Overview of Digitalization of Service Industry and Government Services in the Philippines

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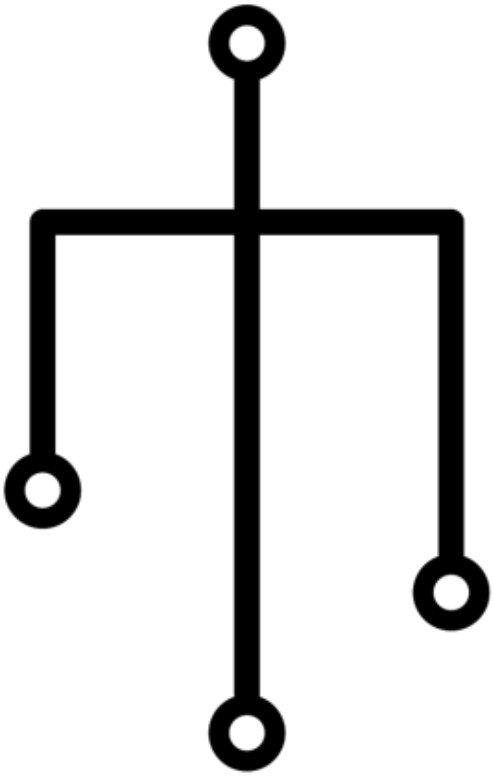

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Abstract

The Overview of Digitalization in Government Services and Service Industry discusses the overall state of digitalization, challenges, and future prospects on these two key economic sectors. Although the government services and service industries are two of the most long-standing and important sectors of the economy and society, the process of improvement through digitalization is still sporadic and disintegrated and is poorly performing in comparison with its neighboring countries largely because of poor ICT infrastructure in the Philippines, especially on the side of the former despite of the impetus that the COVID-19 pandemic has brought. The paper suggests that aside from addressing the long-standing issue of poor ICT infrastructure and national industrialization, a shift of focus from the government to maximize digitalization for the people would not only be a beneficial for the people because of the new normal set-up, but would also push the service industry to adapt a similar outlook on their part.

Introduction

The series of lockdowns caused by the COVID-19 forced the Filipinos to adapt to a new form of lifestyle that is heavily reliant on the internet and online platforms. The restrictions forced many citizens to adjust to a digitalized daily routine from buying food and shopping online to working and studying from home, availing government services, and even celebrating important occasions. Although doing things online have its benefits, most notably towards lessening the chance of contracting and spreading the virus, this shift to the “new normal” also proved to have inconveniences and drawbacks especially on the two of the most important sectors of economy and society of the Philippines: the services sector and government services.

This research aims to provide an overview of the state of digitalization in service industries and public services. To be able to provide a comprehensive discussion on this topic, the researchers divided the paper into four main sections. The first section defined the difference between digitization and digitalization. The second discussed what is service industries and public service, as well as the key components and subsectors constituting them, and the significance of undergoing digitalization. The third section laid down the past and on-going plans, roadmaps, and other related ventures of the two sectors for acquiring or advancing their level of digitalization. The fourth section contains a comprehensive discussion on the current status and the pressing challenges that the service industry and public service face amidst the strive for digitalization. Lastly, the last section contains the plans of the two sectors.

This work highlights three main points: First, despite the service industry and government services being the two long-standing and fundamental parts of the socio-economic aspect of the Philippines, the comprehensive and systematized digitalization of the two institutions from the government itself is still in their emerging stages as most of the steps to digitize came from the private sector. Second, the COVID-19 pandemic pushed most of the subsectors of the service industry and government services to take huge steps to undergo digitalization to

adapt to the “new normal”. Third, the same stimulus that the pandemic brought to digitalize revealed the digital divide and unpreparedness in Filipino society.

