open ended questions concerning problems, benefits and key factors about the interagency information-sharing, E-Government interoperability and integration processes of the MoFLSS. In-depth interviews

are suitable for different purposes such as understanding and unveiling the habits, beliefs, attitudes and emotions in addition to reveal the experience and wisdom of the expert of the subject in depth. Semi-structured interview form has been composed based on the literature review and also field experience of the Researcher that is an employee of the MoFLSS. After the composition of the interview form, pilot interviews have been applied and interview form has been revised accordingly. Besides the data derived from interviews, Researcher has examined official documents, data sharing protocols and also participated and observed the integration processes.

Interview form includes 10 questions concerning the technical, managerial and legislation aspects and the benefits of the integrations. Besides that, personal information of the interviewee related such as position and experience are also included. Semi structured interview form has been applied between 2017 August and 2018 April, to 13 personnel of the Ministry working for diversity of divisions including IT department, core service units such as child, women and poverty affairs. Interview has taken from ten minute to about half an hour. Answers given by interviewees have been recorded and transcribed by the Researcher.

### 3.3 Analysis of Research Results

In the first of part of the 'Analysis of Research Results' section, document overview assessments, observation of the official and technical processes, case studies and unstructured informal interview impressions are evaluated in addition to personal experience of the Researcher. In the second part, answers of questions included in semi-structural interview form applied to the employee of the Ministry are investigated in detail and checked against the first part of the research. In the third part, contingency analysis is applied.

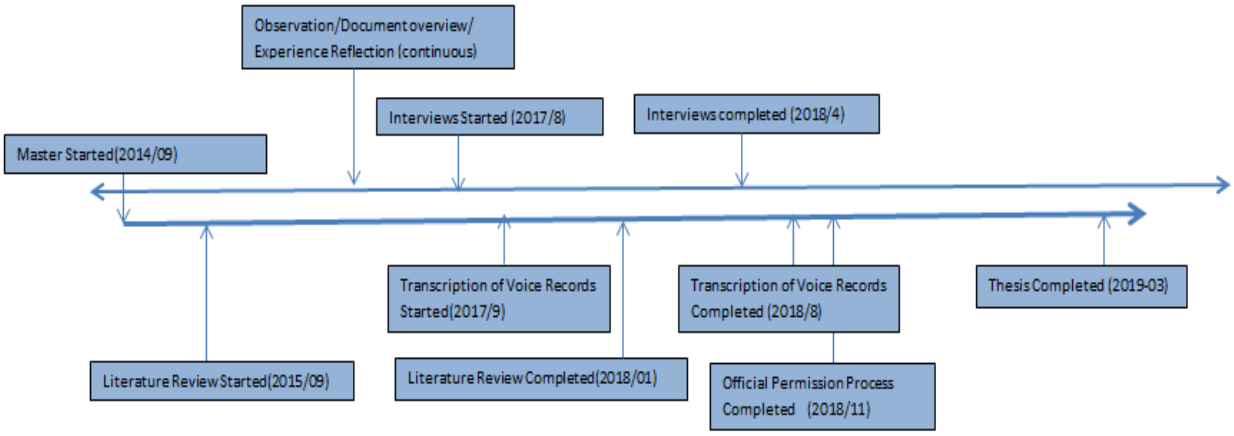



Figure 14: Timeframe of the Research

### 3.3.1 General Analysis Over Experience and Observation

Interagency information-sharing and the data integrations with other government institutions has been a hot topic for the MoFLSS. Even before the constitution of the Ministry in 2011, integrations had been paid extreme attention by Directorate General Social Assistance with a visionary approach for the purpose of empowering the decision mechanism about poverty level. Researcher have participated and witnessed many of the integration processes during his work time for the DGSAS and MoFLSS. The direction of the integrations that MoFLSS has been involved is mostly towards inwards by which information is queried from other government organisations. Yet, especially in the area of the social assistance there is a trend and request from other government organisations for querying social assistance information provided by the MoFLSS. Although none of the integration processes are exactly same with each other, almost all of them share some common characteristics and steps taken. These steps can be listed as;

- Preliminary & Official Prerequisites
- Network infrastructure (VPN) & Accessing and preparation for internal use.
- Developing the software code for consuming service & Deployment

Each step listed above has its own characteristics in terms of problems frequently encountered and required specific approaches for solutions. Steps will be investigated in detail below in the light of the past experiences and actions taken during research phase including last 3 years.

#### 3.3.1.1 Preliminary & Official Prerequisites

This phase generally consists of decision of the integration, determination of the required data and the related organisation that will be integrated, meetings for clarification of the process, official writings and as a final point, signing the protocol for defining the procedures and laws to be based on. The ways of the official processes vary by the feature of the integration, but in general, two main issues about this phase are "Which unit of the Ministry will be responsible for the secretariat?" and "What will be the content of the protocol to be signed?" Answers of these questions are more straightforward when the integration and information sharing request is made by the units of the MoFLSS, or, the subject data and information of the integration process requested by other government institutions is more specific and directly related with a specific unit of the Ministry. In such cases, secretariat of the official processes including preparing and signing the protocol are handled directly by the respective managerial unit of the Ministry such as DGCS, DGSW or, DGSA. But, the institutions that are eager to set up integration and sign a protocol with the MoFLSS encounter with the problem of finding the right counterpart to work together when the subject is related with more than one unit of the Ministry. During the research period, Researcher has witnessed two solid examples of the aforementioned problem. In the first case, Ministry of Labor and Social Security wished to sign a data sharing protocol for prevention of informal economical activities containing four different issues and managerial units of the MoFSP, but they were not able to find the right counterpart to conduct the secretariat of the process for a long time. In the second case, Directorate General of Foundations has attempted to sign a protocol for querying all types of social aids provided by MoFLSS, but ended up just a section of the social aids provided by the DGSA and missed the social-economical support as a specific type of social aid provided by DGCS.

There are some managerial units that are prominent candidates of conducting secretariat task for signing protocol relevant to more than one unit of Ministry. Strategy Development Directorate (which also has a sub-unit named as Management Information System) is responsible for coordinating the issues that are related with more than one unit of the Ministry. Legal Consultancy Department is also a natural candidate for being in the centre of the legal/official issues. Finally, IT department is also very engaged in the process of information sharing works with almost every unit in the Ministry. But any of those units told above regard itself as directly responsible for coordinating and conducting secretariat of multi-stakeholder information sharing protocol signing process.

MoFLSS consolidates many branches of the social policies that are strictly related with each other. Due to the complex nature of social incidents, cooperation and collaboration with other government organisations is not limited to a specific unit of the Ministry. This situation also affects the integration and information sharing process. In fact, in many integration cases, data being requested by a unit of Ministry from any government institution is also useful and usable for another unit of the Ministry. For example, DGSAS had achieved a lot of integrations with other government agencies in the context of the SOYBIS project during years 2009-2010. During this period official processes including meetings, official writings and signing protocols has been conducted actively parallel with the technical work for accelerating information sharing, more specifically querying information for income level determination. After the constitution of the MoFSP in 2011, it has been argued that whether the context of the protocols formerly signed by DGSAS could be used by other General Directorates functioning in social services, during the planning phase of the FIS which also includes some business rules for determination of income level. According to the Legal Consultancy Department of the Ministry, due to the Decree in the Power of Law 633, all protocols signed by the units before constitution of the MoFSP has been accepted as the property of MoFSP and could be used actively by other General Directorates. In fact, even if the protocols signed before has been accepted as the property of Ministry, contents of the protocols had not been suitable for use because of the limitative statements such as explicit names of the information systems of parties. Yet, there have not been clear boundaries between pure social assistance provided by DGSA,

and the social payments in the context of social service provided by other General Directorates.

Researcher has observed a similar case for an integration process concerning the querying and verifying the graduation information from Council of Higher Education. This information has been required for the first time for a specific project of DGCS concerning employment processes of private kindergartens audited by Ministry. During the protocol signing process, draft of the protocol has been sent to IT Department to take the opinion for convenience. It has been viewed by the Researcher and noted that the content of the protocol had constrained the integration just for the use of DGCS for kindergartens employment procedures. It has been advised to the DGCS not to limit to their specific requirement, instead, signing the protocol for the name of Ministry rather than General Directorate level. Nevertheless, advises have not been taken into consideration due to the time constraint and dictation of its own protocol format by Council of Higher Education.

On the other hand, in the context of the another integration process conducted by MoFLSS with the Directorate General Security (DGS) there has been a good example of coordination between two General Directorates of the Ministry, namely DGCS and DGSW. During first few meetings at the beginning of the official process, DGCS has conducted the process to sign the protocol in the context of lost and found children information. In this stage, Researcher has asked to the DGS authority that whether there exists any other information sharing opportunity with MoFSP and conceived that DGS could share his information related with the violence against women which is exactly existed in DGSW's long term plans. Immediately being informed by the Researcher, DGSW has also participated in the meetings for clarification of information sharing process. Context of the protocol has been extended to meet both General Directorates and it has been decided that protocol would be signed at Ministry level rather than General Directorate. Moreover secretariat role has been undertaken by the DGSW which has been lately included in the process. Similarly, just after the establishment of Ministry in 2011, IT department has signed a protocol with Ministry of Justice for querying the judicial sentences' given for children protection and women protection. In fact, the role of the IT

Department is to integrate the systems technically, but in this case Head of IT Department has crossed beyond its borders by taking initiative for accelerating official process and conducted secretariat.

Information sharing protocols signed between the government institutions have a similar structure and sub sections. These sections are generally composed of purpose, scope, legal basis, network infrastructure and legal responsibilities. Many of the protocol examples reviewed by the Researcher has also included an appendix for detailing the format and content of information being shared. Some of the government institutions have a standard protocol draft for adapting and editing the sections above according to the specific information sharing purposes. It seems as a good technique for accelerating the official process to take less time. As a better solution, Researcher proposes a less detailed and more flexible protocol text at each section in order to suit up constantly changing environment of the governance. For example, in the context of the “”legal basis” section, it is not really necessary to attribute a specific law number for an information sharing process, because the laws are prone to change and in this case protocol signed before the law change would be useless and should be renewed.

Similarly in many of the protocols, information being shared is expressed openly with exact boundaries. Moreover, in some cases the names of the information systems are also included in the text which is also very prone to change. It may seem that expression of such information in the protocol text may clarify the process, but this is also a limitative factor in such a constantly changing environment. In fact, there is simple but effective way of preventing such risks by placing a clause stating that the “format and the content of the information being shared may change by the common correspondence of parties via official writings”. Placing such a clause in the protocols strengthens the both side against the changing and advancing information sharing requirements and lessens the bureaucracy.

#### 3.3.1.2 Accessing the Service/Information and Preparation for Internal Use

After the official phase has been completed, network infrastructure should be established in general. Many of the integrations have been made using web services or FTP file

sharing protocol. Due to the security reasons, almost all of the government institutions prefer to share their services by secure network infrastructure rather than directly exposing Internet environment. In some exceptional cases, where the services are open to the internet, IP restriction is applied for augmenting security. But in general, institutions prefer setting Virtual Private Network (VPN) for more secure communication. In this way, a virtual tunnel has been constituted for data transfer. For setting up a VPN tunnel, network teams of the two counterpart organization should work closely and remain in contact. Government institutions have been using diversity of network communication and security servers supplied by different vendors. That becomes a problem in some cases, particularly when the network team that is responsible for managing the network infrastructure is not experienced.

Network infrastructure is almost the most important and high point step for accessing the partners' service, but it is not the only parameter. In some cases, authorization of the application server, database or web service to be accessed may be an obstacle for accessing the service. Discovering the service access problems may take a long time if there is not a thorough coordination between the technical teams of counterpart organizations. Similarly, coordination is required between the teams such as network, software, database of each partner. Such a coordination problem has been witnessed between the SAIS of DGSA and Turkish Coal Authority (TKI). Integration between two systems is intended to carry out coal request of SASF's from Turkish Coal Authority and return back the status of request and delivery information. It has almost taken 6 to 9 months to integrate system due to the network accessibility and some other technical problems. TKI had delegated its network related technical staff and software development business two different IT companies. Moreover coal aid affairs related unit of the DGSA had been quite unaware of the process. At this point, Researcher has conducted a series of phone meetings, mail traffic in order to coordinate all sides of the integration process including the SAIS developer team, DGSA, network staff of each institution until the integration is completed and deployed to the live environment.

Another constraint requested by some government institutions for network infrastructure of integration is the insistence for setting a dedicated line between parties. Dedicated lines increase the security of information flow and separate the traffic from internet but it requires procurement process if the institution is setting up for the first time. Such a case has been encountered while integrating with Ministry of Justice. After a series of meetings and official writings taking a few months, MoFSP has hired a dedicated line in order to be able to communicate the networks of the MoFSP and Ministry of Justice.

At this point, Kamunet project and G2G services over E-Government Gateway aforementioned before in this research are supposed to solve many of the problems above. Once any organization setting up a connection with E-Government Gateway, than it will be a straightforward and easy procedure consuming the service provided by any other government institution over E-Government Gateway. All government institutions are supposed to be included in Kamunet infrastructure until the end of 2017. MoFSP is readily working for adapting Kamunet infrastructure and serving the web services over the TÜRKSAT G2G services. Recently an integration request made by Directorate General Foundations have been implemented just in a few minutes, by just declaring an authentication ticket including username, password and IP on E-Government Gateway normally would take months of time.

#### 3.3.1.3 Developing the Software Code for Consuming Service & Deployment

General purpose of the integrations as a crucial step of organizational interoperability can be considered as using the information and the data belonging to another organization as part of a business process. In some cases, a process is initiated by one organization and completed by another. An example for the first case is the social security inquiry of the DGSA as part of the income level determination and decision making for continuity of some types of regular aid. For the latter case, payment lists composed within the SAIS of DGSA are delivered to the system of the related bank or PTT that will pay the aids to the citizens via FTP integration and return back states of payments.

In general, integrations are implemented by developing web services that are querying a database fed by one or more information systems. In some cases, web services are readily available as being developed formerly for similar integrations. Especially, major government institutions that have deep-rooted history and institutional background and also have a sedentary IT infrastructure can operationalize their web services in-progress swiftly. This situation is advantageous in terms of time; services are readily available, generally strongly documented and having been tested by many other government institutions before. But there are also some side effects of this situation. Services that are readily provided may not be easy to use and exactly match with the requirements of the Ministry. Moreover, such services provide batch data which consumes the bandwidth inefficiently and should be carefully interpreted. For example, DGSA requires the land and estate registry records from Directorate General of Land Registry and Cadastre. Brief information including size, location, type and share proportion is enough for estimating the value of the estate approximately. But, for compiling such relatively basic information, many consecutive web service method calls are executed and interpretation is required after each query for the next service call. This process also requires a deep understanding about the data structure and the meaning of the data for briefing the required summarized data about estate ownership.

One of the most important integrations of the MoFLSS is the social security integration with the SSI. Social security information is extensively used for income level determination for many types of social aids and social services. Moreover due to the Act on the Promotion of Social Solidarity and Aids (Law number 3294) some of the main types of the regular aids, which are benefited by millions of citizens, directly depend on the social security status of the citizens. If there is an active social security record of the citizen then the aids should be stopped immediately, or just after a period of time. Thus, social security status of the citizens is periodically checked from the databases via the web services provided by the SSI. The problem is that social security status of the citizens cannot be classified simply just as active and inactive easily. In order to do that, encoded and enumerated data should be understood by the consumer of the service both from technical and business perspective. Some of the codes and phrases can be understood from

an outside point of view, but meaning of some of the codes cannot be inferred in anyway without the assistance of an expert about social security legislation. It is not always easy to find the right person that will give you the right answers. Technical staff does not know the real meaning of the data, and generally redirects to the legislation units. There are many legislation units related also with each other and they are also prone to redirect to another unit. Issues such as constantly changing legislation of the social security, distributed organizational structure of the Institution before 2005, complex and blurry nature of the social security status make it very difficult to "understand" and determine the status of the citizens. Web services served by the SSI is claimed to provide all information for determining the status of the citizens, but it is a challenge to extract the social security status of the citizens from those services for every citizen, truly.

In fact, for many of the records, social security status can be caught correctly with a high percentage of success if it exists; but the total number of the social assistance beneficiaries checked periodically is so high that, even a very low percentage of failure causes the stoppage of high volumes of the aids unjustifiably. For example, 0.1% percentage means the cut off about 15.000-20.000 salaries. Such problems are encountered particularly when the new versions of the web services of the SSI are deployed, or data or the data structure used by the web services are updated for some reasons such as application of new business rules. For example, some citizens benefiting from regular old-aged aid being queried from SSI had no social security record for last four years according to the data being queried from the SSI web services. But during a regular check from SSI web services, exactly same as the previous queries, suddenly many of the citizens have been caught as if they have an active social security record and so, salaries have been stopped. After an investigation on the case jointly by SSI and DGSA staff, it has been revealed that problem was due to an update on the social security data of the citizens that had paid some insurance charges many years ago for some period and then changed the social security type or status for some reason. Noticing the problem was only possible when the citizens had applied to SASF for asking why their salaries had been stopped suddenly and it was also hard to recover and re-pay the salaries due to the strict business rules of the SAIS and the DGSA themselves.

Another notable integration of the MoFLSS is the integration with the Ministry of Justice for protective and preventive court verdicts against women violence. Purpose of this project is to form the women violence database by consolidating the data of Ministry of Justice and law enforcement agencies such as Directorate General of Security and the Military Police Commandership, and using the data to accelerate service time and take immediate action against women violence and prevent murders. Integration process has been started in 2013 by signing the data sharing protocol and then establishing the secure network infrastructure about in one year due to the procurement process for dedicated secure line stipulated by Ministry of Justice. But the real challenge has been translating and harmonizing with the data structure of the National Judgment Network Project (NJNP/UYAP) system of the Ministry of the Justice for meeting the expectations of the MoFSP. Main problem has been that the Ministry of the Justice has categorized the data as defendant and the plaintiff in all cases mainly, whereas MoFSP has expected to differentiate as "appliers of the violence" and "victims of the violence". It is not always the case that, applier of the violence is the defendant or the plaintiff. Moreover there exist multiple verdicts and verdict types related with one case, and relating those verdicts with the same case have been very problematic with the existing data structure of the Ministry of Justice. Data quality of the verdict data has been another big problem had to be solved, and many of the important data areas has not been compulsory or not entered correctly by data entry operators in the NJNP system of the Ministry of Justice. For example, many of the victims of violence against women have the profession "Wood Carver (Ağaç Oymacısı)". Because, this was the first option that can be selected by data entry operator and this data field was "*Required*".

