MAS

PALESTINE ECONOMIC POLICY
RESEARCH INSTITUTE (MAS)

The Public Sector after the Coronavirus Pandemic: The Need for Modern ICT-linked Public Services (Health, Education, and Social Services as a Model)

Baker Shtayeh
Nidal Dwaikat
Sabri Yaaqbeh

2023

ISBN 978-9950-417-10-6

The Palestine Economic Policy Research Institute (MAS)

Founded in Jerusalem in 1994 as an independent, non-profit institution to contribute to the policy-making process by conducting economic and social policy research. MAS is governed by a Board of Trustees consisting of prominent academics, businessmen and distinguished personalities from Palestine and the Arab Countries.

Mission

MAS is dedicated to producing sound and innovative policy research, relevant to economic and social development in Palestine, with the aim of assisting policy-makers and fostering public participation in the formulation of economic and social policies.

Strategic Objectives

- Promoting knowledge-based policy formulation by conducting economic and social policy research in accordance with the expressed priorities and needs of decision makers.
- Evaluating economic and social policies and their impact at different levels for correction and review of existing policies.
- Providing a forum for free, open and democratic public debate among all stakeholders on the socio-economic policy-making process.
- Disseminating up-to-date socio-economic information and research results.
- Providing technical support and expert advice to PNA bodies, the private sector, and NGOs to enhance their engagement and participation in policy formulation.
- Strengthening economic and social policy research capabilities and resources in Palestine.

Board of Trustees

P.O. Box 19111, Jerusalem and P.O. Box 2426, Ramallah
Tel: +970-2-2987053/4, Fax: +970-2-2987055
e-mail: info@mas.ps Web Site: www.mas.ps

The Public Sector after the Coronavirus Pandemic: The Need for Modern ICT-linked Public Services (Health, Education, and Social Services as a Model)

Supervisor:	Rabeh Morrar
Senior Researcher:	Baker Shtayeh
Associate Researcher:	Nidal Dwaikat
Assistant Researcher:	Sabri Yaaqbeh

This study was funded by The Arab Fund for Economic and Social Development

Palestine Economic Policy Research Institute (MAS)
Jerusalem and Ramallah
2023
ISBN 978-9950-417-10-6

Foreword

Since the beginning of the coronavirus pandemic in early 2020, the Palestine Economic Policy Research Institute (MAS) has taken the initiative in shedding light on the impact of the pandemic on various economic and social sectors in Palestine. MAS has completed a series of studies and research reports, the most prominent of which was a series of studies (published at the end of 2020) focusing specifically on the economic and social repercussions of the COVID-19 pandemic in Palestine. This new study addresses a very important topic: the public sector's needs after the Corona pandemic in terms of modern public services built on information and communications technology (ICT). This highlights the vitality of public sectors such as healthcare, education, and social services.

The study's objective is to assess the readiness of the public sector, in terms of enhancing the quality of services provided to the Palestinian public, focusing on healthcare, education, and social services. This is in light of the urgent need for digitization imposed by the Corona crisis. The study formulates a framework that clarifies digital gaps in education, healthcare, and social services for those authorities (ministries) responsible for providing these services. Therefore, the study developed a set of recommendations that aim to bridge digital gaps in targeted sectors, thereby enhancing the level of services provided to citizens. Among the most prominent recommendations are strengthening legislation that allows the use of digital signatures, digital identities, digital transactions, and electronic certification, as well as automated data management. A further important recommendation is the establishment of an independent regulatory body entitled "The Higher Committee for Digital Transformation Policies", which aims to strengthen digital infrastructure while providing the relevant ministries with the necessary technical expertise.

MAS would like to thank the research team for their efforts in preparing this study. MAS highly appreciates the responsiveness of relevant authorities and the valuable time that they devoted to meeting the research team and answering their questions. MAS also expresses its gratitude to the Arab Fund for Economic and Social Development (AFESD).

their continuous support, and for providing the necessary funding for the preparation of this study, amongst numerous other research initiatives.

Raja Khalidi
Director General

Executive Summary

Governments worldwide seek to ensure that the flow of development-oriented services is stable and invulnerable to disruptions by any pandemic, disaster, or emergency situation, which require enhancing the ability of digital technology to respond to challenges and reducing the social costs associated with delayed digitization of services.

The Coronavirus pandemic has resulted in disparities between countries in terms of their ability and preparedness to smoothly transition to a digital public services system for development activities directly affecting citizens' daily lives.