Difference between digitization and digitalization

It is necessary to first define the meaning of and difference between digitization and digitalization to make the discussion clearer (as both terms may be used interchangeably). Besides, properly defining the two terms served as a benchmark in determining which services (both in the enterprise and government sector) should be focused on the following discussions. As such, it is fitting to use the findings of Schumacher, Sihn, and Erol (2016) on their comparative research regarding the differences among the following terms: digitization, digitalization, and automation. Here, the researchers highlighted that “digitization” purely refers to the transformation of processes—including storage and transfer--from analog to digital; whereas “digitalization” describes the societal and cultural impact of the former, automation, and other similar transformations (2016). Meanwhile, the term “automation” is related to any application of technology to achieve a specific task with little or no human intervention (2016). For that, any change related to digitization in service subsectors and government services was included in the discussion.

Composition of Services Sector and Public Service

Overview of Services Sector in the Philippines

According to the National Economic and Development Authority (NEDA, 2015), Services Sector refers to professions that produce intangible outputs resulting in transformations such as changes in the conditions of products or persons, or help in the transfer of knowledge or ownership. The services sector has the majority of the share of gross domestic product (GDP) of the Philippines from 2009 to 2019, ranging from 53- 61% ratio, demonstrating how big its contribution to the economic functions of the country (Plecher, 2020). It is not

surprising then that this economic sector comprised 57% of the employed Filipino population workers as of 2019 (Plecher, 2020a). On the 2009 Philippine Standard Industrial Classification (PSIC), the Philippine Statistics Authority (PSA) divided and classified the subsectors of the services sector to a total of thirteen. Table 1 shows the list and related information on this subsector. Some sections were not included in this discussion as those are already included in the other papers that the research produced (Sections K and L), do not have any relation to digitalization, or will be discussed in the latter part of this paper (Section O).

Table 1. *Service Industry Subsections*

Sections according to PSIC	Subsectors
G	Wholesale and retail trade; repair of motor vehicles and motorcycles
H	Transportation and Storage
I	Accommodation and Food Service Activities
J	Information and Communication
K	Financial and Insurance Activities
L	Real Estate Activities
M	Professional, Scientific, and Technical Activities
N	Administrative and Support Service Activities
O	Public Administration and Defense; Compulsory Social Security
P	Education
Q	Human Health and Social Work Activities
R	Arts, Entertainment, and Recreation
S	Other Service Activities (Membership Organizations, Repair of Computers and Personal and Household Goods)

Note. Reprinted from 2009 Philippine Standard Industrial Classification (PSIC), by National Statistical Coordination Board(NSCB), retrieved from https://psa.gov.ph/sites/default/files/PSA_PSIC_2009.pdf

The prevalence of the internet and the introduction of the Fourth Industrial Revolution in the 2010s not only caused technological advancements to the economy but also brought new professions into the pool of the labor sector.

These are the so-called Transport Network Companies (TNC) and TNVS (Transport Network Vehicle Service) where the drivers and delivery men from Grab, FoodPanda, Lalamove, among others, are classified under. Due to their recency, the PSA has yet to include the two labor pools on the PSIC and create a standard classification. Despite this, the TNCs and TNVS were still included (more on this below) in this research because of their importance to the current digital economy of the Philippines and as a byproduct and topic of study on digitization itself.

Overview of Services Sector in the Philippines

Government service is an important ingredient for the society and economy to function well and smoothly. Fortunately, e-government services, mostly in the form of online government websites, are already present to bring these services via digital platforms. But to be able to understand and measure the progress of its digitalized format, it is important to know the fundamentals of its root—that is, public services.

The term “public services” does not have a solid definition and oftentimes blurs with other types of services for the common good. However, according to Paul Spicker (2009), public services have four key characteristics: they exist for “public policy; they provide services to the public; they are redistributive; they operate as a trust.” (p. 6). In addition, Specker reiterated that because of the first factor mentioned, services such as “policing, education, defense, or the establishment of communications” fall under the responsibility of the public sectors (2009, p. 4). Although providing these are not limited to governmental bodies (public) as private institutions such as charity and NGOs, these four characteristics distinguish public services from other services provided to the public that have profit as the end goal and not the total benefit of its recipients.