In order to solve those problems and effectively adapting the NJNP data to the Women Violence Database, DGSW and the Software Department of the MoFSP has conducted a very meticulous and long term work, cooperating with the technical and business expert teams of Ministry of Justice. In this context, Ministry of Justice has to make some changes on its NJNP system in order to provide a more concise data entry via screens and data structure of the verdict database. When the version of web services provided from NJNP has been updated every time, MoFSP has also updated its own data structure and software

code processing the service data. One real difficulty at this point has been that NJNP system is a quite comprehensive and sometimes hard to change some of its business rules. Moreover, yielding new versions are implemented only with 3-month periods and not before. It has taken almost 4 years to mature the integration process due to the aforementioned problems above which may be regarded relatively a long period. This has been the first part of the constitution of the Women Violence Database. Integration with the other "Law Enforcement Agencies" has also been started at the beginning of the 2017. During 2019, integration with the DGS has been completed. As the final step, integration efforts with the Military Police Commandership are going on by mid 2019.

### 3.3.2 Interview Analysis

Due to the diversity of institutions being integrated and the multidisciplinary nature of integration such as technical issues, determination and implementations of business rules, managerial and legal aspects, questions of the interview have been organized to get the answers from all those areas. Similarly, specialty areas of the interviewees vary from technical to social areas. It is not expected to get full answer for every question from each interviewee, although participants of any integration may have gained some experience and understanding from other specialty areas as well. In the next section, general profile of the interviewees and the answers of the questions provided by the interviewees will be examined.

#### 3.3.2.1 Descriptive Findings.

Mainly interviewees can be classified into two main parts; first part is, social/business partners of integration who generally request the integration from technical side, prepare legal base, and give the information and guidance about business rules that will be integrated and used within an information system. Second part is the technical side including network connection expert, web service expert, software project manager, software developers and technical support.

Generally, ages of the participants lay between 28 and 47, and their experience are between 2 to 20 years. Some of the participants, particularly working in social area rather than the

technical side have the role of the "Manager", yet they are engaged in the integration processes actively beyond their managerial role. Those managers have also had the "Expert" title within the Ministry and also have engaged actively in integrations before they have taken their managerial role.

#### 3.3.2.2 Analysis of Answers

In this section, answers of the questions of which a full list can be found in Appendix 2, will be examined in detail. Common points emphasized by the interviewees and the specific answers that require specialty are interpreted in this section. The below sub-categories have been constructed from the key questions and answers to them as the main emerging issues.

***Findings about the Approaches about Usage of the Information Systems in Social Area.***

In this question, necessity and usage areas of the information system have been evaluated by the interviewees. Almost all of the interviewees have stated that use of an information system is necessary for increasing service quality. Especially, the large number of the citizens that have been benefiting from social assistance and also social services necessitates the use of information systems for organizing and conducting those service processes properly. It is stated by one of the interviewees that:

> We have a limited number of personnel for all services and have to access high volume of citizens. Without using a robust automation system and doing all staff manually results in latencies about providing social aids. One of the key factors accelerating service delivery via automation is the interagency information-sharing and integrations with other government institutions which reduces the social aid application period from one month to a few minutes. (2. Interviewee, 35, Expert, Social Assistance)

Another key benefit stated by one of the interviewees working on violence against women is that the information system that they have been using provides the opportunity of taking instant action against the violence cases:

> When you accelerate the information flow, this provides to take action faster. If you can do this faster with the information systems, then it is

> inevitable to use information systems. (3. Interviewee, Expert, Head of Department, Social Service)

Besides, after that immediate action, they could also trace the case actively in later phases by using an automation system rather than using manual process, and take actions when required. Manuel processes that include archive scanning for each case would waste much time. Another benefit that makes it necessary the usage of information systems is the instant access to the same case and data both by central organization and the provincial organizations of the Ministry all over the country. Similarly in the area of children services, use of information system is expected to provide essential information about the children and the family from other government institutions including their income level, past life experiences, health and education status, existence of exploitation of the children and among others. for evaluating the case the thoroughly. Diversity of problem types in social area requires information from other government institutions' databases. Accessing those information as early as possible is expected to provide taking instant action which would enable preventive and protective precautions before the case worsens. Currently, many of those information flows are conducted via official writings in an off-line manner between government institutions except income level determination.

Decision support systems and intelligent systems are approached relatively risky by some of the interviewees. First of all, as a prerequisite, it is required to automate all processes via an information system, and provide robust, consistent data for decision making. This could be provided by designing the information system as the core of all business process rather than being a data entry system after implementing the real business. Decision support provided by information systems is accepted beneficial both in the area of social assistance and social service (such as computing poverty level point and case management). One of the interviewees stated that:

> Especially using intelligent systems for analyzing the data collected from the social service beneficiaries using survey-like techniques such as ASDEP project of the Ministry would facilitate the detection of social risk. (9. Interviewee: 46, Technical Adviser)

Nevertheless, almost all of the interviewees especially working on the social/business side stated that systems should support decision making of the social worker, not deciding instead of the human. An interviewee gave an explicit example of the problems of automatic decision making which confirms the point discussed on page 78;

> Some of the aids of the beneficiaries are being stopped by the SAIS by querying the social security information. Even if the number is very limited, aids of the citizens are stopped automatically by the systems which are later re-initiated for those beneficiaries after a period. (12. Interviewee: 36, Team Leader)

In general, use of the information systems is regarded as essential in the social area particularly due to the high volume of the target groups. Decision support is acceptable provided that not giving up the control and decision making process completely to the systems.

***Findings about the Case Management and the Contribution of Integrations & Information Systems***

In accordance with the definition of the Case Management in the literature such that 'cooperative delivery of social services to common clients', Case Management is regarded as an important concept and approach by almost all interviewees. One of the interviewees stated that;

> Case Management is important; area of the social service requires a multi-stakeholder environment in many times. (5. Interviewee: 32, Expert, Head of Department)

It is stated that Case Management Approach yields more benefit and performance in comparison with other approaches. Especially in social service area including women and children affairs require multi-stakeholders implementing their own responsibilities within the case management. An expert working on violence again women emphasized that

> There is a service loop between police force, Ministry of Health, MoFLSS and Ministry of Justice in the case of violence against women. These four institutions work on the same case almost simultaneously. (3. Interviewee, Expert, Head of Department, Social Service)

Similarly, children affairs require the collaboration of MoFLSS, Ministry of Education, Ministry of Justice and Ministry of Health.

It is also stated that many government institutions are working on service areas intersecting with each other. Same house/family is possibly visited multiple times via a diversity of government institutions and findings about the risk factors within the house are required to be shared with other government institutions. Especially, in the social assistance branch of the social policies, house visits take an important role for determining the poverty level and are applied strictly. Furthermore, poverty is very closely related with other social problems. Sharing of the information and the impressions gained about the family, during the family visit would facilitate taking the precautions by the most convenient government institution as early as possible and prevent the case's growing further. An expert stated that;

> If we detect a women detained by her husband, then we cannot say that 'let's write an official document to the Ministry of Domestic Affairs'. It would yield better results to send a notification over system to whom is responsible for such cases within the Ministry of Domestic Affairs. (2. Interviewee, 35, Expert, Social Assistance)

Moreover, it is stated that, citizens could be disturbed multiple times for just identification of a diversity of social risks. Visit of each family separately by each organization also increases the cost for the Government.

Implementing the case management via official writings, which is still very common in social services, would result in the risk of causing latency about intervening the case. Information flow between the government institutions should be very fast and this could be provided by using automatized and online information sharing between the systems of the case-related government agencies. This provides more efficient and effective involvement for the case. According to one of the interviewees, technically, this effective information sharing could be achieved by using the E-Government Gateway of the TÜRKSAT.

Another interviewee working as technical adviser for the Ministry stated that;

> Design of the information systems by which information is shared and consumed, is an important factor for the success of the information sharing. Without providing user friendly screens and filtering options, end users of the system would not benefit thoroughly from the information provided by partners of the managed case. (9. Interviewee: 46, Technical Adviser)

Information sharing in the context of the Case Management between government agencies poses the information security issues besides its expected benefits. Boundaries should be drawn very carefully and the awareness about the confidentiality and privacy must be enhanced within the personnel of the government agencies' sharing sensitive personal information. It is stated by one of the interviewees working as social service expert for many years that

> Not every information can shared with everybody; information you have shared would devastate the rest of the private life, may cause social exclusion and return back to disadvantaged position, even result in a murder. (11. Interviewee: 47, Social Worker, Head of Department, Social Service)

In conclusion, Case Management via online information sharing is regarded as a vital and important approach provided that the privacy issues are regarded properly.

***Findings about the Contributions of the Integrations for Reducing Bureaucracy, Increasing Efficiency and Assessment of Level of Success***

In general, it was stated that integrations and the interagency information-sharing contribute for reducing the bureaucracy and implementing the social services more effectively and time efficiently. Especially, interviewees working on social assistance area emphasized repetitively the benefits of the integrations implemented within the SAIS and the SOYBIS. Formerly, citizens that were applying for social aids has to collect many official documents from a diversity of other government institutions for proving their income level which took much time, effort and monetary cost. After the advent of the SOYBIS and SAIS that have many integrations with other government institutions, citizens does have to collect almost no documents; instead, personnel can easily access the social security information, salary/pension information, vehicle and estate ownership, and some other auxiliary data owned by other government institutions using SAIS within a few

minutes. Moreover system automatically repeats those queries periodically and can take action or warn the end users of the systems, when it "finds" any change about the situation of the aid beneficiaries. An expert working on disability and old-aged pension stated that;

> It has been taking almost one year to conclude an application for disabled & old-aged pension, but after the usage of SAIS with the integrations, all those processes have been reduced to 19 days approximately. (1. Interviewee, 32, Expert, Head of Department, Social Assistance)

According to the interviewees, women services against violence and murders have also benefited from integrations deeply. Before the integration with Ministry of Justice, court verdicts had a long way including posting and classification before being delivered to MoFLSS. After the integration established between Ministries, data flow is implemented almost instantly; the data has been entered to the system of the Ministry of Justice, then proper action is taken by the MoFLSS as soon as possible, which also reduces bureaucracy.

Child related services also require data from other government institutions that have services related with the children. Gathering family information, education related information and also information about social services applied formerly to the children is expected to empower the decision making mechanisms for specifying what actions will be taken and which services will be applied. But, the integration provided by the current information systems has been found not adequate due to some technological and managerial issues and far from meeting the expectations of the expert providing children services. It was stated that;

> IT department is trying to conduct integrations with different units in the area of the child services. But there is not a thorough integration yet, especially regarding MIS. (4. Interviewee: 43, Social Worker, Social Service)

New IT project named as FIS conducted by IT Department of Ministry is expected by interviewees particularly working on child services to provide all integrations required for providing better service delivery for children.

While evaluating the sufficiency and maturity level of the integrations, different remarks have been stated by the interviewees. Experts working on social assistance area generally

found the success level of the integrations enough. It has been stated that the SAIS Project has been praised and being exemplified in many reports. Many other country authorities visit and inquire about the SAIS and there had been a presentation of the system in Washington in an organisaiton of World Bank. Yet, some of the social assistance experts have expressed there is much to do with integrations. For example, an expert working on disability pension service said that;

> We do not require any official document from our disabled citizens for the disabled salary/pension procedures except that the Disability Report ironically. If we are able to access this data from the systems of the Ministry of Health, we will be able to conduct all process without requiring any document from disabled citizens. Moreover, we will be able to prevent the forgery cases utterly and have robust statistical data for further policy making efforts. (1. Interviewee, 32, Expert, Head of Department, Social Assistance)

Women service experts have stated that they have been working on similar integration issue for accessing the data with other government institutions related with security, as they are doing with Ministry of Justice currently.

In conclusion, there have been good examples of integrations especially on social aid and women services areas, but still there is some more work to do about new integrations. Child services area is the weakest chain of the ring currently and it is expected to step forward with the advent of the FIS. Success level is expected to boost via the sponsorship of the high level managers.

***Findings and Suggestions about the Difficulties Encountered Concerning Interagency Information-Sharing and Establishing Integrations***

Answers given for this issue mainly focus on absence of standardization of data between different government institutions, technical infrastructure incompatibilities, coordination problems, and accessing documentation and right person for right information when using the counterparts data.

As the first problem, it is stated that, required data from another government institution has not been allways recorded in a database, or, data is not regarded as reliable enough to be

shared via technical integration. As stated by some of the interviewees, Ministry of Health does not provide a service for sharing Disability Report data with other government institution due to the data reliability issues. Similarly, Ministry of Food Agriculture and Livestock has not shared the animal ownership data for a long time, until the recent completion of the new database and system project.

Another problem stressed by the interviewees about the integrations is the data structure. In the social area data is classified and structured based on the person and so, National Identity Number. But in some government institutions related with the social area, data is stored as based on file and event record. Even if the National Identity Number is included in the database, it must be processed first, before recording it into the databases of the MoFLSS.

Data entry process is an important step for providing reliable data to another government institution. When the data is not entered to the information system correctly and on time, it affects the integration based on that data. According to an interviewee, MoFSP has encountered such a problem while integrating NJNP system of Ministry of Justice. MoFSP has suggested and requested from Ministry of Justice to increase the awareness of the data entry operators by organising extra training programs. When the data is entered false, to the NJNP system, this data has to be be re-entered by the personnel of the MoFSP. Moreover categorization of the data has not been fully compatible with the requirements of the MoFSP. An interviewee working on this area said that:

> Basic and the biggest problem we had to cope with was that, every institution use different systematic for keeping data; some keep data based on National Identity Number, another based on case number and one another use the file number. (3. Interviewee, Expert, Head of Department, Social Service)

Ministry of the Justice has categorized the data as defendant and the plaintiff in all cases mainly, whereas MoFSP has expected to differentiate as “appliers of the violence” and “victims of the violence”. NJNP system kept records based on verdicts, but not persons. For standardizing data, cooperative work has been done and even the data entry screens have been changed in order to meet the requirements of the MoFSP. This requirements and

the extra work have extended the integration period over years. As it can be clearly seen from this example, for reliable integration, beyond understanding and standardizing data, intervention to the internal operations of counterpart is required, such as suggesting and compelling counterpart government institution for improvement about the training level of their personnel.

Another striking example stated by the interviewees is the Social Security Institution integration. Due to the large and distributed structure of the SSI, integration process has also become complex and hard as it has been explained in detail in the light of the experiences of Researcher in section 3.3.1.3 of this research. An interviewe also verified and expressed such that;

> SSI is a huge institution. There is nobody that knows all distributed data within the institution. There are many different software systems and databases for different units. Data has been stored in different areas. We want to get all these data for determining social security status. In fact they give the data, but when we ask that 'What is the meaning of this data?', then they redirect to another unit, and sometimes the redirected unit also do not have the answers. We are generally struggling too much to overcome such problems (2. Interviewee, 35, Expert, Social Assistance)

It is stated by one of the interviewees that, because of such problems, as the consumer of the data, they have to run the risk of using data with their perceptions by taking initiative. As a consequence, corrections have been made via feedbacks from field. This causes the risk of stopping the regular aids of the citizens, which is then very difficult to compensate.

Interviewees working at technical level stated that problems encountered at the technical level generally composed of secure network infrastructure and the software development phases. Mostly, government institutions prefer to set up a secure network connection for sharing information and not to publish directly to the internet. According to an interviewee working on network area;

> Diversity of the types and models of network devices and also firewall technologies being used by government institutions causes some problems while setting up secure network connection (VPN) between the systems. Experience and specialty of the technical personnel is another problem at this point. If they do not have enough experience on

> the network devices that they manage, access problems are encountered and cannot be solved quickly. Some of the government institutions stipulate point-to-point dedicated secure connection isolated from the internet for increased security. This type of connection requires procurement process besides the technical work, and so prolongs the integration time. Kamunet project which is a closed secure network infrastructure that combines and connects the network infrastructures of all government institutions is regarded as a solution to network connectivity problems. MoFSP is also working on to be included in Kamunet. (6. Interviewee: System Programmer, Head of Network Department)

Different software technologies used for developing the web services or consuming those web services may also result in problems. Although there are standards for data sharing such as SOAP and WSDL, implementation of the standards may vary from platform to platform. An interviewee working as software developer stated that

> We had some difficulties when we first used the Restful web services provided by Ministry of Health. It took some extra time to use, because we had not been familiar with Restful services. (8. Interviewee: 32, Assistant Expert)

Restful services are a relatively new web service technology and data structure is less standard compared to SOAP. Adapting the new technologies also extend the time required for integration.

Additionally, some government institutions use extra security layer at the service level. Central Bank web service had some extra security certificate issues which took almost one year to solve how to consume service technically.

Coordination problems have also been emphasized by many of the interviewees. Integrations have multiple steps from beginning to completion and every step is conducted by different units of the organizations. Both technical staff and social/business units have to work in coordination for a successful integration. When there is not a dedicated coordinator who controls all steps of the integration, problems may stay unsolved and nobody is aware of that there is a bottleneck. An interviewee stated that integration process was not a one time work, in contrast it was a continuous process; even if everything was completed successfully and data flow was succeeded between counterparts, any of the

steps that had successfully passed before might change and data flow might stop or distorded. He also stated that due to such a data change performed by SSI, some of the regular social aids/salaries had been stopped.

Government institutions which have a high level of institutionalization are good at this point; they always notify when there will be planned network access failure or their service will be changed. Personnel circulation within the government institutions is another problem at this point. Organizational memory is lost via this circulation due to the weak knowledge management and this factor affects the success level and continuity of integrations.