In the Palestinian case, similar to the rest of the world, the pandemic has led to the disruption of public life in several sectors, including the provision of public services to citizens, companies, and institutions in the majority of sectors, such as the **health, education, and social services**. One of the main factors exacerbating the crisis was the slow response to the pandemic, the absence of digital readiness, and the weak infrastructure supporting the ICT sector.

In chapter two, the study opens with a literature review of international digital transformation experiences in the field of public services provision by governments, especially in the health, education, and social services sectors. It goes on to examine mechanisms for bridging the digital gaps at the public level, with a focus on different Palestinian communities (such as urban areas, rural areas, and refugee camps) and population groups (at gender, age, and educational levels). This helped assess these communities and groups' access to the internet and electronic services, as examined in chapter three. Palestinian statistics showed the need to bridge certain digital gaps by expanding the capabilities of and empowering women, refugee camp residents, the Gaza Strip, the elderly, and those with low educational attainment to access and use the internet.

In chapter four, the legal and operational frameworks for the digitization of public services in Palestine are dealt with:

1. Legislations and Laws Regulating the Digital Transformation Process

The study showed that the legislative and legal environment is still hindered by the absence of the legislative council and the lack of a comprehensive and integrated national digitization strategy, which has led to distortions in the legislative environment regulating the comprehensive digital transformation process.

2. The Infrastructure Supporting the Digital Transformation Process

The study also discussed the achievements of the government in general, and those of the Ministry of Telecom and Information Technology (MTIT) in particular, in the field of preparing the supporting infrastructure for digital transformation. It also highlighted the challenges faced by service responsibility centers and MTIT in their efforts to enhance the digital transformation requirements of public services directly aligned with the needs of the public. Some of these challenges are:

1. The reliance of digital transformation plans on external funding, which is usually unstable and irregular, leads to delaying and disrupting the transition plans and projects.
2. Digital gaps between citizens.
3. Disparity in digital skills among government employees.
4. The slow internet speed in Palestine, and the lack of the fourth-generation broadband services (4G) as a result of the occupation's practices and obstacles imposed on the digital infrastructure.
5. Weak data governance; citizens' databases differ from one ministry to another, and each ministry has different work procedures for storing and saving citizens' data. Also, there are no automated services in most responsibility centers due to the lack of business process analysis of the services provided by those ministries. Standard work procedures must be established for each service before it is digitized, which is the responsibility of the ministries in the first place.

   Undoubtedly, poor data governance is a key hindrance to the application of:

   - Electronic signature.

- Digital identity.

6. The absence of full-time (around-the-clock) professionals to follow up and ensure the continuity of services at electronic platforms.

Required Interventions

1- The study concluded with a set of required procedures and complementary interventions necessary for the development of the legal and operational environments for all stakeholders -the Palestinian government, MTIT, and partner ministries and institutions-. These are summarized in the following points: Issuing legal legislation that legalizes the use of digital signature, digital identity, digital transactions, and electronic authentication, in cooperation with the cabinet and competent ministries, and other relevant authorities through the establishment of an Electronic Authentication Authority (a unit to be responsible for creating, regulating, and managing electronic signatures).

2- Data governance through establishing a central national data center that serves ministries and the public. This is considered a very important step that could fulfill the needs of the government in obtaining the necessary data, analyzing it for informed decision-making, and developing electronic government services, in addition to being useful for citizens in processing digital transactions. Here are some of the steps that need to be taken to establish such a national data center:

   - Unifying citizens' data and identifying the bodies of responsibility entrusted with this data/mission, then building the needed infrastructure for this purpose.
   - Establishing a private government communication line for data transmission and communications (a government wired network must be constructed, and government communication copper cables should be extended separately from the regular communication lines).
   - Establishing an independent organizational body under the name of the "Supreme Council for Digital Transformation Policies" under the supervision of MTIT, whose organizational structure brings together all the scattered councils, bodies, and committees that were established through many centers of responsibility, international organizations, and the private sector. The mission

of this organizational body should be to develop a strategy and a comprehensive timed action plan for the establishment of the National Data Center, identifying its objectives, services, technical requirements, and the human and physical resources necessary to achieve these objectives.

- Conducting a business process analysis and setting Standard Operating Procedures (SOPs).
- Building technological infrastructure necessary to establish and manage a centralized national data center, including servers, storage, networks, and cyber security.
- Recruiting professional and technical personnel: A team of specialists must be employed to manage and run maintenance of the center, data processing and analysis, and the design and development of the necessary programs.
- Training: The personnel must be trained and equipped with the necessary technological skills, and administrative and technical processes related to the management and maintenance of the center.
- Forming a financing coalition that brings together all the relevant international institutions (the World Bank, European Union, UNDP, and GIZ), in addition to land and cellular telecommunications companies operating in Palestine. Such a coalition would ensure the provision of regular funding for digital transformation within a comprehensive national strategy developed by the proposed Supreme Council for Digital Transformation Policies.
- Ensuring the allocation of constant governmental funds in coordination with the proposed coalition, to provide a regular financing source for the digital transformation efforts and plans.