Therefore, any type of public service, including the digitalized format, namely the e-government services, should have these factors as key components.

But is e-government merely just a digitalized version of government services? In one of the early researches of its kind, Ulrica Löfstedt (2005) defined "e-government" as the incorporation of information and communication technology (ICT) in public administration to change the "structure and processes of government organizations" and reinvent its interactions with citizens, businesses, government agencies, employees, and other stakeholders (p. 40). It was also emphasized that the use of technologies in e-government fundamentally aims the following: (1) provide easy access to government information and services; (2) increase the quality of services in terms of speed and efficiency; and (3) to provide an opportunity to citizens to participate in democratic processes (2005). Löfstedt also mentioned that local governments use and adapt e-governments on a much different scale in comparison with the national level, as the former has some specific demands exclusive to its locality (2005).

In the case of the Philippines, each department responsible for each public service has its department and e-government platform. The Department of Interior and Local Government (DILG) is the department officially responsible for delegating the national mandate and other public policies to local government units and the related and subsequent public services institutions such as education, public safety, electricity, water, and sewerage, among others. Respective DILG and local government offices handle the e-government aspects of a locality, albeit on varying levels (more on this topic below). Meanwhile, the Department of Information and Communications Technology (DICT) is the institution responsible for promoting and improving the quality of ICT at both the national and local level, making one of its major tasks on e-government to collaborate with local government units (DICT).

With the definition and role of the service sector and public services already discussed, where does digitalization fit and how important is it really for both of

these sectors to attain this advancement? Fundamentally, digitization could potentially increase the quality of products and services in terms of speed, precision, and rate of distribution and penetration on various stakeholders. For the services sector and other types of businesses, digitization can cause an increase in indirect savings from improved operational efficiency and greater market flexibility (Rosin et al., 2020). Similarly, digitization in government services can increase the efficiency of operations (reduce back-office costs up to 45%), reduce the unemployment rate, and promote transparency in all government agencies, which can translate to improved quality of life for constituents (Sutton, 2015; Lauron & Stamboel, 2018). The bottom line is that if implemented properly, digitization will not only benefit the services industry and government services, but also the overall economy of the country.

Past Plans for Digitalization

The government and the services sector are aware of the benefits of digitalization and its possible chain reaction to the economy. A multitude of measures has been drafted by the government throughout the decade to fully harness the potential of digitalization. Whether it is successful, forgotten, or swept-aside by different socio-cultural and socio-political factors is a different story. In this section, the past plans, roadmaps, and other activities of the government related to grasping digitalization for the two sectors mentioned will be discussed.

Service Industry

Since the 1960s, the service industry has gained a much larger role in comparison with manufacturing industries to the point that the Philippine economy is largely dependent on the former. This is mainly because the Philippines failed to fully industrialize together with its neighboring East and Southeast Asian countries due to incompatible economic policies and socio-political events in the 1970s to 1990s (Ofreneo, 2015; de Dios & Williamson, 2013).

With the awareness of its importance not only to the economy but also to the livelihood of the majority of the employed Filipinos, the government and its partnering institutions had done steps in the past years to improve its overall quality, of which obtaining the benefits of digitalization is one of the priorities.

In terms of the digitalization roadmap, the Philippine government mainly focused on Sections G, I, and P (Wholesale and retail trade, accommodation and food services, and education, respectively) of the service industry in the past five years. Improving e-commerce under the “E-Commerce 5-Year Roadmap 2016-2020” has been the main target of the government for sections G and I, as these two have been the main players in e-commerce trade in the daily lives of people. Initiated by the Department of Trade and Industry (DTI) with the participation of other government agencies such as the Department of Science and Technology (DOST) and Bangko Sentral ng Pilipinas (BSP), this roadmap, the government aims to improve the following six areas on e-commerce: infrastructure, investment, innovation, intellectual capital, information flows, and integration (2016).