As a result, interagency information-sharing and integration of systems of the different government institutions have some challenges, including data quality stemming from data entry and other problems, insufficient documentation of the web services and the data itself, standardization of the data between organizations, finding the right colleagues at other organization due to fast circulation of personnel within and between organizations, and technical level problems. All those problems result in prolonging integration processes and inevitable data interpretation errors, causing citizens' victimization.

***Findings about the Average Time Required for Integration***

Answers to this question are quite varying. First of all some of the interviewees especially working at main service units of Ministry and interested in the final result and completion of the integration process, talk about the total time that includes managerial processes such as official writings and signing protocol. But some other interviewees working on more technical area comment on the part directly related with them such as setting up secure network connection and coding related software. In general, the total time required for integration varies depending on the integration. Integration between DGSA and SSI concerning the health registration via web service of the disabled & old-aged age citizens that are put on pension took only one month. Although it was not a simple integration and required an update operation on the social security databases rather than just querying the data of the counterpart organization, legislation had determined an explicit deadline and

latency was intolerable. Similarly, General Health Insurance project which was conducted by SSI and DGSA concerning the determination of the income level by DGSA and sending of the results to the SSI took just two months from the beginning to the end.

On the other hand, as part of the same aid type discussed above, namely Disabled Pensions, integration required with Ministry of Health for querying disability reports. It is stated by an interviewee that it was not possible to set up an integration concerning sharing data of disability reports. First issue in front of this integration expressed by the Ministry of Health was the data quality gathered from hospitals authorized to give disability report. Secondly, legislation was asserted as an obstacle for data sharing and finally it was stipulated that top level management at the level of Ministries should make a meeting concerning this issue. As a result, after the 6 years, integration could not be set up for sharing disability report data.

An expert working on the area of violence against women stated that integration with another government institution would take a time between 6 months and 2-3 years.

> The problem is not just laying a network cable between two organizations; it is an issue of talking the data of the organizations with each other and revision of the business processes. (3. Interviewee, Expert, Head of Department, Social Service)

Moreover, during the interview, it was stated as a shortening factor in terms of time is, designing and using common and standardized data collection forms, which are being used for collecting data from the citizens (women that is victim of the violence in this case). Another expert working on '*employment of the children in private sector after institutional care*' has stated that they were working on integration with SSI, although was not completed even after more than one year effort.

Another interviewee has stated that:

> E-Government Gateway facilitates the integration with multiple government agencies and shortens the time required for network infrastructure and accessing to the services takes almost no time provided that the institution has completed official prerequisites. (2. Interviewee, 35, Expert, Social Assistance)

Managerial decision mechanisms that evaluate the data sharing requests for social assistance data requests from other government institutions were processed periodically by the "Data Sharing Council" and this was also a shortening factor for integrations and data sharing.

Interviewees working on the technical aspect of the integrations state that the time required for establishing network infrastructure and software coding parts (web services and the software that will use the web service) might vary from a few days to two months. A network specialist interviewee stated that;

> If the network connection does not require a special connection type and right counterpart personnel are found, then it may take just one day. But if counterpart institution stipulates a dedicated line and need procurement, time required for integration extends for an extra few months. Capability of the technical staff is also very determining factor. (6. Interviewee: System Programmer)

Technical problems can be dealt with easily by experienced and capable technical staff; however, another factor extending the time for integration is the change in the project plans of the software developers and other team members due to the newly emerging urgent requests from other business areas.

In conclusion, there is not a standard time plan for integrations. Official prerequisites such as signing protocols may take quite much time, while technical parts of the integrations do not take too much time in general. Legislations that are drawing clear deadlines motivate both sides of the integrations and accelerate the whole process. Generally technical staff requires less time but occasionally it may also take too much time, when the data and processes are not easily standardized between institutions. E-Government Gateway and Kamunet infrastructure that provide Government-to-Government data sharing opportunities have been proposed by the interviewees as a solution to the long running integration processes, via reusable services and ready-to-use network infrastructure. Meanwhile, official processes and technical issues can be conducted simultaneously; technical work can be initiated while the protocol preparation and signing process still continues.

### *Findings about the Evaluation of the Information Systems of the Ministry In Terms of Integrations*

Answers of this issue mainly emphasized the success of the SAIS and SOYBIS systems of the Ministry, especially by the interviewees working on the social assistance. Yet, interviewees working on social services are also aware of the integrations and overall success of those systems. It has been stated by an intervieewee that success of the SAIS was appreciated not only in Turkey but also in the international area. For example, according to a research conducted by Australian Government, SAIS is on the top of the list in which many systems have been evaluated in terms of maturity. [ Researcher's note : related source is : Barca & Chirchir (2014)]. An interviewee working on SAIS and the social assistance stated that;

> SAIS is integrated with almost every institution that is required for determining income level and coordinating social aids. Even if there exists some problems about the integrations with other government institutions; they do not influence the general success of the integrations and the system. (2. Interviewee, 35, Expert, Social Assistance)

One of the key factors underlying the success of the integrations is emphasized as the use of the National Identity Number commonly used by all government institutions. According to an interviewee working on social assistance, SAIS has played an important role for the palliation of the humanitarian crisis of Syrian refugees due to the strong infrastructure, prevalent use all over the country, and integration opportunity with Turkish Red Crescent. Aid applications of the refugees are recorded and evaluated via SAIS and then payment lists and the payment statue lists are shared between Turkish Red Crescent and Ministry via integration.

SOYBIS is evaluated as a relatively simple and limited version of the SAIS. Usage of the SOYBIS has been cesaed for Social Assistance and Solidarity Foundaitons after the advent of the SAIS, which also provides the same integrations with SOYBIS with a more structural and automated way. But, SOYBIS is still in use for provincial units of the Ministry and regarded as a powerful and effective system for decision support about initiating the social service up to the completion and actively use of the FIS in the area of

social services. Almost all of the integrations included in SAIS and planned in the FIS, particularly those are used for income level determination, are based on the integrations constituted via SOYBIS.

MIS, the legacy information system of the MoFLSS in the area of the social service (women, child and disabled & old-aged services) and enterprise resource management, was still being actively used and evaluated as insufficient by interviewees with respect to the integration opportunities like many other issues. MIS is planned to be replaced with the FIS and one of the most important difference and facility provided by FIS is expected to be its closing the gap about integrations and providing strong integrations with other government institutions. One of the professionals working on women affairs, specifically, against violence to the women stated that;

> We have been working on the information system heavily depend on the integration with Ministry of Justice and succeeded finally to establish a robust infrastructure to get the correct and usable information from NJNP system of the Ministry of Justice. (3. Interviewee, Expert, Head of Department, Social Service)

This system concerning the women has been included in the FIS recently and it is planned to share the processed data derived from the Ministry of Justice, Directorate General of Security and the Military Police Commandership with the Ministry of Education, Social Security Institution and other government institutions, enabling confidentiality of the victims of the violence in their information systems. Similarly, another sub-module of the FIS, namely, ASDEP project of the Ministry, which is characterized by family visits in their homes, is expected to provide the opportunity of reporting the situation of the family to the most related government institution via online integrations and get back the status information about what actions have been taken about the problem. Currently, ASDEP provides the online integration same as the SOYBIS and provides information about the income level of the family.

Interviewees working on the software development side of the projects have stressed that data quality and sufficiency clearly affect the success level and sense of the end users. For example, a software developer working on SAIS stated that;

> There have been a lot of integrations with other government institutions, and when there is a problem about any of integrations, it has been commented as "SAIS is not working properly". (8. Interviewee: 32, Assistant Expert)

Similarly, ASDEP project of the Ministry that depends on the house visits uses the Address Query Service of the Central Population Management Information System. The latency about recording the buildings in the system that are newly constructed or squatter houses not recorded in the system result in improper working of the ASDEP system. Sense is similar:" ASDEP is not working". From the perspectives of the end users, over-all success of the system heavily depends on the data and service quality of the counterpart systems.

In conclusion SOYBIS and the SAIS systems of the Ministry are the prominent systems in terms of integrations, currently. FIS is expected to provide many of the integrations required in social service area. Currently, women services and ASDEP sub-modules of the FIS provide some of those important integrations. MIS, which is still being used actively by Ministry, is generally evaluated as insufficient in terms of integrations and this is one of the most important factors that MIS is being planned to be replaced with FIS. It is also notable that the overall success of the information systems is very much correlated with the success of the integrations within these information systems.

***Findings about the Role and the Importance of the Top Level Management about Integrations***

Many of the interviewees answering to this question have stressed the power of the high level management. One of the interviewees explicitly stated that high level managers have the power of an "iron fist". Top level managers have the authority on other employees, and they can control and audit the integration processes thoroughly provided that they are eager and aware of the importance of the integration and the information sharing. Moreover in some integration cases, they initiate the integration process between the institutions due to newly introduced legislation implying interagency information-sharing, or to enhance an existing business process. It is an important and facilitating success factor of an integration process with another institution, when the top level managers understand why the information should be shared or required, then communicate directly with the counterpart

level manager of the other institution (minister to minister, general director to general director, etc.), and emphasizes the importance of the subject. But in the past, there had been negative approaches, too. It has been noted by one of the interviewees that;

> Information belonging to an institution and not being shared with others is postulated as the power of that institution by top level managers in the past. (2. Interviewee, 35, Expert, Social Assistance)

New generation and visionary managers were expected to play an important role in order to pull down such a nonsense approach. MoFLSS has such managers and lead successful integration processes especially in the social assistance and women affairs (In Appendix 4, ages of the young managers can seen in the full list of interviewees). Another key factor for the success is to bridge up a seamless information flow starting from technical staff to top level managers about how the process is going on. It is also stated by an interviewee that, in some cases, problems at one step of the integration, either technical or bureaucratic, that result in latency are concealed or lately conveyed to next level of management due to fear for over-reaction of the director or avoiding from being labeled as unsuccessful.

An interviewee working on social assistance has emphasized an interesting point. Directors have diversity of issues to cope with during their management lifetime and sign many important official documents. Especially in the area of the social assistance, top level managers sign and approve payment lists concerning millions of payment records over billions of liras annually. Of course, they cannot know or validate every payment record that they sign, but they can focus on the reliability of the integrations of which payments are based on. Payment lists are composed depending heavily on the information gathered from other institutions via integrations. If the managers trust in the information system and the integrations included in, then they can sign the payment lists feeling more in comfort. This is an important motivation for a top level manager for sponsoring the integrations strongly. Similarly, any women being victim of domestic violence due to a failure or lack of information flow between Ministry of Justice and MoFLSS would discredit the Minister and Ministry, and decreasing this risk with an effective system can be seen as another motivation for the directors.

An interviewee stated that;

> Familiarity of the mid-to-top level managers with the information technology terminology, which is an important means of the interagency information-sharing process and integrations, is a key success factor for integrations. (3. Interviewee, Expert, Head of Department, Social Service)

Orientation level of the Managers to the information technologies is correlated with the age of the Managers; new generation and young managers are more familiar compared to the more experienced ones. As a striking example, one of the interviewees (32 years old) that is working as the head of the Department of the Old-aged and Disabled Aids stated that he was very familiar with and an active user of the SOAPUI software. Normally, SOAPUI is used for invoking directly XML web services and expose XML data over a non-user-friendly screen. He also stated that he was quite familiar with XML data structure since he is was very involved in web service integration processes in the context of Social Security integrations. As a final note from an interviewee, when the Managers are so ignorant of the information technologies, there is risk of being tricked by the technical staff.

> Those intelligent guys may easily persuade a top level manager that the requested integration process is impossible or more difficult to implement than the manager plans. (1. Interviewee, 32, Expert, Head of Department, Social Assistance)

As a result, managers potentially have a deep impact on the integration and interagency information-sharing processes due to their administrative power, and may contribute and facilitate the whole process if they are eager enough and have the wisdom.

***Findings about the Influence of the Protection of the Personal Information Law on the Interagency Information-Sharing and Integrations of Ministry.***

First of all, in spite of the fact that, all of the interviewees heard about and know what the main purpose of the Law for the Protection of Personal Data is, many of them do not have information about the details of the Law. In general, almost all of the interviewees stated that it was an important law for protection of sensitive personal data, particularly in social services. However, it was not clear from the answers of the interviewees that whether there

is a specific legislation concerning the details about how the Law will be implemented. Exceptionally, one of the interviewees have stated that,

> There has already been clear sections for many years in the Law Number 5237 named as Turkish Criminal Law, stating imprisonment for sharing and accessing personal information without the permission of that citizen. What is newly introduced by the Law for the Protection of Personal Data is the amercement. (13. Interviewee, 35, Expert, Social Assistance, Head of Department)

But, it is a fact that, legislation of such a law completely dedicated to the protection of the personal data has augmented the awareness about the subject. However, lack of detailed and clear information about the Law resulted in different answers and approaches about how the Law would affect the interagency information-sharing and integrations.

Interviewees working on social aids have stated that they have been using the SOYBIS and SAIS systems for almost 10 years which has facilitated dramatically the access to the important personal data of the citizens, and legally they have already been implementing the legal obligations. An interviewee stated that:

> DGSA have published legislation and constituted the "Data Sharing Council" as the data owner in this context. This council evaluates the data sharing requests from other government institutions about social assistance in accordance with the Law for the Protection of Personal Data. Additionally, every citizen or his/her legal guardian that has applied for social aid should explicitly give permission by signing an application form that contains phrases stating that his/her personal data could be queried from other government institutions and processed. (2. Interviewee, 35, Expert, Social Assistance)

In the social services area, SOYBIS is being used extensively by the Ministry personnel for evaluating the income level of the social service applicants and citizens give explicit permission by signing related application form. However, this is applied for regular applications such as Social Economic Support for poor families. Some of the cases, meanwhile, require instant action such as women or child abuse, and there is no time to lose for getting permission from who is being queried for accessing victim. From this perspective, it is expected by some interviewees that it would be better that if the law had

stated explicitly such exceptional situations or name of the privileged institutions explicitly so that they can query some personal data without requiring permission.

> Law for the Protection of Personal Information is an important law, but it has sabotaged the social services; some institutions serving in social services could be exemplified by this law. Because when you encounter with a case, then you have to conduct pre-inquiry for deciding the right actions to be taken. (13. Interviewee, 35, Expert, Social Assistance, Head of Department)

Another fragile case stressed by an interviewee that is encountered often by the Ministry is related with martyrs. When there is such a case, Ministry should organize informing the family appropriately and learn about the urgent needs of the family by snapshotting the socio-economic picture of the family via querying personal data of the family members.

Women services and related data is very sensitive, especially the secrecy verdicts and the addresses of the women that are supposed to be hidden. Formerly, that information had been passed among the related units of the government institutions via official writings with a bunch of hardcopy as appendices holding sensitive data. So, information had also chased a longer path before reaching to the right address. Protection of the data, providing the confidentiality and also keeping track of who has accessed sensitive data was more difficult by this way.

Electronic data transfer between institutions, namely verdicts for protection of data, was accepted as more secure and accountable. Because, confidential data was almost directly transferred in electronic environment to the related personnel of the Ministry and each access to this data is logged strictly. From this perspective, it was stated by the interviewees working on women services that, the advent of the Law for the Protection of Personal Data has not deteriorated or affected the interagency information-sharing between government institutions, in response to our related question.

Consequently, the presentation type of the services provided by the Ministry is quite determinant; services that are request-based are relatively less affected such as social assistance. In turn, services initiated by government are more problematic. Some points in the law deeply require to be explained explicitly. According to the law, if there is not any

other option except querying the personal data of the citizens in order to fulfill the task implied by law, then it is legal to access and process personal data. In such a situation, Ministry personnel may avoid from querying personal data even if it is legal and necessary. As a final word, The Law is a protection factor for both citizens and personnel that are processing personal data, rather than an obstacle, by defining the boundaries, but there are still some blurry areas.

***Findings about the Role of the E-Government Gateway Regarding Interagency Information-Sharing and Integrations.***

Services provided over E-Government Gateway, particularly the G2C services are regarded as positive and beneficial by almost all interviewees. But, G2G service type provided by E-Government Gateway is only well-known by the interviewees that have participated in G2G integration. Interviewees that have participated in the Government-to-Government integrations in either the technical side or the social/business positions have stated that it was a very efficient way of sharing institutional data when it was a necessity to share the same data with multiple government institutions regardless of the number of client institutions.

> ..instead of setting up web service integration separately with each institution, information is presented to one point. Any requester institution can go and access the information over Gate. (1. Interviewee, 32, Expert, Head of Department, Social Assistance)

First of all, secure network infrastructure (VPN, Virtual Private Network) has been established between TÜRKSAT and the Ministry only once. Any other government institution that is eager to access the services of the Ministry presented over E-Government Gateway does not have to establish a secure network infrastructure (VPN) with Ministry. Many of the government institutions have already connected with the E-Government Gateway somehow and using this connection they can easily access to the services of the Ministry. This eliminates some of the difficulties mentioned in the section 3.3.1.2 of this Researach. The only task to do for the Ministry is to define a user name and password to the client government institution for accessing the service. Meanwhile, even if there is no VPN connection with the client government organization and the E-Government Gateway,

services can be accessed with IP restriction. Because, some of the government organizations or local administration might not have strong enough network infrastructure or qualified personnel. Similarly, Ministry can access the services provided by other government organizations more effectively over E-Government Gateway. This is regarded as a very efficient way of sharing institutional data with other government institutions by interviewees, considering the existence of thousands of local administrations, central government organizations and voluntary organizations. Another advantage of distributing and orchestrating services centrally is that TÜRKSAT maintains all authentications, authorization, logging and monitoring of the services centrally. So, the total cost of the government is optimized effectively by this way, and also the service quality is enhanced.

> ..Whereas, after every institution is integrated with the E-Government Gateway, one institution presents service and other institutions take the data. This provides coordination of all data flow among institutions from single point from the point of logging, security and bandwidth. (2. Interviewee, 35, Expert, Social Assistance)

When there is an access failure or the service is down somehow, it is noticed by TÜRKSAT and the related service provider is notified to take required action.