3- Establishing a unified database (used in real-time) fed by the MoI, and updated on a daily basis.
4- Working on the electronic interconnection between the ministries with overlapping tasks and mandates, and determining which data and information will be exchanged. Therefore, a technical incubator is needed; in this case MTIT.
5- Adopting and developing the following legislation:

- the personal data protection law

- law on the right to obtain information electronically.
- Developing the law on saving and sharing data, data security, and confidentiality.
- Developing the law on digital services use, clarifying the legal age for using digital transactions.

3. Social Protection Sector:

The digitization of the social protection system led by the MoSD faces many obstacles and challenges, including:

1. The citizen cannot submit an electronic application by himself. Allowing all citizens to submit applications electronically will put a huge burden on the Ministry.
2. Shortage in human resources; the number of employees working on the automation of services is very limited (four to five employees). In addition, there are conflicting jobs or overlapping job tasks among employees.
3. There is no integrated data management system for the digitization of services in the ministry. Rather, it is managed by distributing tasks to technology staff.
4. The social protection system lacks data interconnection with partner organizations and ministries; the capabilities of MoSD in this respect are limited to requesting data from partner organizations for interested parties, as it has no access to up-to-date databases of these organizations (such as the civil registry of the MoI, the health registry, MoE data, data of the Ministry of Labor (MoL), data of the relevant institutions, ... and others)**.**
5. The difficulty of updating partner organizations' data.
6. There are no applications, especially for citizens in the National Social Registry System, the National Transfer System, and other systems of the Ministry.
7. There is no special item in the MoSD's budget for digitization and staff training and qualification. Unlike other ministries, the current efforts are either part of personal initiatives or funded projects.
8. Other obstacles are related to employees' inability to handle the new systems and extraction of data.

9. Another problem is related to the internet used in the field. All directorates suffer from low internet speed, though the speed was increased to 20 megabytes. In order to increase the speed of the internet, the Ministry needs approval from MTIT, in addition to going through long procedures for obtaining MTIT approval, which affects the speed and efficiency of completing work in all directorates.

Required Interventions:

Based on all of the above, a set of required procedures and complementary interventions emerge as necessary to be taken by the Palestinian government, the MoSD, and partner ministries and organizations, namely:

1. Ensure the regularity and stability of funding sources that support the digital transformation plan of the MoSD. The need to involve the Palestinian private sector through the social responsibility item, which must be institutionalized in a way that ensures its regular contribution to social protection needs under the umbrella of the MoSD, should be noted in this context.
2. Developing a plan, in cooperation between the MoSD and MTIT, for the digital empowerment of the targeted marginalized groups and regions, by connecting them to the internet and providing them with some smart devices in order to bridge the digital gap among the targeted groups.
3. The need to work on electronic interconnection between ministries with overlapping tasks, and not just provide each ministry with blind, un-updated databases on an up-to-date basis.
4. Creating an independent department for data digitization and processing at the MoSD.
5. Immediate response to the needs of the field teams in terms of upgrading the speed of the internet, to enable them to perform their tasks as quickly as possible.
6. Work gradually on activating the National Social Registry platform for the public, and benefiting from the advantages of the proposed electronic interconnection, which will ensure an initial filtering system of applications submitted electronically, and thus reduce the growing need for field teams, vehicles, and logistics costs.

4. Health Sector:

The digital transformation process of the health care system revolves around the Ministry of Health (MoH) in the first place, which in turn undertakes the task of networking with other partner organizations and ministries. Many challenges and obstacles are hindering digital transformation endeavours, including:

1. Digital gaps between recipients of health care services, which require additional efforts to simplify the process of digital transformation of health care services provided to these groups.
2. The limited development funding allocated to MoH in light of the operational expenses overflow mainly because of services purchase (medical referrals), and the purchase of medicines and medical consumables. According to the Health Information at the MoH, all services (like reserving/canceling/changing an outpatient appointment, booking an appointment for an operation, viewing medical and lab tests, prescriptions, issuing medical certificates, booking vaccination appointments, vaccination records, primary care, pregnant care, hospitals, medical registry, and medical referrals) can be digitized in Palestine if the necessary financial allocations are available.
3. Digital gaps among the personnel, in addition to human resources shortages in some needed disciplines, required to build the digital capabilities necessary for digital transformation.
4. Weak legislative and regulatory environment and infrastructure for information security, data protection, and confidentiality.