Meanwhile, Section P under the Department of Education also has a comprehensive roadmap for adopting digitalization known as the “ICT Information System Roadmap”. Spanning from the year 2018 to 2020, the framework has four key areas of focus, specifically on teaching and learning, communication, governance planning, and decision-making, and process and operations (Abanil, n.d.). One of the major steps of this roadmap to fulfill its goal of modernizing and digitalizing the existing features of the education sector is by using Microsoft Country License that could push for the system-wide adoption of cloud services for all public-school teachers and students (Oxales, 2018). Aside from the structural aspect, the digital transformation that would result from this roadmap can help expand the level of pedagogy of educators, of which one could be the gamification of education (2018).

Government Services

The attempt of the Philippine government to digitalize government services can be traced back to 1971 when the National Computer Centre was established to automate government works during the term of President Ferdinand Marcos (Exec. Order No. 322, 1971). However, the creation and implementation of comprehensive strategies, plans, and roadmaps started in the late 1980s during the presidency of President Corazon Aquino. Under Article II of the then newly created 1987 Constitution, the importance of improving and prioritizing ICT was established as an essential element in rebuilding democracy (Phil. Const. art. II, §24). Throughout the 1990s during the term of President Fidel Ramos, the National Information Technology Plan for the 21st Century (IT21) 1997 aimed (1) to provide access to Information Technology (IT) to every business, government agency, school, and residences in the Philippines by the year 2000 and pervasive throughout the country by the year 2000 and (2) for the Philippines to become the Knowledge Centre of Asia by 2010 (National Information Technology Council [NITC], 1997).

In 2000, the e-Philippines Strategy Government Information Systems Plan laid down during the term of President Joseph Estrada aimed to spread digital connectivity to the local level, as the diffusion to the latter can potentially generate revenue, improve public services, and promote entrepreneurship (Ona et al., 2012). Also, it was during this administration that the E-Commerce Act of 2000 was enacted and the Information Technology and e-Commerce Council (ITECC) was created.

Throughout the first decade of the 21st century, which was mostly ruled by the administration of Gloria Macapagal-Arroyo, there were at least two roadmaps created that were related to the furthering of digital transformation in government services: the Philippine Strategic ICT Roadmap (2006-2011) and the Philippine Digital Strategy (2011-2016). Aside from improving the ICT infrastructure, e-commerce, and ICT-related human capital, these two roadmaps focused on

institutionalizing e-Government Funds, especially after the replacement of ITECC with Commission on ICT (CICT) in 2004 (Economic and Social Commission for Asia and the Pacific [ESCAP] et. al., 2016). It was also during the term of President Arroyo that Business Process Outsourcing was prioritized heavily by the government (2016). Although similar to the ICT roadmaps from previous administrations, the digitalization roadmap of the administration of Benigno Aquino III named as "E-government Master Plan", which was then headed by the Department of Science and Technology, DICT, National Economic Development Authority (NEDA), and Department of Budget and Management (DBM), primarily aimed to transform and improve the e-Governance in the Philippines (National Computer Center & National IT Industry Promotion Agency [NCC & NIPA], 2012). Still, under the mentioned roadmap, the flagship project under the DOST named Integrated Government Philippines (iGovPhil) to better interconnect government agencies to improve online coordination and government services, thus revamping the quality of governance and citizen participation (DICT & DOST, n.d.). The digitalization roadmap of the Aquino administration was repatterned under the name of "E-government Master Plan 2.0 (2016-2022)" by the current administration under President Rodrigo Duterte.

Current Status and Challenges of Digitalization

Service Industry

Determining the exact state of digitalization of the service industry is challenging due to the lack of data for each of the subsectors. However, available data shows that some sectors in the services industry demonstrate signs of advancement in digital adaptation. According to 2020, Asia Pacific Small and Medium Business Digital Maturity study by International Data Corp. (IDC), the SMEs in the Philippines ranked 12th on digital maturity among the other countries in the Asia-Pacific region, followed by Indonesia and Vietnam, respectively (2020). Also, the report stated that the SMEs are still on the "digital indifferent" stage while some are

transitioning to the “digital observer” stage (2020). The “digital indifferent” stage refers to the state of being reactive to market changes with no digital initiatives while the “digital observer” stage shows some initiatives for digital adaptation but still minuscule and cannot be considered to be proactive (2020). The challenges that SMEs face include difficulty on where to start to digitize and budget and lack of commitment from the management (2020).