In the area of the social aids, there is a strong and comprehensive database, including the social aid information, income level test result in the context of General Health Insurance, "social-investigation-at-house" information, and some other information gathered from other government organizations such as social security, salary/pension, vehicle and estate ownership. These data are critical and necessary for many other government institutions and voluntary organizations. Currently, some of the government organizations such as Credit and Dormitory Institution, Ministry of Domestic Affairs, Turkish Red Crescent(Kızılay) and Directorate General of Foundations(Vakıflar Genel Müdürlüğü) readily access to those services over E-Government Gateway. Many other government institutions such as Social Security Institutions are also eager to use these services, and related managerial processes are in progress.

One of the interviewees working on the social aids area and the SAIS project has stated the Ministry has also developed services for coordinating the social aids and social services

among related government organizations. Personnel of SASFs all over the country visit periodically the homes of the citizens, to whom that they provide social aids. When they notice that there are other social problems about the family that must be notified and intervened by other government organizations such as Ministry of Health or Ministry of Education, Ministry personnel would enter this information to the SAIS, and SAIS sends this data to other government organization over E-Government Gateway. Similarly, there are services for other government organizations for recording the citizens that need social aid or social service as inspected during house visits. This has been a very visionary approach and an implementation of Case Management in Social area. But unfortunately this infrastructure has not been used actively due to legislation problems.

> ..Case Management System provided over E-Government Gateway had been a good example of G2G service. The only reason why it has not been used actively was the legislation problems. (13. Interviewee, 35, Expert, Social Assistance, Head of Department)

G2C services provided over E-Government Gateway are found successful generally, but one of the interviewees has stated that, while provision of many information gathered from a diversity of government institution is good, but it is insufficient. More intelligent services should be served in general. In this context, Researcher has participated in such an E-Government Service for application of the Free Travel Card Application for the martyr relatives and veterans. The service provided via E-Government Gateway is also integrated with Social Security Institution web service and MERNIS web services for determining whether the applicant has this right truly. It is not just an application recording service, but an intelligent and integrated service which is coherent with Whole of Government (WoG) approach. What makes the service intelligent is that, service is designed to control immediately whether the applicant is eligible for free travel card by checking the related data queried from SSI and MERNIS against to the business rules that depend on laws. Another weak side of the G2C services has been stated such that, many of the government organizations do not trust their own data presented over E-Government Gateway. There is a statement on some of the documents given by the E-Government Gateway that they are “only for information”.

Additionally, personnel of the Ministry working in cooperation with the personnel of the TÜRKSAT for providing services over E-Government Gateway have stated that the specialty and the quality of the TÜRKSAT personnel is good but, due to the circulation of these personnel, integration processes are affected negatively. While providing a service over E-Government Gateway, TÜRKSAT personnel should also be familiar with the nature and the business rules of the service. But, frequently changing personnel or their positions slows down the integration processes.

In conclusion, E-Government Gateway provides opportunities about interagency information-sharing and integration among institutions alongside the large number of Government-to-Citizen services in an efficient way. Increasing the awareness within the government institutions would be a facilitating factor for a more effective and robust E-Government environment. Ministry is currently using the opportunities provided by E-Government Gateway, particularly in the social aids area. But there is still much to do in the social service area.

***Findings about the Evaluation of the Data Sharing Model of the Ministry Proposed By Richardson&Asthana (2006)***

In this question, interviewees were asked to evaluate the information sharing approach of Ministry in terms of a four level information sharing model proposed by Richardson and Asthana. According to Richardson and Asthana, with respect to the interest of the service users and the pressure to protect their privacy leads to four possible outcomes with regard to information sharing, in order to find a compromise between the pressures for exchanging information: 'Ideal Model', 'Over-open Model', 'Over-Cautious Model', and the 'Chaotic Model'. Characteristics of these models have been explained in more detail in previous section (2.5.3) in this research.

Almost all of the interviewees stated that the information sharing approach of Ministry is consonant with the 'Ideal Model'. Information to be shared with other government institutions or voluntary organizations are classified, evaluated and filtered carefully. Private information belonging to the Ministry is not exposed directly; protocols are signed to clarify which data will be shared and which techniques such as web service, FTP. In

fact, even if the social assistance data is not regarded as critical to yield an infringement of confidentiality, it is still very valuable for private sector to have the database of disabled citizens, which is a part of the social aids database. An expert stated that;

> If we consider the SAIS, we are trying to conform to the 'ideal model'. We approach to decrease the risk. If you act over-cautious, then you may obstruct the information sharing process. (12. Interviewee: 36, Team Leader)

As an exceptional case closer to the 'Over Open Model', SOYBIS application which is still extensively being used within the Ministry in social service area rather than the social aids, to determine the income level of the social service applicants, has also been allowed to be used by the Directorate General of Foundations (DGF) affiliated to Ministry of Culture and Tourism. By using the SOYBIS application, DGF can access the information produced by MoFLSS and also other government institutions' data such as social security, vehicle ownership and land/estate ownership. This was a managerial decision due to urgent need of the DGF and the insufficient technical infrastructure to integrate all other government institutions. An expert in the area of the social assistance stated that;

> In fact, we are sharing quite serious information with other government institutions; we both take and also share much. Mostly with DGF, because we have given them SOYBIS. In fact, this is beyond the information sharing; we directly gave the system. (13. Interviewee, 35, Expert, Social Assistance, Head of Department)

In the area of the women and the child services concerning violence/murder and child abuse, confidentiality is more prominent due to the risk of death, social exclusion and other social risks. So, it has been stated by some interviewees that Over-Cautious Model is also preferable to minimize the risks. As a conclusion, there should be good balance for information sharing such that neither any citizen would be the victim of the careless information sharing nor, poor information sharing as in the case of the Victoria Climbie.

#### 3.3.2.3 Contingency Analysis of Interviews

Analysis of the qualitative data can be implemented via qualitative content analysis. According to Bilgin, purpose of the content analysis techniques is to get out of the

subjective factors, when understanding and interpreting rhetoric. It provides to expose the tacit content of the rhetoric rather than the openly exhibited and easily caught sides (2014).

There are many sub categories of the content analysis. One of the most known and oldest content analysis techniques is the frequency analysis. Frequency analysis exposes the frequency of the notions in content. But, it does not always provide sufficient understanding about the relationship of the notions with each other. In order to understand the relation of the notions in content, Osgood has introduced the contingency analysis in 1959, which focuses on the relations of the items with each other, rather than individual items. (Bilgin, 2014)

Although qualitative content analysis is a systematic technique, there are not universally accepted steps when applying it (Çetin, 2016). Basic steps for contingency analysis suggested by Osgood (1959, as cited in Bilgin, 2014) are;

- Determination of keywords/concepts,
- Partitioning the whole content to sub partitions,
- Coding by counting keywords within each sub partition,
- Computing the co-occurrence the of keywords,
- Displaying and visualizing the results.

In this research, contingency analysis has been applied to the interview transcriptions. Firstly, interview text was read and keywords and key concepts have been determined. Besides the general concepts such as ‘social assistance’ and ‘information sharing’, adjectives such as ‘sufficient’ and ‘preventive’ have been included to expose certain expressed evaluations. After that, interview text has been partitioned to sub partitions. Firstly, every answer given to each question has been accepted as a basic partition. But, if there is a section within an answer worth to be re-partitioned for gaining better granularity, then, new partitions have been created by dividing long answers. As the third step, every partition has been read carefully for detecting which keywords are included within the partitions. While trying to detect the keywords, Researcher has included and counted some

keywords, even if the word is not explicitly placed in the partition, provided that there is an indirect expression stating and meaning the aforementioned keyword.

After that, Researcher has counted all keywords and selected first 30 of 58 keywords for computing the co-occurrence counts and building a matrix. Using the detected keywords and the partitioned text together, Researcher has populated the matrix. But, while doing that, not every two keywords placed in the same partition have contributed to the co-occurrence counts. For example, both social assistance and social service are included in the same partition text with the adjectives of successful and unsuccessful. In such a case partitioned text has been reviewed carefully again and social service is paired with unsuccessful and social assistance is paired with successful as the interviewee stated. Final matrix is shown in Figure 15. Column numbers are placed in place of the keywords that are placed in the rows and numbered with the reciprocating number. For example, column number 11 represents the 'High level management' which is placed in row number 11.

| | | Keyword/Concept | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 67 | Integration | | | 4 | 10 | | 7 | 5 | 4 | 7 | 3 | 22 | 6 | 11 | 6 | 9 | 6 | 2 | 4 | 3 | 1 | | 4 | 4 | 7 | 4 | 1 | 1 | 1 | 2 | 7 |
| 2 | 75 | Informaton Sharing | | | 3 | | | 8 | 10 | 5 | 10 | 8 | 11 | 8 | 4 | 3 | 3 | 6 | 9 | 10 | 5 | 8 | 12 | 3 | | 1 | 5 | 5 | 1 | | 1 | |
| 3 | 51 | Facilitator/Positive | | | | | | 13 | 2 | 4 | 2 | | 20 | | 1 | | | | 1 | 6 | 3 | 1 | | | 2 | 1 | | | 1 | | | 1 |
| 4 | 27 | Sufficient/Succesful | | | | | | 1 | 6 | 5 | | | 1 | 16 | | | | | | 1 | 1 | | | 13 | | | 1 | | | | | 2 |
| 5 | 41 | Preventive/Negative | | | | | | 1 | | | 3 | | 21 | | | | | | | 6 | 3 | | | | 6 | 8 | | 1 | | 1 | 6 | 13 |
| 6 | 33 | E-Government Gateway | | | | | | | 3 | 3 | 11 | 2 | | 1 | 6 | 9 | 4 | 4 | 3 | | 5 | | | | | 1 | | | 1 | | 1 | 1 |
| 7 | 36 | Social Assistance | | | | | | | | 10 | 6 | | | 1 | 4 | 5 | 1 | 6 | 2 | 4 | 2 | 5 | 6 | 2 | | | | | | | | |
| 8 | 32 | Automation of Processes/Use of IT | | | | | | | | | 3 | 8 | 2 | 3 | 1 | 10 | 4 | 4 | | 2 | | 7 | | 1 | | | 2 | | 3 | | | |
| 9 | 26 | Information Security | | | | | | | | | | 2 | | 1 | 1 | | | 2 | 1 | 5 | | 1 | 2 | | 1 | | 2 | | 2 | | | 1 |
| 10 | 29 | Necessary/Important | | | | | | | | | | | 1 | | 8 | | | 2 | 7 | 1 | 3 | | | | 1 | 3 | | 1 | 1 | | | |
| 11 | 37 | High level managemenet | | | | | | | | | | | | | | | 5 | 1 | 3 | 2 | 2 | 1 | | | | 4 | | | | | 2 | |
| 12 | 32 | SAIS | | | | | | | | | | | | | 2 | 4 | 3 | 6 | 2 | | 3 | 1 | 4 | 8 | | | | | 1 | | 1 | |
| 13 | 24 | Coordination of Institutions | | | | | | | | | | | | | | 2 | 1 | 4 | 9 | 1 | 2 | 1 | | | 1 | | 1 | 1 | | | | |
| 14 | 23 | Increased Efficiency | | | | | | | | | | | | | | | | 5 | 2 | | 1 | 1 | | 1 | | | 2 | | 1 | | | |
| 15 | 26 | Insufficient/Unsuccessfu , | | | | | | | | | | | | | | | | 1 | 2 | | | | | 1 | | | | 2 | | | | |
| 16 | 21 | Reduced Bureaucracy | | | | | | | | | | | | | | | | | 2 | | | 1 | | 1 | | | 1 | | 1 | | | |
| 17 | 19 | Case Management | | | | | | | | | | | | | | | | | | 1 | 4 | 4 | | | | | 2 | | | | 1 | |
| 18 | 24 | Legal Aspect | | | | | | | | | | | | | | | | | | | | 3 | 1 | | | | 1 | 1 | 1 | | 1 | |
| 19 | 18 | Cooperation | | | | | | | | | | | | | | | | | | | | 1 | | | 1 | | 2 | | | | | |
| 20 | 18 | Social Service | | | | | | | | | | | | | | | | | | | | | 2 | | | | 1 | | | | | |
| 21 | 14 | Ideal model | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | |
| 22 | 17 | SOYBİS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | 12 | Standardisation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5 |
| 24 | 16 | Coordination of Personnal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 4 |
| 25 | 8 | Women Violence | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | |
| 26 | 8 | Child Services | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27 | 7 | Accountability | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 28 | 7 | Data Interpretatiton | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 29 | 7 | Legislation Issues | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | 13 | Technical Issues | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Figure 15 :Co-occurrence Matrix for Evaluation of the Interview Data Based on the Methodology of Osgood (1959)

Numbers on the matrix display directly computed co-occurrence numbers of the keywords as told above. For example, most frequently keywords told together are ‘High Level Management’ and ‘Preventive/Negative’ with a number of 21. Similarly, ‘High Level Management’ and ‘Facilitator/Positive’ keyword are told about together 20 times. Bold numbers display the most frequently co-occurred keywords. (9 or more co-occurrences). Keywords that are not listed in the matrix can be found at the Appendix 3. Most frequently co-occurred keywords have been visualized on a conceptual map placed below in Figure 16.

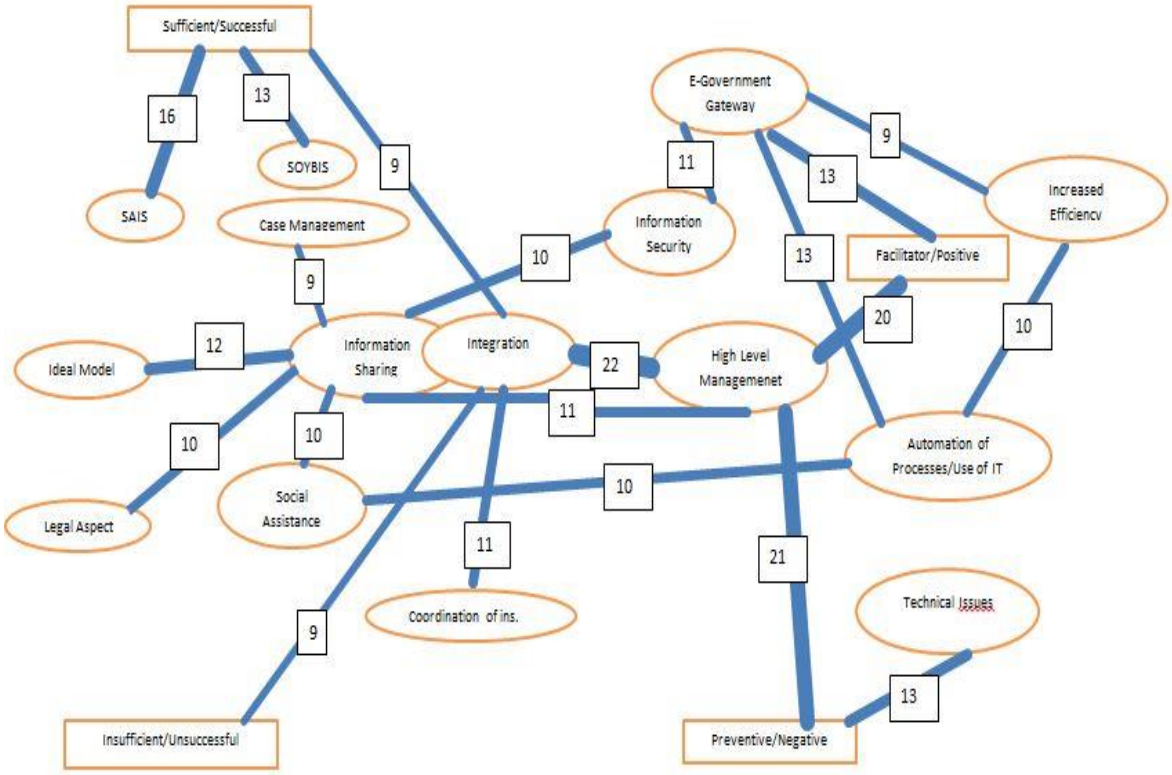



Figure 16: Conceptual Map of the Most Frequent Co-occurrences

From the Figure 16 above, integration and information sharing are displayed stickin with each other since they are so close that almost these two keywords are used in place of each

other. Integrations are both found successful and unsuccessful. One of the most intriguing points displayed by the Figure is the role of the high level management about the interagency information-sharing and integrations. Generally, high level management is considered both as a facilitator and as a preventive factor about the integrations. As many of the interviewees stated, if the high level management is aware of the importance of the interagency information-sharing and integrations they have the potential of contributing and accelerating the integrations. In contrast, if they are not aware of the importance or they have institutional fanaticism or not coordinating or controlling the integration processes, then they are regarded as obstacle in front of the successful and efficient integrations.

E-Government Gateway is also another notable keyword stressed by interviewees and seen as a facilitator for interagency information-sharing and increasing efficiency. E-Government is also frequently mentioned with information security and automation of business processes.

Information sharing is also frequently mentioned with the information security and its legal aspect. Social assistance is frequently mentioned with integrations and information sharing. Additionally, information systems such as SAIS and SOYBIS used at social assistance area are found successful, whereas MIS, FIS and ASDEP are not addressed frequently. MIS is a legacy system that is notorious for not supporting integrations; FIS and ASDEP are advanced but still being developed systems with new technology, and still not used extensively and full capacity.

Case Management approach is also related with the information sharing due to its collaborative nature and placed in the conceptual map. Information sharing activities of the Ministry is mostly found to be close to the ideal model.

Although this contingency analysis exposes the relation of the basic keywords related to the integrations, information sharing, role of the high level management and other basic concepts with the adjective keywords such as ‘successful/unsuccessful’ or ‘preventive/facilitator’, this analysis is not enough convenient for a full-stack evaluative

analysis. Because, it was difficult to process in the matrix such a phrase "*social assistance* is *successful* about *information sharing*" that combines three keywords, due to the two dimensional structure of the matrix. For a better understanding of which basic concept is related with which adjective keyword, *Evaluative Assertion Analysis* developed by Osgood could have been used. Yet, contingency analysis has revealed the relation of the basic/main keywords with each other quite successfully.