Required Interventions:

1. The importance of adopting a national health strategy that emphasizes that health data should be classified as sensitive personal data, and therefore requires advanced standards of safety and security.
2. The need for a solid legal and regulatory ground that protects the privacy, confidentiality, integrity, and availability of personal health data processing. This requires more government investment in

cybersecurity, trust-building, accountability, good management, ethics, capacity-building, and transparency.

3. Optimization of the MoH's operating expense items, foremost of which are allocations for service purchases (medical referrals), which drain nearly one billion shekels annually from the government treasury, and allocate a new financial allocation for building a long-term digital transformation strategy for the MoH, in order to bridge any donor funding shortfall provided for this purpose.
4. Develop a strategy for computing and linking medical registry and health records at all levels (primary, secondary, and tertiary) within a well-studied time plan.
5. Accelerating the creation of interactive digital platforms for the public in some areas of direct relevance to service recipients' daily lives, which could relieve pressure on the providers of those services, including:
    - Outpatient appointments and bookings.
    - Operations appointment bookings.
    - Medical and lab tests and review by the competent committees.
    - Some medical prescriptions.
    - Issuing medical certificates.
    - Vaccination dates and records.
    - Pregnancy care.

7. Building a strategy for cooperation and exchange of medical and health data with partner organizations (NGOs and the private sector).
8. Needs assessment of the required human resources for running digital platforms, databases of medical and health records, their analysis, interconnection, protection, and confidentiality, in addition to training and qualifying workers in the health sector.

5. Education Sector

The digitizing of this sector's services is hindered by many obstacles and challenges, including:

1. Lack of legislation regulating electronic transactions at the Ministry level, including:
   - E-authentication.
   - E-signature
   - Digital identity
   - Electronic payments
2. The legislative and regulatory environment that ensures data protection is weak, noting that the Ministry saves backup copies of data in the event of any defect or breach.
3. The lack of logistics capabilities to reach schools in remote and marginalized areas.
4. The disparity in digital skills and abilities between personnel and teachers at schools.
5. Variation in digital skills and abilities among students.
6. The disparity in digital skills and abilities among parents of students.
7. The disparity in digital skills and capabilities between private and public schools.

Required Interventions:

1. Develop a time plan that paves the way for the digitization of the high school stage, so that the plan includes issues such as issuing certificates, establishing a question bank that limits reliance on human resources, and that paves the way toward submitting high school examinations via electronic platforms.
2. Strengthen internet networks in all public schools, especially in remote and marginalized areas.
3. Upgrade computers in all public schools, and equip them with appropriate scientific software, especially those in remote and marginalized areas.
4. Develop the digital capabilities and skills of teachers and the ministry's employees, through advanced training courses.
5. Collaborating with MTIT to establish interconnection infrastructure to link the MoE with the various ministries (MoSD, MoH, and MoI).
6. Work on interconnection between the Ministry and public and private schools.
7. Work with the cabinet and the concerned authorities to adopt the necessary legislation for the digital transformation process in the ministry.

6. Higher Education Sector

Despite the efforts made by the Ministry and institutions of higher education towards the digitalization of services and procedures, especially within the World Bank's project (Digital Palestine: West Bank & Gaza), many challenges and obstacles are facing these efforts, such as:

1. There is a large disparity between universities with regard to digitization and e-learning capabilities.
2. A shortage in the budget allocated by the government to support digitization efforts.
3. Digital inclusion among university students: differences among students in terms of access to the internet, either for financial reasons and conditions or because they live in marginalized areas with no internet coverage.
4. The lack of unified and updated databases for universities and higher education institutions at the Ministry.
5. The lack of legislation regulating electronic transactions at the level of the ministry and the government.

Required interventions:

1. Working on issuing legal and regulatory legislation (e-authentication, e-signature, and digital identity) necessary to facilitate the implementation of the digital transformation of higher education procedures and services.
2. Working on linking universities digitally with the ministry, including a unified registration platform, student databases, and university databases.
3. Digitizing the services provided by the Ministry to universities and higher education institutions, to include licensing and accreditation services for colleges and academic programs (public and private accreditation).
4. Completing the digitization of the services provided by the Ministry to students and graduates of local and foreign universities (grant and loan services, inquiring about universities, certification, and certificate equivalency services, ... etc.).

5. Facilitating interconnection with some ministries such as the MoL, MoE, the MoFA, MoSD, and other relevant ministries.
6. Building and providing e-learning and communication platforms, especially for the higher education institutions' use and needs, and providing training for students and lecturers on e-learning tools.