The COVID-19 pandemic also brought a new stimulus to the state of digitalization service industry in the Philippines. A study from World Bank (2020) reported that the pandemic boosted the pace of digitalization of different organizations and institutions, especially in terms of operating and offering their services remotely to adjust to the mobility restrictions as a form of health protocol. Although this may seem beneficial to businesses, the COVID-19 pandemic hit the workforce hard wherein 4.5 million Filipinos have lost their jobs in 2020 (StraitsTimes, 2020). In addition, according to the report of the International Labor Organization (2020), approximately 7.8 million workers from wholesale and retail trade, transportation and storage, construction and accommodation, and food services or 25% of total current employment is at risk of job loss due to the pandemic and the digitalization in the coming years.

Although the report provides useful information on the current state of digitalization in the service industry, it is still necessary to have a specific discussion on each subsector to provide a more complete overview. As such, the following section will briefly discuss the current state and challenges of some of the subsectors of Sections G, H, I, J, M, N, P, R, S, and the TNCs and TNVS in digitalization.

Section G: Wholesale and Retail Trade

Section G generally refers to businesses that distribute goods without applying any sort of transformation or manipulation to the quality of the product (NSCB, 2009). Establishments such as specialized stores, grocery stores,

and malls are the most commonly known to offer this type of trade. The earliest form of digitalization of these types of businesses can be traced back to 2006 when “Sulit.com.ph” was created as a nationwide online platform where individuals or businesses can sell different sorts of products, from furniture to vehicles (ABS-CBN News, 2013). The popular social media platform Facebook also created an online marketplace feature in 2016, which allows users to post their products on the “Marketplace” tab (Ku, 2016).

But the current trend in digitalized wholesale and retail trade is owned by online shopping platforms such as Lazada, Shopee, and Zalora. According to the report of iPrice group, the three e-commerce platforms are the top choice of Filipinos in buying and selling goods online, with Lazada having 34 million visits a month (59% market share), Shopee with over 19 million monthly visits (33% market share), and Zalora with two million visits in 2019 (Aureus, 2019). Due to COVID-19 lockdowns, online shopping applications gained a greater surge in sales, with Lazada gaining 2.5 times sales growth in 2020 (ABS-CBN News, 2020). Even the institution SM Malls, a humongous institution in retail services, jumped to online trends and created its application (although it is still in the beta stage as of writing) (Inquirer, 2020).

Although the digitalization of services of wholesale and retail trade may seem to be beneficial on both ends of businesses and customers, challenges will still be present in this area. For instance, there are reports wherein customers who ordered electronic gadgets such as phones or laptops online were scammed as the parcels received turned out to be a stone (Kingsu-Cheng, 2020). The Department of Trade and Industry received an almost combined 7000 complaints from customers to Lazada and Shopee related to violations of the Price Act, defective products, and unwanted sales acts or practices (Crismundo, 2020).

Section H: Transportation and Storage

Delivery Services became more essential in e-commerce as the buying and selling of goods online boomed in recent years. However, due to the effects of the COVID-19 pandemic on the manufacturing sector, the projected growth rate of 8.2% to 8.8% from 2018-2024 (worth Php 970 billion to Php 1trillion) of the logistics and warehousing market was halted (Inquirer,2020). Nevertheless, logistics services have been deemed as becoming more essential to the economy due to the rise of e-commerce amidst the lockdown (2020). There are two types of courier services in the Philippines, express delivery and cross-border shipping and warehousing, both of which are being used by online sellers depending on what goods they offer. One of the digital facets of courier services is their online order-tracking feature, wherein customers can track the location of their parcel on their website or application using the unique tracking number of their parcel. Also, courier services notify customers via SMS or phone call.