# PART-4

# 4. CONCLUSIONS & DISCUSSIONS

This research which has the title of “Evaluation of Integration And Interoperability Opportunities Of E-Government Projects Concerning Social Work Practice: An Action Research Into Ministry of Family and Social Policies” has aimed to investigate the interagency information-sharing related work in the context of benefits, opportunities, difficulties in relation with the E-Government and E-Government Gateway in Turkey. In this context, information sharing processes of the Ministry in the area of the social services and social assistance have been evaluated against to the data sharing model of Richardson & Asthana (2006) and interview results have been examined thoroughly by using Osgood’s contingency analysis method.

## 4.1 Assessments and Conclusions

During the research, it can be easily seen that social policy is a very complex and intricate area in compliance with the complex nature of the social sciences. There is a diversity of branches such as social services for children, women, disabled and old-ageds, social security, health services, employment and social assistance. All those services are provided by different government institutions, local administrations and voluntary organizations. In general, MoFLSS is responsible for providing many of the social services and collaborates with other stakeholders to do so. Even if there are no exact boundaries between the services of the MoFLSS, it is notable that social assistance is more prominent in terms of the information systems and the interagency information-sharing.

As it is stated in the limitations of the research (section 1.4, page 7), answers to the interview questions depended on the titles, experiences and the positions of the interviewees. Benefits, gaps (future expectations) and the results of the possible problems of the integrations are more explicitly emphasized by the personnel working on the managerial/business side and area experts. In this context, integration requirement for disabled health report, and similarly, aids being stopped due to integration failures were strongly stressed by the interviewees working on managerial/business area. In turn, technical and technological problems, such as network problems, software standards, and technical capability of counterpart organizations were stressed by interviewees that have the technical title.

In the light of the answers given to the interview questions, as well as of the experiences and the observations of the Researcher, use of the information systems both in the social assistance and social services areas was regarded as inevitable, especially when considering the high volume of service beneficiaries compared to the limited number of employees. Particularly, SAIS of the DGSA was told as the prominent information system of the Ministry, by which about 40.000.000 citizens were recorded and almost millions of citizens were supplied regular aids. However, total number of the SAIS users was about 6.000 by 2017, which can be considered as quite low compared to the large number of citizens being served.

On the other hand, the intelligent systems that are “deciding” instead of the social workers are not fully welcomed and they are expected just to support the decision-making. Using intelligent systems for analyzing the data, collected from the social service beneficiaries by using survey-like techniques such as ASDEP Project of the Ministry, would facilitate the detection of social risk. But, using a fully automated process for deciding social security status that is prerequisite of some type of regular aids had resulted in unintended stoppage of those aids. Even if the information systems are very beneficial in the area of the social services, they must be carefully planned, organized and implemented in such a sensitive area.

Collaborative Case Management heavily depends on the interagency information sharing of the institutions working on the same incidents from different, but related aspects (Kunkel &

Yowell, 2001). It is known and found beneficial by the social service workers, but not implemented in a structural way in our country. Only one type of the sub-institutions of the Ministry named as Child Support Centers applies case management for children. In general, Case Management implies the cooperation of a diversity of government institutions on the same case and can be best achieved via effective interagency information-sharing. Still, it is quite common to use old style bureaucracy and official writings even in such a sensitive area in which latency is very unacceptable and occasionally ending up with death cases. Interviewees expect from the newly developing FIS to provide integrations with other government institutions and also with the SAIS of the DGSA. Poverty is very closely related with other social problems and many of the households recorded within the SAIS are visited by the social workers of the SASFs and have the chance of detecting other social problems besides the poverty. Moreover there exists a Case Management Module within the SAIS at least for the last four years, for notifying other government agencies over E-Government Gateway for the cases inspected during house visit records. But this module has not been used with full functionality and remained in the test phase due to legislative and managerial issues. Because, as it is stated by an interviewew, current legislation does not support initiating the social services without explicit application of the citizens (except for some criminal cases) in general and sharing information between government institutions.

Interagency information-sharing activities of the MoFLSS have been generally found very beneficial and especially actively used in the area of the social aids. SAIS has been providing strong integration opportunities to its end users for reducing bureaucracy and boosting efficiency. Citizens do not have to collect many documents from other government institutions anymore for proving their income level. For now, many of the information required by the social aid workers are provided by SAIS such as identity information, address information, social security status and salary/pension amount for both working actively and retired citizens, estate and land ownership, tax payment status, vehicle ownership, care at home payments for disabled & old-aged citizens, children-care-at-home payments, the number and type of the owned cows or sheeps, other social solidarity foundation aids, unemployment payments, scholarship payments. By accessing all those critical information, aid applications are evaluated and concluded quite earlier

compared to the past. For example, concluding the disabled & old-aged pension applications has been reduced to 19 days, which was formerly taking almost 1 year, thanks to the aforementioned integrations provided by SAIS. This is a quite short time compared to the Universal Credit (UC) system of the United Kingdom which is an electronic gateway for social welfare applications. Chirara (2018) states that, "Between registering for UC payments, providing documentary evidence and getting the first payment, there is a six-week waiting period (soon to be reduced to five-weeks). Although there is a credit called as 'advance payment' that the government can give while awaiting the UC payment, this can trigger spiraling into debt and subsequently lead to social exclusion" (p. 114). Other social service areas such as child, disabled & old-aged and women also require all those income level determining related information and use SOYBIS for accessing those information.

SAIS also shares information with other government institutions that need social aid information. Additionally, SAIS supports organizational interoperability as in the case of sharing General Health Insurance related income level test results with SSI. Similarly, health insurance registrations of disabled & old-aged pension beneficiaries are implemented via web service integration with SSI.

Women-services-related department of the Ministry, DGSW, also use interagency information-sharing especially with the Ministry of Justice. DGSW also works actively on integration with the DGS similar to the integration with Ministry of Justice. Child services also deeply require integrating with other government institutions, especially with the Ministry of Education and Ministry of Justice, but there is still much to work on this issue.

SOYBIS is also well known for aggregating a lot of information from other government institutions and also information from different departments of the MoFLSS. But MIS is notorious for its old technology that is hardly supporting web service integrations. Consequently, expectations from the new brand FIS in terms of integrations are very dense in the area of the women, children and old-aged & disabled services.

In general, as an answer to the first research question of this research, that is asking for the remarkable integrations and their benefits, it can be summarized briefly such that, in the area of the social aids, there are many good examples of integrations providing a diversity of benefits. But, in the area of the social services, there is still a lot of work to be done.

In the context of the second research question of this research, it can be understood that interagency information-sharing has its own specific difficulties and risks besides the provided benefits. It is notable that, many of the interviewees have common ideas for most of the interview questions, but especially answers for the "problems and difficulties" part have varied depending on the speciality and business area of the interviewee. One of the mostly highlighted difficulties has been stated as the data quality and standardization. Women services of the DGSW had struggled too much to overcome such difficulties over the years, while integrating with Ministry of Justice for transforming the data format about violence against women and even had contributed redesigning the data entry screens of the NJNP system of the Ministry of Justice.

Disability health report information is critical and required by DGSA and DGDO both for pension payments and institutional care; but it has not been provided by the Ministry of Health due to the insufficient data quality. In fact, there exists a web service providing individual disability reports citizen by citizen for statistical purposes. This data has been readily used in the context of the constitution of National Disabled Database (As a module of the FIS currently) project of the DGDO. But this data cannot be used for concluding disabled & old-aged pension or institutional care applications due to internal inconsistencies about data. Ministry of Health promises a new brand web service that will provide validated data via E-Signature in 2019. But, formerly given reports would not be validated using this new service. So, even after the advent of this new service, disabled citizens currently having a valid disability report will also have to be proceeded in the old way, when they apply the services of the MoFLSS.

Another critical information required by the Ministry is the social security related data which is provided by SSI. Usage of the social security information provided by SSI via web services requires being meticulous, when interpreting the data to determine the social

security status of the citizens and also net salary. Lacking documentation of the service data and finding the right counterpart within the SSI that could give the right information for service interpretation has been strongly stated as really challenging problems. Additionally, each type of aid may be affected by social security information and status in a different way because of legislation. Some type of the aids such as old-aged & disabled and conditional education aids exactly imply the stoppage/refusal of the regular aid with 'some type of social security', but in turn, some of the aid types regard only the charge amount of the social security pension impacting total income.

In addition to the data quality problems, issues related with technical infrastructure and capability of the IT staff may cause latencies at web service integration. Lack of a dedicated coordinator for the integration results in unexpected latencies for the whole process. Because data being shared between the systems of the two institutions travels through many technical and logical layers such as networks switches, routers, firewalls, web service proxies, data consumer software and database. Integration with the Turkish Coal Institution has taken almost one year on the technical side due to such coordination problems. Finally, the Researcher have intervened and coordinated the whole integration process starting from coal aid related sub-division of DGSA to the IT Company supporting the software and network infrastructure of the Turkish Coal Institution. After this strict coordination, problems have been solved in a short time and integration has been established.

The time required for the integration is determined by total time spent for both the official processes and the technical work. Managerial processes such as signing protocols, official writings and technical problems such as VPN and service development are important factors extending the integration time. 'Reusing' the official processes generally shortens the integration time and this can be provided via coordination of the official processes of General Directories within the Ministry. In fact, Strategy Development Headship is responsible for such coordination, but they have not fully participated in integrations in such a way. At this point, Researcher has always suggested that the signing of the data sharing protocols should be at the Ministry level rather than the General Directorate level, when he has been officially asked as the Head of Software Department of the IT. Because,

information being integrated is always prone to be required by multiple departments of the Ministry sooner or later. For example, graduation information of the citizens is required for both employment of the children protected by Ministry and also martyr relatives and veterans. The Protocol, which requests this information from High Education Council, has been signed by DGCS in the name of the just DGCS in spite of the suggestion of the Researcher. Directorate General Martyrs Relatives will have to repeat the official process.

In the light of the experiences of the interviewees, required time for integration from starting to end may take from one month to a few years, but on average about 6 months. The top level management is expected to solve possible deadlocks during the integration process and so, the awareness of the top level management about the importance of the interagency information-sharing is critical. Fortunately, new generation managers within the Ministry are quite well aware of the importance of this subject and also more familiar with the information technologies-related notions. As a striking example, Head of the Old-Aged & Disabled Aids department of the DGSA is quite familiar with web service technologies such as WSDL and SOAP due to the various involvements in the integrations of the Ministry, even though he was graduated from social sciences. The importance of the high level management on the integrations has also been the most notable and prominent result of the contingency analysis conducted over the interview transcriptions.

Third research question of this research is about the E-Government Gateway and its role in the integrations. E-Government Gateway is well-known by almost everyone for G2C services. But, G2G services are only appreciated by the employees who have participated in a G2G integration process and it is generally found very beneficial to use the E-Government Gateway for sharing information with multiple counterpart government organizations. Especially, the income level related information of the citizens and the information about the aids provided by SASFs in the past or aids that are periodically being provided are very precious information for many other government institutions and local authorities. Moreover, Disability Report data and Disability Identity Card data are frequently asked by other government institutions and some private sector companies for providing additional advantages and discounts for disabled citizens. Similarly, martyr and veteran data are asked

from Ministry for providing advantages similar to the disabled citizens. Finally, MoFLSS is on the way of gathering all information centrally about the women to be protected and it is expected to share this critical information with all other government institutions. Rather than interlinking point-to-point to each requester, all those information are planned to be provided over E-Government Gateway centrally over web services and can be consumed easily just by defining access credentials. Currently, some of the government organizations such as DGF, SSI, 'Credit and Dormitory Institution' and voluntary organizations such as Turkish Red Crescent use the social aid information service over E-Government Gateway readily, or, are currently working on integration. Moreover, network infrastructures of all government institutions are unified via Kamunet project that is expected to increase efficiency and security.

Another key point about the E-Government services is the trend of the Whole-of-Government. In this manner, Ministry provides a good example of G2C WoG service for accepting the applications of 'Free Travel Card' for martyr relatives and veterans; after the application of the citizen, data is validated online and simultaneously by accessing the MERNIS and SSI web services in the background. Of course, there is still much to do for benefiting from the opportunities of E-Government Gateway concerning the WoG. One of the most important steps forward for providing WoG is considered as the Disability Report validation from Ministry of Health. Current G2C services of the Ministry, related with disability report information, do not truly facilitate to support and improvement of the lives of the disabled citizens; because, mostly these services are designed to be appointment/preliminary application services and citizens should still bring their disability report physically, to the locations of the Ministry for their 'real' application. As soon as the Ministry of Health provide validated disability report data, this service is planned to be integrated within the G2C services of the MoFLSS and transform those services in to the Whole-of-Government manner.

Law for the Protection of Personal Data is known in general and found beneficial although there has already been laws concerning protection of personal information. Advent of the new law has contributed to the augmentation of the awareness. In the area of the social aids,

necessities of the law have already been implemented strictly for last 10 years by requesting a signed document from applicants of the aids, stating that they permit that their personal data could be queried from other government institutions. All of the citizens recorded in SAIS database and the citizens queried using SOYBIS are assumed to give wet-signatured permission. But, there are also some apprehensions in the area of the social services, which are more sensitive and prone to the actions that could be taken without the application of the citizens in some cases. It is stated that it would be very beneficial and relieving that social service area could be stated as exceptional, when it is inevitable to access and query personal data to fulfill the tasks given by laws. In fact, when the Institution of the Protection of Personal Data has been asked opinion via official writings asking whether the citizens that are planned to be served in future by Ministry, but have not signed any permission document could be processed and served. According to answer to this question citizens could be queried if the citizen is going to be given some right or benefit. But it would be far better that related law explicitly will have stated the situations conforming to this interpretation of law.

Interagency information-sharing approach of the Ministry is evaluated against the model proposed by Richardson & Asthana (2006) and generally stated as close to the "ideal model" in which information is exchanged and shared appropriately and when there is a good reason, but equally withheld if necessary.

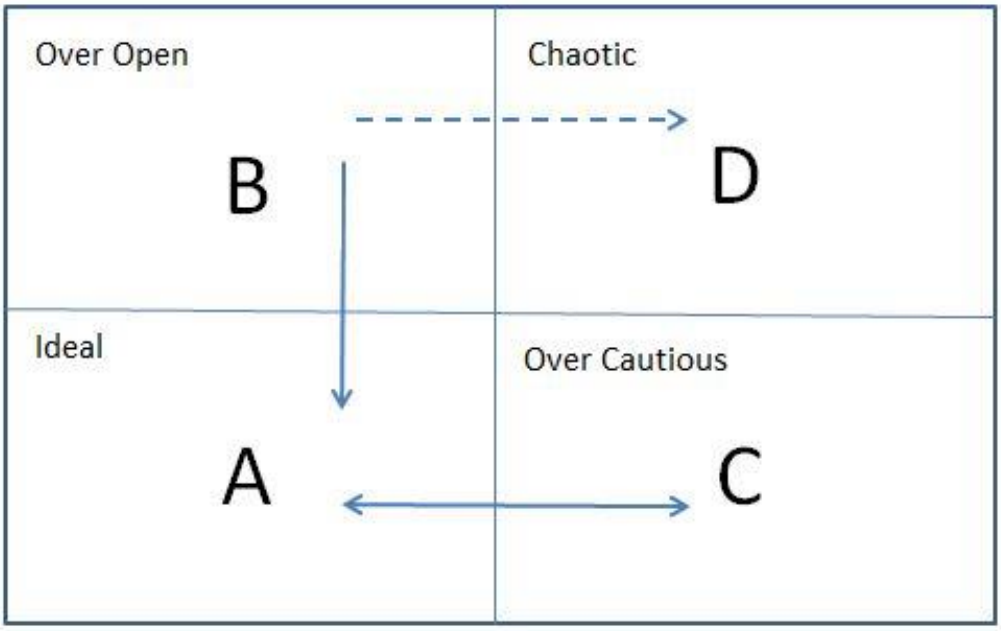



Figure 17: Application of the Academic Model by Richardson & Asthana (2006) to the MoFLSS(Source: Authors own creation)

According to the application of the academic model proposed by the Richardson & Asthana (2006), Ministry currently experiences the A, B and C sections of the model. Information sharings in the area of the social assistance over SAIS project are quite complient with the A section of the model. But in turn, it has been stated by one of the interviewees that, SOYBIS project poses the risk of driving the position of the Ministry to the B, and even to the D section of the model by sharing the information with another government organization (DGF) as a proxy system. At this point, the Researcher also proposes and suggests to the high level management that the SOYBIS should be closed to the DGF, and not to be opened for other government institutions such as SSI and local administrations (SSI and diversity of municipalities have requested many times to access SOYBIS and rejected by the Ministry). Instead, only the part of the information that belongs to Ministry should be shared over web services using E-Governmnent Gateway. In the area of the social services, particulary women and child services, Ministry tries to find a compromise between A and C owing to the more sensitive nature of these areas. This is because, the information being shared

uncarefully that results in death or loss of privacy is more severe and less excusable compared to the situation in which information is not shared and resulted in victimization.

In compliance with the nature of the action research, the Researcher has participated in a lot of interagency information-sharing work during the research. General Directorates of the Ministry prior to initiating any integration process and signing protocols have been suggested and redirected by the Researcher to sign the protocol at the Ministry level rather than the General Directorate level. They are also advised to include a clause in the protocol stating that changes in data format and context would be handled by official writings rather than changing the original protocol to reflect the change. Problems about ongoing integrations and establishment of the new ones have been coordinated by the Researcher many times. In this context, many of the integration requests coming from other government institutions have been provided over E-Government Gateway.

Observations and the experiences of the Researcher that are expressed in the first section of the "Research Section" under the "General Analysis Over Experience and Observation" title are quite well coherent with the results of the interviews conducted and the consequtive contingency analysis. Additionally, the findings of the research have been presented to the Chief Information Officer of the Ministry via official writing as a seven page report. This report can be found in the Appendix 5.

As a compilation of the issues stated by the interviewees and experiences of the Researcher, success and failure factors that are affecting the integrations and interagency information sharing are listed in the table below.