The biggest challenge that the logistics subsector is currently facing is its heavy reliance on manual and paper-based processes which causes lags and delays in the time of delivery. This is not only an intrinsic problem for the logistics company but also the part of related government agencies. YCP Solidiance suggests that the digitalization of processes will address this challenge, aside from the fact that it will enable order transparency (Wong, 2020).

Section I: Accommodation and Food Service Activities

There are websites and mobile phone applications that feature accommodation-related services wherein users can freely search accommodation establishments such as hotels and Airbnb that are available based on their preferences and budget. Meanwhile, businesses related to food services such as fast-food restaurants and SMEs have digitalized their services

by serving their customers online by jumping in online food-selling platforms such as Grab or FoodPanda. Social media pages are another means of online engagement for food service establishments. Aside from going online, food establishments use different Industry 4.0 technologies such as AI or Cloud to adjust their services based on customer feedback and thus to be ahead of the competition (Amadora, 2020).

In the early quarter of 2020, a new type of online food service known as cloud kitchens has joined the market. Cloud kitchens are different from online food platforms because instead of ordering foods from establishments via an application, customers can order their food in one “shared kitchen” where kitchens from different food brands are located (ANCX, 2020). Another perk of virtual kitchens is that foods are made and packaged specifically for delivery (2020).

Currently, the biggest challenge for businesses under section I are the effects of the COVID-19 pandemic, specifically the restrictions in gathering people in enclosed spaces. The majority of 2020, accommodation services have turned into quarantine facilities for returning migrants and persons monitored for potential COVID-19 infection (Chua, 2020). On the part of food and beverage services, several establishments such as restaurants, bars, small and medium scale enterprises have either closed and stopped operating or downsized their employees due to struggle to keep up financially (Reyes, 2020; Flores, 2020).

Section J: Information and Communication

Section J is dominantly composed of institutions related to the dissemination of information towards the public such as publishing houses and mass media. Although the services of publishing houses are mostly in the traditional format, there are some established institutions such as Anvil and Ateneo University Press that sell books in ebook format. This is aside from the fact that publishing houses sell their books on their website or in partnership with online platforms

such as Shopee or Lazada (Arcadio, 2020). The digitalization of mass media can be considered to have started when institutions used radio and television for broadcasting content. However, in the case of the Philippines, the precise transition date of mass media to online platforms is hard to determine, although by 2006 there were at least 30 online news publications that had been posting news online (Guioguio, 2015). As of 2020, most of the mainstream media companies and institutions—both in television, radio, and newspaper--have their online website that is linked to several social media websites. Besides, are news websites that are exclusively online such as Rappler.

Contrary to the accepted notion that the internet will help in faster and wider information spreading, it also ironically gave rise to one of the biggest problems that this industry is currently facing—the proliferation of fake news. Most of the fake news, including political propaganda, is done by outsourced organizations that mostly focus on posting and commenting on social media pages (Leetaru, 2019). Although this is not directly the problem of the companies, it still affects their engagement and reputation in the online world, as there are people who prefer unconventional “news” sources in comparison with the mainstream media and most importantly, their primary function is to spread verified and proper information to the public and consumers. In September of 2020, Facebook shut down pages and accounts linked to individuals based in China that have been conducting “coordinated inauthentic behavior”, which includes activities such as spreading propaganda in an organized manner (Lalu, 2020).

Section N: Administrative and Support Service Activities

Section N covers most of the workers classified as IT-BPO workers, which, according to the Philippine Standard Occupational Classification (PSOC) of PSA (2008) comprises contact/call centers, human resources, accounting, and payroll outsourcing. Started in 1992 and continuously growing until it contributed to .075% of GDP to the country in 2000, the IT-BPO industry is one of the

byproducts of digitalization in the Philippine labor sector (Natividad, 2015). The same industry is also considered as the largest employer in the Philippines, with a total of 1.3 million employees, along with the countryside employment of 280,000 jobs in 23 provinces (Magellan Solutions, 2020). As of 2019, the IT-BPO industry contributed $26 billion or approximately Php 1.2 trillion for the overall GDP of the Philippines (Thompson, 2020). The IT-BPO industry is still seen to be growing and is projected by IT & Business Process Association Philippines (IBPAP, 2020) to have a 7.0% headcount growth and 7.5% yearly revenue growth from 2020 to 2022.