Table 3: Summary of the Success and Failure Factors

| | |
|---|---|
| **Success Factors** | Strong sponsorship of the high level management (SOYBIS/SAIS cases) |
| | ICT oriented and visionary new generation managers |
| | Efficient use of opportunities provided by E-Government Gateway and Kamunet |
| | Experinced and technically qualified personnel |
| | Strong communication and coordination between counterparts |

| | |
|---|---|
| | Service provision based on application of the citizen (easy to take consent) |
| **Failure Factors** | Long running and repeating bureaucratic official processes. |
| | Lack of coordination between/within institutions at technical and managerial level |
| | Insufficient data quality and documentation of some of the government insitutions. |
| | Complex business rules of the counterpart institution |
| | Technical bottlenecks when large amount of data is transferred |

Source: Authors own creation

### 4.2 Conceptual Framework Reflecting Practice Concerning Integrations of Ministry

In this framework, Ministry of Family Labor and Social Services and its main information systems are positioned at the center of the social policies. Citizens interact with the Ministry over the Whole-of-Government G2C services using E-Government Gateway. Ministry is connected with other partners in the areas of health, education, security and social security over E-Government Gateway G2G services (solid lines) or, site-to-site VPNs (dashed lines). Ministry prefers to serve its G2G services over E-Government Gateway to other government institutions. Voluntary organizations are also possible and eager customers of the Ministry's data, particularly in the area of the social assistance. This data is also shared with them over G2G services. Municipalities as local authorities are not directly integrated with the Ministry, but via the Ministry of Domestic Affairs. All lines are bi-directional, because data flow is also bi-directional between the Ministry and other partners in general.

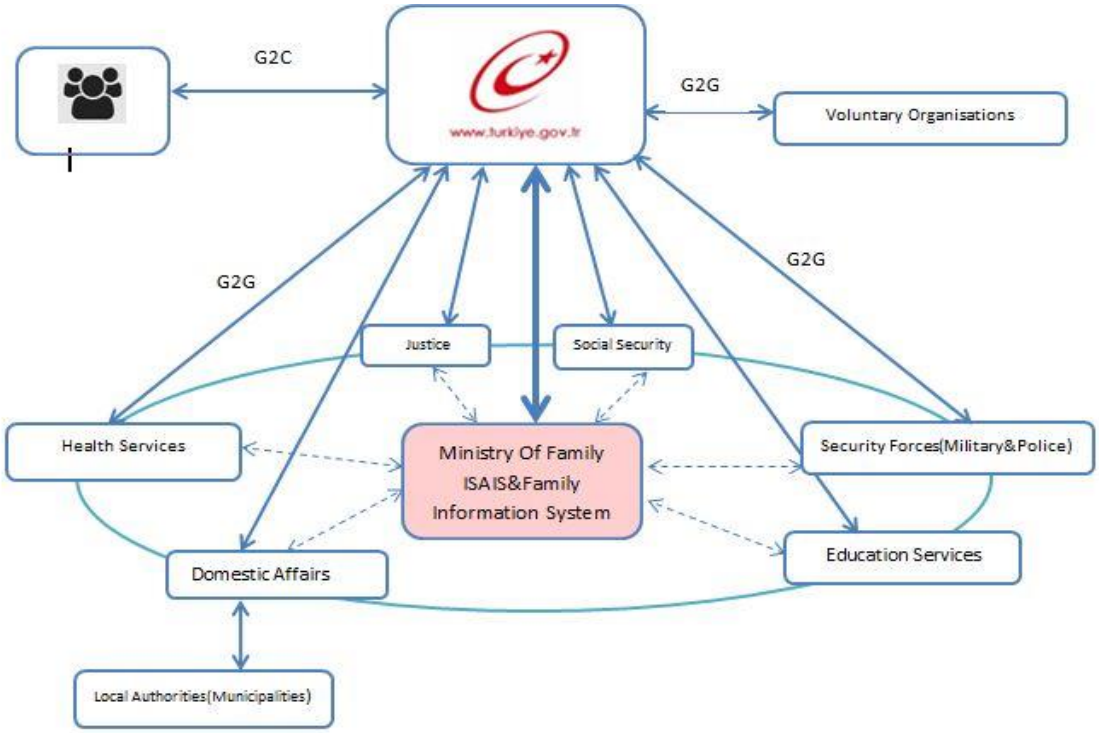



Figure 18: Social Policy Coordination and Information Sharing Framework to Reflect Practice (Source: Authors own creation)

### 4.3 Suggestions

Social policy is a comprehensive, complex and sensitive area and it implies efficient coordination and cooperation of a diversity of government institutions, voluntary organizations and local authorities. Similar or supplementary social services such as social aids, social care and health services are provided by different organizations. Coordination problems due to the old style bureaucracy decrease the efficiency and result in the waste of state sources, and to make matters worse, citizens that really need support might be neglected. In order to overcome those problems, organizational structure of the government is reshaped, the tasks given to the institutions are re-organized by law, or institutions may have to spend very dense effort and sometimes siginificant money for coordinating their services.

E-Government Gateway has provided enormous opportunities for interagency information-sharing via mechanisms such as G2G services and Government Application Center (Government Application Center is composed of query screens for sharing information with other government institutions and included in E-Government Gateway). Yet, it is required to scrutinize and reorganize the tasks and the operations of the government institutions working on the social area in the context of a long term planning for more effective services. For example, the income level determination of the citizens is conducted by many other government institutions in addition to the SASFs of the MoFLSS and every institution requires same sort of information for this task. Normally, every institution should reach to the same result, but results may vary for the same citizens due to the differences in application. Moreover, many of government institutions that are trying to determine income level do not have the chance to visit houses for a better provisioning. At this point, income level determination that is required for many institutions could be given as a task for the SASFs which are readily implementing this operation with strong information system infrastructure and periodical house visits. In fact, SASFs have been charged with this task at 2012 in the context of General Health Insurance registration. (Formerly green card given by Ministry of Health) Since then, number of citizens applied to the SASFs for income level test has been tripled and almost half of the citizens have been recorded in SAIS. Yet, many other government institutions such as Ministry of Justice and SSI are still trying to decide the income level of the applicants in their own way.

In the area of the social services it is strongly required to apply the case management approach. Recently, MoFLSS has implemented an information sharing infrastructure in the context of the SAIS system by integrating the E-Government Gateway and providing G2G web services for other government institutions serving in the area of social policies. But this module of the SAIS has not been actively used yet. As a first step to the Case Management Approach, this module could be activated and then enhanced to integrate the ASDEP module which is actively being used within the Ministry.

One of the most important prerequisites of the robust and efficient information sharing is developing and maintaining strong information systems designed on well-planned organizational structure and business processes accompanied with the strong sponsorship of the high level managers. As strong and smart integrations being established among the robust information systems, the Whole-of-Government services provided over E-Government Gateway could diminish the necessity, frequency and the scope of re-organizing (dividing or combining ministries as in 2011, 2018 and even forthcoming) the government institutions and ministries.

### 4.4 Further Research Suggestions

This research has focused on the benefits and problems of the integrations, interagency information-sharing and E-Government concepts in the area of the social assistance and social services. Interagency information-sharing opportunities in these areas are quite wide and each of these areas deserves to be investigated deeply. Child care, violence against women, social aids and others can be evaluated from the perspective of collaboration with other related government organization and local authorities. Particularly, child care section of the social policies is not at a satisfying level with respect to collaboration and interagency information-sharing. This research has just identified the insufficiency; 'What can be done in the child care area about collaborative case management and information sharing?' could be quite a good research subject candidate. Similarly, use of the mobile devices and technologies supporting the instant information sharing in the area of the social assistance and social services could also be as a complementary of this research which could also further the works of Çinar (2012) and Kunkell & Yowell (2001). As another subject, private sector is generally eager to access the data of the Ministry, so it could also be research subject how this valuable data is being shared with (or sold to) private sector.

Moreover, technical aspects and technological innovations are also convenient for further research. Because, amount of the data being exchanged between the organizations via batch queries is sometimes quite large and processes encounter with technical borders.

Information security and the judicial aspect of sharing sensitive information are also possible further research subjects.

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# APPENDICES

## APPENDIX 1: Full list of Institutions, Information Being Exchanged by MoFLSS in the area of the social services and social aids, (World Bank & MoFSP, 2017)

| Related Organization | Name of Service |
|---|---|
| Population and Citizen Affairs Directorate General | Identity Register Inquiry<br>Address Inquiry<br>Combined Personal Data Inquiry<br>Person Inquiry<br>Foreigner Identity Inquiry<br>Foreigner Address Inquiry<br>Provincial District Data Inquiry<br>Parameter Inquiry |
| Social Security Institution | Employee Inquiry<br>Pensioner Inquiry<br>SGK Service Record Inquiry<br>Active Insuree Data Inquiry<br>Pensioner Salary<br>Debt<br>Social Security Support Premium (SGDP)<br>Health Provision Activation System (SPAS)<br>Delete Disabled Elderly Register<br>Terminate Disabled Elderly Register<br>Inquire Disabled Elderly Register<br>Save Disabled Elderly Register<br>Delete Date of Application for Means Testing<br>Notify Date of Application for Means Testing<br>Save Date of Application for Means Testing<br>Participation Share Inquiry (Medula) |
| Ministry of Interior | Collective Village Guard Information Inquiry |
| Land Registry and Cadastre Directorate General | Real Person Land Registration Data Inquiry |
| Ministry of Health | Inquire Birth Information<br>Inquire Clinic Information<br>Inquire Health Follow-up Information<br>Inquire Infant Information<br>Inquire Pregnancy Information |

| | |
|---|---|
| | Inquire Pregnancy Follow-up<br>Inquire Training Movement<br>Inquire TYP (Community Service Program) Movement |
| Ministry of National Education | Inquire Education Attendance Records<br>Inquire Educational Achievement Records<br>Inquire Student Status Information<br>Inquire School Information<br>Inquire Educational Achievement Records For Syrian refugees |
| Ministry of Justice | Inquire Protection and Secrecy Verdicts for Women and Children<br>Inquire Criminal Registry Report |
| Ministry of Finance- Revenue Administration | Inquire Tax Payer Status<br>Inquire Vehicle Ownership Information |
| Ministry of Food Agriculture and Livestock - Farmer Registration System (ÇKS) Cattle Quantity Information - ÜKES | Inquire Business Information (Agricultural Land)<br>Inquire Livestock Information<br>Inquire Livestock Information<br>Sheep & Goat Quantity Information |
| Ministry of National Defence | Inquire Military Service Status |
| Central Bank of Republic of Turkey | Inquire Balance Information<br>Inquire Account Extract |
| Turkish Employment Agency (İŞKUR) | Inquire Compensation Status (Inquire Işkur Allowance)<br>Register Person with İŞKUR – Request Appointment<br>Inquire İŞKUR Status<br>Inquire Job Seeker<br>Inquire Employment Movement<br>Inquire Employment Profile Movement<br>Inquire Training Movement<br>Inquire TYP (Community Service Program) Movement |
| PTT | Payment List, Payment Synchronization and Payment Cancellation |
| Ziraat Bankası | Fund Transfer from DGSA to Foundations |

| | |
|---|---|
| Halkbank | Fund Transfer from DGSA to Foundations |
| Vakıfbank | Fund Transfer from DGSA to Foundations |
| TÜRKSAT | Sending SMS<br>Inquire Result of SMS,G2G services related with<br>Inquire Martyr And Veteran Applications,<br>Social Assistance And Income Test Result Status |
| Turkish Coal Authority | Submit Request for Coal, Inquiry Delivery Status |
| YÖK | Inquire Graduation from University |
| ÖSYM | Inquiry Result of Central Government Exams |
| Higher Education Credits and Dormitories Agency Directorate General | Inquire Tuition Fee Loan and Scholarship |
| Foundations Directorate General (VGM) | Inquire Poverty Assistance |

## APPENDIX 2: Interview Questions

**Görüşülen Kişiye İlişkin Bilgiler:**

1. Yaşınız?
2. Unvanınız?
3. Biriminizdeki göreviniz?
4. Bakanlıkta Çalışma Süreniz?

**Alan Soruları**

1. **Sosyal hizmet/yardım alanında ICT kullanımının rolü hakkında ne düşünüyorsunuz? Sizce ICT sosyal hizmet sunumunda kullanılmalı mı? Evet, ise, kurumsal kaynak yönetimi, iş süreçlerin otomasyonu, orta ve uzun vadeli karar destek, politika üretme v.b. gibi alanlardan hangilerinde kullanılmalıdır?**

    - Kurumsal Kaynak Yönetimi(Personel, Stok, Belge Yönetim vs.)
    - Yönetim Bilişim Sistemi(Kadın, Çocuk Engelli hizmetlerine ilişkin süreçler)
    - Vaka bazlı akıllı karar destek sistemleri(örn. Muhtaçlık Puanlama Projesi)
    - Üst yönetim için karar destek sistemleri

2. **Sosyal Hizmet/Yardım alanında Kurumlar arası işbirliğine dayalı vaka yönetimi ve bu kavramın kurumlar arası çevrim içi bilgi paylaşımı ile ilişkisi hakkında görüşünüz nedir?**

3. **Bakanlık bünyesinde rol aldığınız entegrasyonların kamu hizmetlerinde bürokrasisinin azaltılması, verimliliğin ve hizmet kalitesinin artırılması hususlarında beklenen faydalar nelerdir? Başarı seviyesi sizce yeterli midir? Sağlanan fayda nasıl artırılabilir?**

4. **Rol aldığınız kurumlar arası veri paylaşımına yönelik entegrasyonlarla elde edilen verilerin etkin kullanımında karşılaştığınız genel ve özel problemleri somut örneklerle anlatabilir misiniz? Karşılaşılan bu sorunların aşılması için önerileriniz nelerdir?**

    - Teknik sorunlar
    - Mevzuatsal sorunlar
    - İdari sorunlar
    - Koordinasyon(Teknik/idari)

5. **Kurumlar arası veri paylaşımına yönelik entegrasyonların tesisi süreci, niyet aşamasından diğer kurumun verisinin kullanılmaya başlanmasına kadar yaklaşık ne kadar bir süre gerektirmektedir?**

    - Hukuki altyapı/protokol imza süreci
    - Sistemler arası güvenli ağ erişimin sağlanması
    - İlgili bilgi sistemi tarafından verinin iş süreçlerine entegre edilmesi

6. **Kullandığınız ya da destek verdiğiniz Bakanlıkta kullanılan Bütünleşik, YBS, SOYBIS, Aile Bilgi Sistemi v.b. bilgi sistemlerini kurumlar arası veri paylaşımların yeterliliği ve etkinliği açısından değerlendirebilir misiniz?**

    - Bütünleşik/SOYBIS
    - Yönetim Bilişim Sistemi
    - Aile Bilgi Sistemi/ASDEP
    - Diğer Sistemleri

7. **Üst yönetimin kurumlar arası veri paylaşımı üzerindeki etkisi ve rolü nedir? Sağladıkları katkı ne şekilde artırılabilir?**

8. **Kişisel verilerin korunması kanununun sosyal alanda kurumlar arası veri paylaşımı üzerindeki etkilerini mevzuat ve iş süreçleri açısından engel teşkil edip etmeyeceği hususunu nasıl değerlendiriyorsunuz?**

9. **E-Devlet Kapısı (turkiye.gov.tr) üzerinden Kamudan Kamuya sunulan web servis hizmetlerinin Kurumlar arası veri paylaşımına sağlayabileceği katkılar ve etkileri hakkında ne düşünüyorsunuz?**

10. **Aşağıda sunulan modeller çerçevesinde sosyal alanda yapılan kurumlar arası veri paylaşımları hangi model ile en çok uyum göstermektedir?**

| | **Bilgi Paylaşımı** | **Bilgi Korunumu** | **Gizlilik İhlali Riski** | **İhmal Riski** |
|---|---|---|---|---|
| **İdeal Model** | **Makul ölçülerde** | **Makul ölçülerde** | **Düşük Risk** | **Düşük Risk** |
| **Fazla Açık Model** | **Olması gerekenden fazla veya gereksiz** | **Makul ölçülerde** | **Yüksek Risk** | **Düşük Risk** |
| **Fazla Tedbirli Model** | **Makul ölçülerde** | **Olması gerekenden fazla veya gereksiz** | **Düşük Risk** | **Yüksek Risk** |
| **Kaotik Model** | **Olması gerekenden fazla veya gereksiz** | **Olması gerekenden fazla veya gereksiz** | **Yüksek Risk** | **Yüksek Risk** |

## APPENDIX 3: Less Frequent Keywords

| # of Usage | Notion/Keyword |
|---|---|
| 6 | MIS |
| 6 | Data Dictionary |
| 6 | Decision Support |
| 6 | Kamunet |
| 6 | Awareness |
| 6 | Institutional Fanatism |
| 5 | Volume Of Business |
| 5 | Social Security |
| 5 | Data Reliability |
| 5 | Fast Action |
| 5 | Information Sharing Comission |
| 5 | Further Advance Required |
| 4 | Realistic Planning |
| 4 | ASDEP |
| 4 | Risk Detection |
| 4 | Turkish Red Crescent |
| 4 | Family Information System |
| 4 | Intelligent Systems |
| 4 | Chaotic Model |
| 3 | Disability Report |
| 3 | IT Orientation |
| 3 | Over-Cautious Model |
| 3 | Local Authorities |
| 2 | İncome Level Determination |
| 2 | Government To Citizen |

**APPENDIX 4: List of the Interviewees & Official Permission Documents**

| | |
|---|---|
| 1. Interviewee | 32, Expert, Social Assistance, Social/business Title, Head of Department, 10 years experince |
| 2. Interviewee | 35, Expert, Social Assistance, Social/business Title with former IT background, 9 years experince |
| 3. Interviewee | 32, Expert, Women Services, Social/business Title, Head of Department, 10 years experince |
| 4. Interviewee | 43, Social Worker, Children Services, Social/business Title, 10 years experince |
| 5. Interviewee | 35, Expert, Family and Society Services, Social/business Title, Head of Department, 12 years experince |
| 6. Interviewee | 32, System Programmer, IT Department, Technical Title, Head of Department, 3 years experience |
| 7. Interviewee | 35, Expert, Social Assistance, Social/business Title, Head of Department, 12 years experience |
| 8. Interviewee | 32, Assistant Expert(Software Developer, Social Assistance), Technical Title, 3 years experience |
| 9. Interviewee | 46, Technical Adviser, Software Architect(Social Services), Technical Title, 3 years experience |
| 10. Interviewee | 28, Assistance Expert, Software Developer, 2 years experince in Ministry |
| 11. Interviewee | 47, Social Worker, Children Services, Social/business Title, Head of Department, 15 years experience |
| 12. Interviewee | 36, Call Center Team Leader, Social Assistance, 9 Years experience |
| 13. Interviewee | 37, Expert, Social Assistance, Social/business Title, Head of Department, 10 years experince |

T.C.
AİLE,ÇALIŞMA VE SOSYAL HİZMETLER BAKANLIĞI
Bakan Yardımcılığı
Eğitim ve Yayın Dairesi Başkanlığı, Eğitim Planlama ve Uygulama Birimi

Sayı : 94952863-605.01-E.707799 26/11/2018

Konu : Ali Saip DEMİRÖZ

BAKAN YARDIMCILIĞI MAKAMINA

Bilgi İşlem Dairesi Başkanlığının 02/10/2018 tarih ve 320555 sayılı yazısı ile Başkanlıklarında uzman olarak görev yapan aynı zamanda Yıldırım Beyazıt Üniversitesi Sosyal Bilimler Enstitüsü Yönetim Bilişim Sistemleri bölümünde yüksek lisans eğitimine devam eden Ali Saip DEMİRÖZ'ün "Sosyal Hizmet Alanında Entegrasyon ve Birlikle Çalışılabilirlik İmkanlarının Değerlendirilmesi: Aile, Çalışma ve Sosyal Hizmetler Bakanlığı Örneği" başlıklı tezi kapsamında 25 Ekim-30 Kasım 2018 tarihleri arasında Bilgi İşlem Dairesi Başkanlığı, Sosyal Yardımlar Genel Müdürlüğü. Çocuk Hizmetleri Genel Müdürlüğü, Aile ve Toplum Hizmetleri Genel Müdürlüğü ile Kadının Statüsü Genel Müdürlüğü bünyesinde kurumlar arası veri paylaşımı konusunda çalışmış personel ile mülakat ve anket uygulayabilme talebi bildirilmiştir.

Söz konusu talep ilgili Genel Müdürlükler tarafından olumlu değerlendirilmiştir.

Araştırmanın ilgili Genel Müdürlüklerin koordinesinde, gönüllülük esasına dayalı olarak, ses-görüntü kaydı alınmaksızın, araştırma sonuçlarının herhangi bir yerde yayınlanmadan önce kurum izni alınması ve araştırma bitiminde bir örneğinin Çocuk Hizmetleri Genel Müdürlüğü, Kadının Statüsü Genel Müdürlüğü ile Eğitim ve Yayın Dairesi Başkanlığına gönderilmesi koşulları ile uygulanabilmesi hususunu;

Olurlarınıza arz ederim.

e-imzalıdır
Salih BOZKURT
Eğitim ve Yayın Dairesi Başkan V.

OLUR
26/11/2018

e-imzalıdır
Ayşe ERGEZEN
Bakan Yardımcısı

Ek :
1 - (1 sayfa)
2 - (1 sayfa)
3 - (1 sayfa)
4 - (1 sayfa)

Not: 5070 sayılı Elektronik İmza Kanunu çerçevesinde güvenli elektronik imzalı aslı ile aynıdır.

T.C. AİLE, ÇALIŞMA VE SOSYAL HİZMETLER BAKANLIĞI
Eskişehir Yolu Söğütözü Mah. 2177. Sok. No: 10/ A Kat: 27
Posta Kodu: 06510 Çankaya/ Ankara
(312)705 57 00
(312)705 57 57
Bilgi için:Seval ÇETİN
Sosyal Çalışmacı

T.C.
AİLE,ÇALIŞMA VE SOSYAL HİZMETLER BAKANLIĞI
Eğitim ve Yayın Dairesi Başkanlığı

Sayı : 94952863-605.01-E.744509 27.11.2018
Konu : Ali Saip DEMİRÖZ

DAĞITIM YERLERİNE

Bilgi İşlem Dairesi Başkanlığının 02/10/2018 tarih ve 320555 sayılı yazısı ile Bilgi İşlem Dairesi Başkanlığında uzman olarak görev yapan aynı zamanda Yıldırım Beyazıt Üniversitesi Sosyal Bilimler Enstitüsü Yönetim Bilişim Sistemleri bölümünde yüksek lisans eğitimine devam eden Ali Saip DEMİRÖZ'ün "Sosyal Hizmet Alanında Entegrasyon ve Birlikle Çalışılabilirlik İmkanlarının Değerlendirilmesi:Aile, Çalışma ve Sosyal Hizmetler Bakanlığı Örneği" başlıklı tezi kapsamında 25 Ekim-30 Kasım 2018 tarihleri arasında Bilgi İşlem Dairesi Başkanlığı, Sosyal Yardımlar Genel Müdürlüğü, Çocuk Hizmetleri Genel Müdürlüğü, Aile ve Toplum Hizmetleri Genel Müdürlüğü ile Kadının Statüsü Genel Müdürlüğü bünyesinde kurumlar arası veri paylaşımı konusunda çalışmış personel ile mülakat ve anket uygulayabilme talebi bildirilmiştir

Söz konusu talebe ilişkin alınan Makam Onayı ekte gönderilmektedir.

Bilgilerinizi ve gereğini arz ederim.

e-imzalıdır
Salih BOZKURT
Eğitim ve Yayın Dairesi Başkan V.

Ek : (1 sayfa)

Dağıtım:

Gereği:
Bilgi İşlem Dairesi Başkanlığına

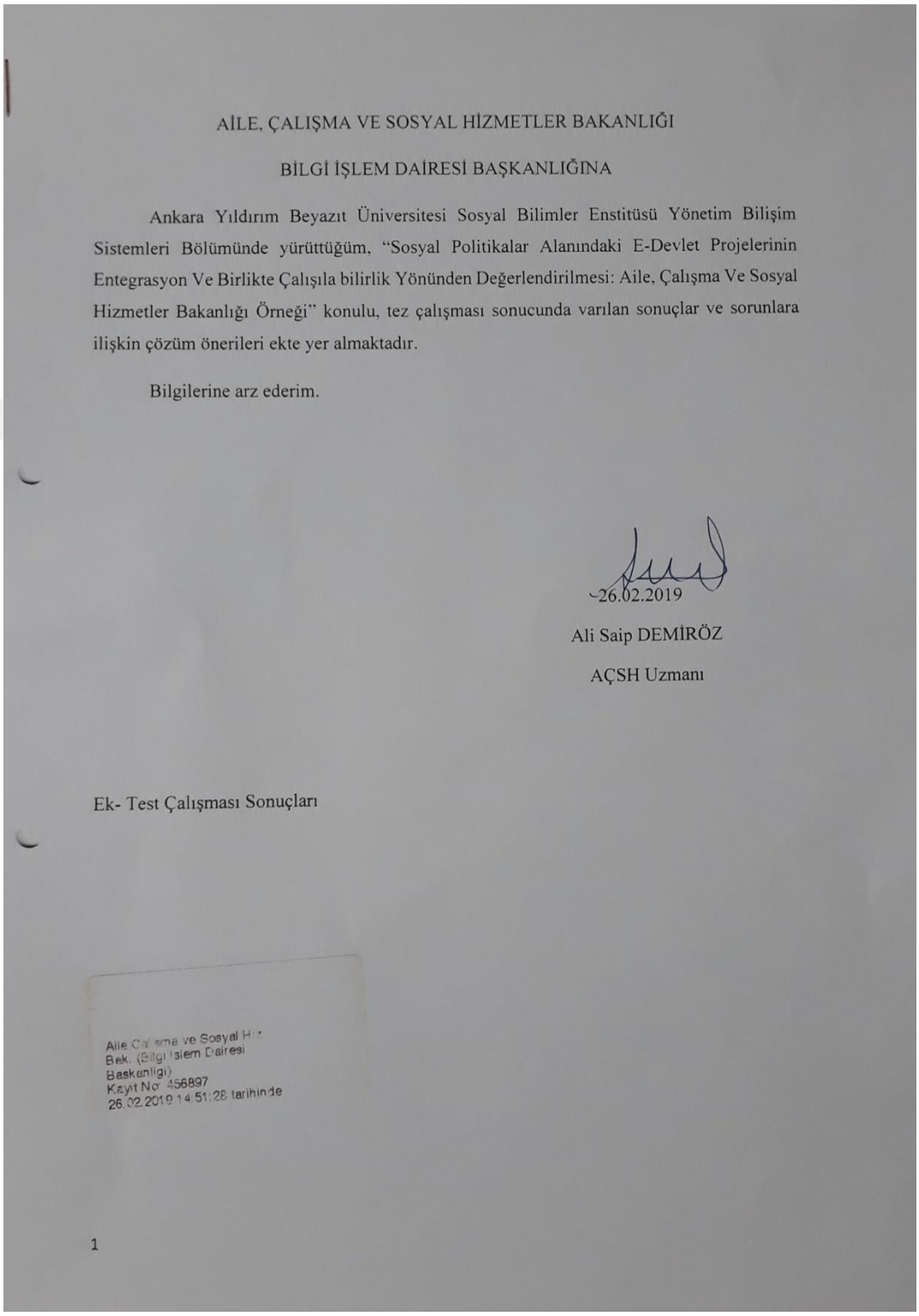
Bilgi:
Çocuk Hizmetleri Genel Müdürlüğüne
Aile ve Toplum Hizmetleri Genel Müdürlüğüne
Kadının Statüsü Genel Müdürlüğüne
Sosyal Yardımlar Genel Müdürlüğüne

Not: 5070 sayılı Elektronik İmza Kanunu çerçevesinde güvenli elektronik imzalı aslı ile aynıdır.

T.C. AİLE, ÇALIŞMA VE SOSYAL HİZMETLER BAKANLIĞI
Eskişehir Yolu Söğütözü Mah. 2177. Sok. No: 10/ A Kat: 27
Posta Kodu: 06510 Çankaya/ Ankara
(312)705 57 00
(312)705 57 57

Bilgi için:Seval ÇETİN
Sosyal Çalışmacı

## APPENDIX 5: Report Presented to the Ministry



AİLE, ÇALIŞMA VE SOSYAL HİZMETLER BAKANLIĞI

BİLGİ İŞLEM DAİRESİ BAŞKANLIĞINA

Ankara Yıldırım Beyazıt Üniversitesi Sosyal Bilimler Enstitüsü Yönetim Bilişim Sistemleri Bölümünde yürüttüğüm, "Sosyal Politikalar Alanındaki E-Devlet Projelerinin Entegrasyon Ve Birlikte Çalışıla bilirlik Yönünden Değerlendirilmesi: Aile, Çalışma Ve Sosyal Hizmetler Bakanlığı Örneği" konulu, tez çalışması sonucunda varılan sonuçlar ve sorunlara ilişkin çözüm önerileri ekte yer almaktadır.

Bilgilerine arz ederim.

26.02.2019

Ali Saip DEMİRÖZ

AÇSH Uzmanı

Ek- Test Çalışması Sonuçları

Aile Çalışma ve Sosyal Hiz.
Bak. (Bilgi İşlem Dairesi
Başkanlığı)
Kayıt No: 456897
26.02.2019 14:51:28 tarihinde

1

## Özet

Sosyal politikaların özellikle sosyal hizmet ve sosyal yardım ayaklarının tek elden yürütülmesi amacıyla 2011 yılında 633 sayılı KHK ile Aile ve Sosyal Politikalar Bakanlığı kurulmuştur. Bakanlık bünyesinde, aile ve toplum hizmetleri, engelli ve yaşlı hizmetleri, sosyal yardımlar, çocuk hizmetleri, kadın hizmetleri alanlarında, gerek doğrudan vatandaşa hizmet sunan, gerekse araştırma ve politika üretme alanlarında faaliyet gösteren genel müdürlükler tek çatı altında birleştirilirmiş, ayrıca şehit yakınları ve gazilere yönelik daire başkanlığı kurulmuştur. Böylece, Bakanlığın teşkili öncesinde de birbirleri ile ilişkili alanlarda faaliyet gösteren devlet kurumlarının koordinasyonun artırılması hedeflenmiştir. Örneğin, Bakanlığın teşkilinden bir yıl önce, Mülga (SHCEK) ile mülga Sosyal Yardımlaşma ve Dayanışma Genel Müdürlüğü, vatandaşların gelir durumlarının tespiti amacıyla web servisler ve SOYBİS uygulaması üzerinden veri paylaşmaya başlamışlardır. Aile ve Sosyal Politikalar Bakanlığı kurulduğu dönemde, sosyal politikaların merkezinde bulunmasına rağmen, sosyal politikaların kompleks yapısı gereği, sağlık, eğitim, adalet, güvenlik ve sosyal güvenlik gibi konularda faaliyet gösteren diğer bir çok kamu kurum ve kuruluşu ile birlikte koordineli çalışmak, ve bu kapsamda veri alışverişi yapmak ihtiyacı duymuş, bir çok kamu kurum ve kuruluşu ile veri alışverişine başlanmıştır.

Bakanlık veri paylaşımlarında Sosyal Yardımlar Genel Müdürlüğü, Bakanlık öncesi dönemden başlayarak dikkat çekici ve öncü bir rol üstlenmiştir. Yardım faaliyetleri kapsamında, vatandaşların gelir ve varlık durumlarının tespit edilmesi için, vatandaşların çeşitli kurumlardan tek tek dolaşarak belge temini gerekmekte idi. Bu durum ise hem vatandaşlar hem de kamu için verimlilik ve güvenilirlik açısından sıkıntılara neden olmaktaydı. Bu sorunun çözümüne yönelik olarak, diğer kurumlardan gelir ve varlık durumuna ilişkin çeşitli verilerin elektronik ortamda temin edilmesi çalışmalarına 2009 yılında başlanmıştır. İdari ve teknik süreçlerin eş zamanlı olarak yürütülmesi ve üst yönetimin önemli desteği ile yaklaşık bir yıl gibi kısa bir süre içerisinde bir çok kamu kurum ve kuruluşu ile entegrasyon sağlanmıştır. Kurulan entegrasyonlar ile, halen aktif bir şekilde kullanılmakta olan SOYBİS uygulaması ile anlık olarak sorgulanarak Sosyal

Yardımlaşma ve Dayanışma Vakıflarının kullanımına sunulmuştur. Bu kapsamda elektronik ortamda elde edilen veriler, nüfus ve adres bilgileri, sosyal güvence ve maaş bilgileri, tapu ve araç sahipliği bilgileri, işsizlik ödeneği, vergi mükellefiyeti, hayvan sahipliği bilgileri, tarımsal destek ödemeleri, sosyal hizmet kapsamındaki yardımlar, muhtaçlık aylığı, korucu maaşı bilgileri, kredi ve burs bilgileri şeklindedir. Bu entegrasyonlar hâlihazırda sosyal yardım tarafında Bütünleşik uygulaması üzerinden Sosyal Yardımlaşma ve Dayanışma Vakıflarına, SOYBİS üzerinden ise sosyal hizmet ile ilgili Bakanlık birimlerine sunulmaktadır. Sosyal hizmet alanında bu veriler gelir seviyesi tespitinde önemli ölçüde kullanılmakta, ancak sosyal hizmetlerin doğası gereği ilgili kurum ve kuruluşlarla sosyal hizmet vaka yönetimine dair entegrasyonlara da ihtiyaç duyulmaktadır. Bu kapsamda, Bakanlık bünyesinde gerçekleştirilen en önemli entegrasyon ise Kadının Statüsü Genel Müdürlüğü ve Bilgi İşlem Dairesi Başkanlığı tarafından Adalet Bakanlığı ile 6284 sayılı yasa kapsamında verilen tedbir kararlarının elektronik ortamda temin edilmesi ile gerçekleştirilmiştir. Halihazırda, yakın zamanda benzer bir entegrasyon da Emniyet Genel Müdürlüğü ile gerçekleştirilmiştir. Ayrıca şehit yakınları ve gazilere yönelik tanına hakların elektronik ortamda veri paylaşımı ile kontrol edilebilmesi için Sosyal Güvenlik Kurumu ile entegrasyon sağlanmıştır. Sosyal hizmet alanında, çocuk eğitim bilgileri, çocuğa yönelik tedbir kararları diğer bir çok entegrasyon için planlamalar ve çalışmalar yapılmaktadır.

Bakanlık mevcut durumda veri paylaşımlarında ağırlıklı olarak diğer kurumlardan veri temin eden taraf konumundadır. Aile Bakanlığının dışında birçok kamu kurum ve kuruluşu da verdiği hizmetler kapsamında vatandaşların gelir durumlarının ve var ise aldığı yardımların bilgisine yoğun bir biçimde ihtiyaç duymaktadır. Bu kapsamda faaliyeti bulunan birçok kamu kurum ve kuruluşu ile yerel yönetimler ve sivil toplum kuruluşları tarafından özellikle Bakanlık bünyesinde kullanılmakta olan SOYBİS uygulamasının kullanımına yönelik yoğun talepler iletilmektedir. SOYBİS uygulaması ise yalnızca Bakanlığa ait verileri değil, diğer kurumlardan da temin edilen verileri sunmakta olduğundan bu talep olumsuz karşılanmakta ve SOYBİS uygulamasının, Aile Bilgi Sisteminin kullanımının yaygınlaşmasını müteakiben kapatılması planlanmaktadır. Bakanlık diğer kurumların veri taleplerini karşılama noktasında Bütünleşik(sosyal yardım

bilgileri) ve YBS(Evde Bakım, Sosyal Ekonomik Destek, Koruyucu Aile ödeme bilgileri) veri tabanlarından beslenen web servisleri ile E-Devlet Kapısı üzerinden Kamudan Kamuya Hizmetler kapsamında veri paylaşma politikası izlemektedir. Hali hazırda sosyal yardım bilgileri, Kızılay ve Vakıflar Genel Müdürlüğü ile paylaşılmış, diğer birkaç kurumla paylaşılma aşamasındadır. Sosyal hizmet ödeme verileri ise henüz paylaşılmamış olup, teknik açıdan son noktaya gelinmiştir.

Yürütülen veri paylaşımı ve temini çalışmalarında, entegrasyonlardan beklenen faydaların yanında, sürecin sağlıklı ve hızlı bir şekilde etkileyen çeşitli faktörler ile karşılaşılmaktadır. Öncelikle, veri paylaşımlarının usul ve esaslarının belirlendiği veri paylaşım protokollerinin imzalanması süreci olması gereken makul sürelerin çok üzerine çıkabilmektedir. Bu durumla özellikle Bakanlığın birden fazla birimini ilgilendiren veri paylaşımlarına dair protokollerin imza sürecinde karşılaşılmaktadır. Bu tür süreçlerde sekretarya görevinin hangi birim tarafından yürütüleceği net olmadığından, birimler arası koordinasyonun sağlanmasında gecikmeler yaşanmakta, kimi zaman protokol imza süreci olumsuz neticelenebilmektedir. Ayrıca, Genel Müdürlükler düzeyinde imzalanan protokoller ise aynı veriye Bakanlığın diğer Genel Müdürlükleri de ihtiyaç duyduğundan bu verinin farklı bir birim tarafından kullanımında hukuki açıdan tereddütler oluşabilmekte, bu tereddütlerin giderilmesi ise uzun süren resmi yazışma süreçlerini tetikleyebilmektedir. Örnek olarak 633 sayılı KHK'da Bakanlık öncesi Genel Müdürlükler tarafından imzalanan protokollerin Bakanlığın tüzel kişiliğine ait protokoller olarak kabul edildiği ifade edilmiştir. Ancak, protokol metinlerinde geçen Genel Müdürlük atıfları ve paylaşılacak verilerin sınırlarının net bir şekilde çizilmiş olduğu durumlardan dolayı, aynı veriler diğer Genel Müdürlükler tarafından kullanılmak istendiğinde protokollerin güncellenmesi ve/veya yenilenmesi gerekmiştir. Ayrıca, protokol metinlerinde paylaşılacak veri formatının sınırlarının net bir şekilde ifade edilmesi, bu veri setini genişletmenin usul ve esasları hakkında protokolde hüküm bulunmaması veya veri seti değişikliğinin ancak ek protokol ile yapılabileceğinin belirtilmesi, protokolün örneğin 1 veya 2 yıl gibi kısıtlı bir süre geçerli olduğunun belirtilmesi gibi sebepler yine veri paylaşım süreçlerinin uzamasına yol açmaktadır. Yazar, resmi yazı veya gayri resmi olarak protokol taslaklarına görüş istendiğinde özellikle protokollerin Genel Müdürlük

seviyesindense Bakanlık seviyesinde yapılması, paylaşılacak veri formatında değişiklik gerektiği durumda resmi yazışma ile yeni verilerin eklenebileceğine bir maddenin eklenmesi önermektedir. Protokollerin Bakanlık seviyesinde imzalanmasının hukuki açıdan da daha uygun olduğu, bu konuda uzman personel tarafından da belirtilmiştir.

İdari süreçlerin yanı sıra teknik süreçlerde de birçok problem ve gecikme yaşanabilmektedir. Ağ iletişim alt yapısının kurulmasında, genellikle noktadan noktaya VPN yöntemi tercih edilmektedir. Bazı kurumlar ise üst seviye güvenlik sağlaması açısından veri paylaşımının kiralık hat üzerinden gerçekleştirilmesini şart koşabilmekte, bu durum ise satın alma süreçlerine ve tüm sürecin daha da uzamasına neden olabilmektedir. Farklı teknolojilerde ağ cihazlarının kullanımı ve kimi zaman teknik personelin yetersizliği bağlantı kurulması ve sürdürülmesinde beklenmedik gecikmelere neden olabilmektedir. Bu noktada Kamunet çalışmasının, tüm kurumlar Kamunete dahil olduğunda kurumlar arası veri paylaşımını oldukça kolaylaştıran bir faktör olacağı değerlendirilmektedir.

Veri paylaşım sürecinde aşılması gereken bir diğer önemli aşama da verinin paylaşılacağı web servislerinin geliştirilmesi veya mevcut servislerin karşı kurumun erişimine açılması, bunu müteakiben servislerden sunulan verilerin yorumlanarak bilgi sistemlerine entegre edilmesidir. Bu aşamada çoğu kurum mevcutta bulunan web servislerini, talep eden diğer kurumun kullanımına açmakta, bazı durumlarda ise ihtiyaca göre yeni web serviler geliştirmektedir. Sunulan servislerin doğru bir şekilde dökümante edilmesi hem teknik entegrasyon ve hataların doğru yorumlanması, hem de verilerin mevzuat açısından doğru yorumlanması açısından büyük önem arz etmektedir. Çoğu zaman dokümantasyonlar bulunmamakta veya yetersiz kalmakta, bu durumda karşı kurumdan, servis ve verinin dahil olduğu iş kuralları hakkında bilgi alabilmek için doğru irtibat noktaları bulunarak entegrasyon sürecinde gerekli olan bilgilere ulaşılmaya çalışılmaktadır. Örnek olarak, SGK tarafından sunulan sosyal güvenceye dair web servisleri kullanılarak, şehit yakınları ve gazilerin istihdam hakkını kullanmada daha önce kamu hizmetinde çalışıp çalışmadığının tespiti gerekmiştir. TC no ile sorgulama yapıldığında SGK tarafından kişinin sosyal güvenlikle ilgili neredeyse bütün verisi sunulmakta, bu verinin doğru bir şekilde yorumlanarak kişinin kamun hizmetinde çalışıp

çalışmadığı tespit edilmesi gerekmektedir. Bu amaçla yapılan çalışmalarda uzun uğraşlar sonucunda SGK'dan servisi sunan teknik personel ile ilgili mevzuata hâkim idari personeller bir araya getirilerek hangi servisten hangi alt kodların kişinin Kamuda SSK kapsamında dahi olsa çalıştığına dair net bir bilgi edinilebilmiştir. Benzer şekilde sosyal yardım alanında da sosyal güvencenin yardım türüne göre doğru bir şekilde yorumlanması büyük önem arz etmektedir. Entegrasyon sürecinde gözden kaçan küçük bir detay kimi zaman birçok vatandaşın toplu bir şekilde yardımının durdurulmasına veya kesilmesine neden olabilmektedir. Bunun da ötesinde, veriyi sunan kurum tarafından entegre olan kurumlara bilgi vermeden yapılan değişiklikler ile önceden sosyal güvenceli sayılmayan vatandaşlar sosyal güvenceli olarak değerlendirilebilmekte, servisi kullanan kuruma bu konuda bilgi verilmediğinde bir çok mağduriyet ortaya çıkabilmektedir.

Adalet Bakanlığı ile yürütülen kadına yönelik tedbir kararlarının Bakanlık tarafından online entegrasyon ile temini sürecinde de veri formatlarının ve sınıflandırmasının uyumsuzluğu ile ilgili olarak yoğun ve uzun süren örnek bir çalışma gerçekleştirilmiştir. Tedbir kararları Adalet Bakanlığı tarafında "Davalı" ve "Davacı" şeklinde tutulduğu, Aile Bakanlığı tarafından ise "Şiddet Gören" ve "Şiddet Uygulayan" şeklinde bir ayrımın yapılması gerektiğinden bu verilerin tüm tedbir karar türleri için dönüştürülmesi ve bunun için de UYAP ekranlarında ve sunulan serviste kapsamlı değişiklikler yapılması gerekmiştir. Ayrıca, UYAP ekranlarına veri giren personellerin farkındalığının artırılması için çalışmalar yapılması planlanmıştır.

Bakanlık, ağırlıklı olarak diğer kurumlardan veri temin eden bir konumda iken zamanla Bakanlığa ait verilerin diğer kurumlar ile paylaşılması talepleri de yoğun olarak gündeme gelmiştir. Bu konudaki talepler, SOYBİS uygulamasının göreceli olarak entegrasyonların az olduğu erken dönemde ortaya çıkarak şöhret kazanması neticesinde, uygulamanın kendi kurumlarına da açılması şeklinde olmuştur. Bakanlık öncesi yaşanan istisnalar dışında, bu talep Bakanlık nezdinde kabul görmemiştir. Çünkü, SOYBİS uygulaması Bakanlık bünyesinde bulunan verilerin haricinde diğer kurumların da verilerini anlık olarak sorgulamakta, uygulamanın diğer kurumların kullanımına mevcut haliyle açılması, Kişisel Verilerin Korunması Kanunu'nun getirdiği hükümler de göz önünde

bulundurularak bu açıdan uygun görülmemektedir. SOYBİS kullanma talebinde bulunan kurumlara ise, , Bakanlığa ait olan sosyal yardım ve sosyal hizmet kapsamındaki verilerin, verinin sahibi Genel Müdürlüklerden izin alınarak, E-Devlet Kapısı üzerinden web servisler aracılığı ile sunulabileceği ifade edilmekte, talep eden kurumlara da bu servislere erişim sağlanmaktadır.

Ayrıca vatandaşlar tarafından E-Devlet Kapısı üzerinden erişilmek üzere, sosyal hizmet ve sosyal yardım kapsamında bir çok servis sunulmaktadır. Ancak bu servislerin önemli bir kısmı, daha önce yapılan başvuruların durumlarının sorgulanabildiği servisler olup, sosyal hizmet ve sosyal yardımın insana dokunan doğasından dolayı, sadece online başvuru alınarak hizmet sunulması çoğu zaman mümkün olmamaktadır. Bununla beraber, Kamudaki genel eğilim olan vatandaştan belge talep etmeden çevrimiçi başvuru ile işlemlerin bütününün yürütülmesini ifade eden(Whole-of-Government) kavramına uygun servisler üzerinde de çalışmalara devam edilmektedir. Örneğin, şehit yakınları ve gazilere verilen bir hak olan ücretsiz seyahat kart başvuruları E-Devlet Kapısı'ndan online olarak alınmakta, alınan başvurunun hak sahipliğine uygun olup olmadığı, SGK ve MERNİS'ten anlık olarak yapılan kontroller ile sağlanmakta, vatandaşın yüklediği resim de kullanılarak kart basılabilmektedir. E-Devlet Kapısı üzerinden sunulan hizmetlerde, bütüncül hizmet sunumu konusunda göze çarpan en büyük eksiklik ise Bakanlık hizmetlerinin ve yardımlarının önemli bir kısmında kilit rol oynayan Engelli Sağlık Kurulu Raporunun online olarak temin edilememesidir. Bu konuda verinin üreteni ve sahibi olan Sağlık Bakanlığı tarafından uzun yıllardır çalışmalar yürütülmekte, ve kısa bir süre sonra doğrulanmış verilerin online olarak sunulabileceği ifade edilmektedir.

**Sonuç ve Öneriler**

Kurumlar arası veri paylaşımı ve entegrasyonlar günümüzde E-Devlet süreçlerinde önemli bir konu olarak gündemde yer almakta olup, kamunun, vatandaşlara etkin ve verimli hizmet sunabilmesi için önemli bir araç olarak değerlendirilmektedir. Sosyal politikalar alanında da Bakanlık kanunen kendisine verilen görevleri yerine getirebilmek için diğer kamu kurum ve kuruluşları, yerel yönetimler ve sivil toplum kuruluşları ile yakın işbirliği halinde çalışmak durumundadır. Sosyal politikanın kapsamlı ve karmaşık yapısı

bu işbirliğini zorunlu kılmakta, sorunların çözümü, sosyal hizmet, sosyal yardım, sosyal güvence, istihdam, güvenlik, eğitim ve sağlık gibi konularda bütüncül yaklaşım sunulmasını zorunlu kılmaktadır. Zaman zaman devletin kurumları yeniden yapılandırılarak aynı çatı altında toplanmakta veya ayrışarak başka bir yapılanmaya gidilebilmektedir. Bu durum sosyal politika alanında da yaşanmakta olup, bu kapsamda 2011 yılında sosyal hizmet ve yardım alanından faaliyet gösteren çeşitli kurum ve kuruluşlar Aile ve Sosyal Politikalar Bakanlığı çatısı altında birleştirilmiştir. 2018 yılında ise Çalışma ve Sosyal Güvenlik Bakanlığı ile birleştirilerek Aile, Çalışma ve Sosyal Hizmetler Bakanlığı teşkil edilmiştir.

Sosyal politikalar özelinde, bu alanda faaliyet gösteren kurumlar arasında veri paylaşımı hâlihazırda bu araştırmada vurgulanan bazı sorunlar ve kazanımlar çerçevesinde belli ölçülerde gerçekleştirilmektedir. Özellikle sosyal yardım alanında hem vatandaşların gelir tespitlerinin sağlıklı bir şekilde yapılması, hem de elde edilen sonuçların birlikte çalışılabilirlik esasları doğrultusunda diğer kurumlarla paylaşılması gibi noktalarda güçlü bir şekilde sürdürülmektedir. Sosyal hizmet alanında ise özellikle sosyal hizmet vaka yönetimine yönelik olarak veri alışverişi yapılması gereken bir çok çalışma bulunmaktadır.

Veri paylaşımlarının tüm devlet nezdinde etkin bir şekilde yapılabilmesi için organizasyonel yapının, mevzuatın ve iş kurallarının teknolojinin gelişimine uygun olarak doğru bir şekilde kurgulanması ve revize edilmesi gerekmektedir. Veri paylaşımına imkân sağlayan ana faktör arka planda verilerin tutulduğu ve iş süreçlerinin üzerinden yürütüldüğü sağlıklı bilgi sistemlerinin geliştirilmesi ve kullanılmasıdır. Bilgi sistemleri kurgulanır iken ağırlıklı olarak kâğıt üzerinde ve resmi evraklar üzerinden yürüyen eski süreçlerin revize edilerek e-imza gibi teknolojiler ile veri tabanlarında tutulana idari kayıtların ve e-devlet üzerinden yapılacak işlemlerin de resmi olarak geçerli kabul edilmesi gibi konuların dikkate alınması büyük önem arz etmektedir. İş süreçlerini revize etmeden olduğu gibi elektronik ortama taşımak ve veri paylaşımlarını bu yapıya dayandırmak, daha fazla kağıdın taranması ve elektronik ortamda taşınması anlamına gelecektir. Bu sebeple, Bilgi sistemlerinin üzerine inşa edildiği yönetmelik ve kanunların sosyal politikalar alanında da revizyonu büyük önem arz etmektedir.

Kurumlara verilen görevlerin de bazı durumlarda yeniden yapılandırılmasının verimliliği ve yerindeliği artıracağı değerlendirilmektedir. Kamuda yürütülen birçok hizmet sürecinde, sosyal politika ile doğrudan bağlantılı olmasa dahi, vatandaşların gelir seviyesine yoğun bir şekilde ihtiyaç duyulduğu gözlenmiştir. Bu bilgiye ihtiyaç duyan kurumlar ise tabiri caizse el yordamıyla gelir seviyesini tespite çalışmakta, zaman zaman da Aile, Çalışma ve Sosyal Hizmetler Bakanlığından veri talep etmektedir. Gelir tespiti ülke genelinde belli bir standart çerçevesinde en profesyonel şekilde, diğer kurumlardan elde edilen veriler ve hane ziyaretleri yapılarak Sosyal Yardımlaşma ve Dayanışma Vakıfları tarafından yardım faaliyetleri kapsamında yapılmaktadır. 2012 yılı itibariyle Genel Sağlık Sigortası kapsamında da vatandaşların gelir tespiti yaptırması zorunlu hale gelmiş, bu görev de Sosyal Yardımlaşma ve Dayanışma Vakıflarına verilmiştir. Gelir seviyesi tespitine ihtiyaç duyulan diğer kamu hizmetlerinde de, gelir tespitinin ülke genelinde ihtiyaç duyulan tüm alanlarda tek bir noktanda yapılmasının verimlilik ve doğruluk oranını artıracağı değerlendirilmektedir. Bu kapsamda gerekirse Sosyal Yardımlaşma ve Dayanışma Vakıflarının personel ve alt yapı açısından takviye edilerek bu görevin tek elden yürütülmesi, bu verinin de ihtiyaç duyan diğer kurumlara E-Devlet Kapsısı üzerinden sağlanması ideal bir çözüm olacak, böylece, geliri etkileyen her bir kalem için bu bilgiye ihtiyaç duyan tüm kurumların da birbiri ile entegre olma ihtiyacı ortadan kaldırılacaktır.

Kurumlar arası veri paylaşımının etkin bir şekilde gerçekleştirilmesin ve elde edilen kazanımların bütüncül hizmetler şeklinde E-Devlet Kapısı üzerinden sunulmasının Kurumların yeniden organize edilerek birleştirilmesi ve ayrıştırılması ihtiyacının en aza indirerek verimliliği artıracağı değerlendirilmektedir. Bakanlıkların ayrılması ve birleşmesi süreçleri özellikle Bilgi işlem, Strateji, Personel ve Destek hizmetleri gibi ortak birimler açısından, doğurduğu fırsatların yanında, oldukça sancılı geçebilmektedir. İlişkili alanlarda faaliyet gösteren kamu kurumları arasında yapılandırılacak etkin veri paylaşımları ile idari olarak yeniden yapılandırılmaya ihtiyaç duymadan bütün kurumlar vatandaş nezdinde tek bir yapı halinde verimli bir şeklide hizmet sunabilecektir. Kurumların arka planda birbirleri ile sağlıklı bir şekilde entegre olması ve veri paylaşması, vatandaşlara E-Devlet Kapısı üzerinden sağlıklı ve etkin hizmet sunumu açısından büyük önem arz etmektedir. Ancak,

Kamuda E-Devlet Kapısı üzerinden vatandaşa açılan G2C servis sayısı asıl başarı faktörü olarak değerlendirilmektedir. E-Devlet Kapısının kamudan kamuya, kamudan vatandaşa ve kamudan iş dünyasına veri paylaşımını kolaylaştıran önemli bir faktör olması yanında, E-Devlet kavramının E-Devlet Kapısından ibaret olmayıp, kendi içerisinde doğru çalışması gereken büyük bir ekosistem olduğu gözden kaçırılmamalı, bu ekosistemin bilgi teknolojilerin sunduğu imkanlar ile uyumlu mevzuatlar üzerine kurgulanmış güçlü bilgi sistemleri hayat bulduğu gözden kaçırılmamalıdır.

Arz ederim.