Although the future seems to be favorable for the companies in IT-BPO, the case for some workers is different, most especially because of the fear of automation and the effects of the COVID-19 pandemic. According to Frost & Sullivan (2015, as cited in TESDA, 2017) the following roles in the IT-BPO industry that are the most likely to be automated: (1) medical transcription, (2) simple contact center services, (3) basic 2D animation services, (4) parts of IT technical support, and (5) transactional mid and back-office processes. However, the same research also emphasized that although the low-skill services will be the most affected by automation, this phenomenon can potentially open new job opportunities—especially in mid-skill and high-skill roles--due to the higher skill needed to maintain these new technologies (2015). The COVID-19 pandemic, on the other hand, pushed workers to work from the home set-up. Although this may protect the workers from the risk of being infected by the virus, some BPO workers face technical difficulties due to slow internet connections and unfair labor practices from their company (Ochave, 2020). In worst-case scenarios, there were BPO workers—approximately a total of 1000--who were put under “floating” status by their employers, wherein they would not receive a salary for at least 90 days until they are transferred to another available account (Macaraeg, 2020). Workers under floating status found this extremely problematic as seeking an alternative job during this indefinite period may result in a breach of contract and thus a possible termination (2020).

Section P: Education

Distance learning can be considered as the first type of education in the Philippines that is digitalized in overall format and service. In essence, distance learning is an option offered by schools and universities for people who want to pursue education but are unable to because of different constraints in time, profession, location, among others. In its first years, similar to the case of the University of the Philippines Open University (UPOU), distance learning is print-based until the year 2000 when the online tutorials and open-source learning management system (LMS) was introduced along with the continuous geographical spread of students, thus introducing the term “ODeL” meaning “open and distance e-learning” (Arinto, 2016). By the same year, e-learning has started to become a popular mode of learning in the Philippines (Galeon et al, 2019). By 2007, UPOU leaned on a more digital fashion of educating by shifting to Moodle-based online-teaching (Arinto, 2016). In 2014, Republic Act 10650 was enacted to support educational institutions, both public and private, that offer both traditional and unconventional types of education that addresses the diverse needs of students.

Since 2012, digital technologies have been widely incorporated in the teaching and learning methods of schools. One good example is the use of PowerPoint presentations and videos shown via projectors and laptops as alternatives to the previously dominant “manila paper” and “kartolina” instruction materials which is not only arduous to make, but also visually difficult to read (Natividad, 2016). Another example would be the learning applications tailored for Lumad students that teach the children about their history and culture that are available in six different languages (Inquirer, 2020).

As of the first quarter of 2020, most public and private schools conduct teaching in the traditional format inside the classroom until the health hazard and lockdown in March of 2020 caused by the COVID-19 pandemic made this format of teaching not applicable (CNN Philippines, 2020). It was not until

October of 2020 when the resumption of classes—albeit in online and hybrid format--was announced by the Department of Education (DepEd) and Commission on Higher Education (CHED) despite the calls from different organizations to not proceed with such decision until equal opportunities for all types of students were available (Santos, 2020; Bagayas, 2020). While there were around 24.35 students who were able to join the new type format of classes, around 6 million elementary and high school students failed to do so due to challenges in technical and/or financial aspects (Magsambol, 2020; Reysio-Cruz, 2020). And despite being able to join the classes, some students still faced challenges in the psychological aspect due to the stress-induced by difficulties in adjusting to a new learning set-up or anxiety on meeting the requirements in classes (Cagula, 2020). The change of form of teaching under the “new normal” highlighted the current economic and digital inequality in the Philippines.

Section R: Arts, Entertainment, and Recreation

Most of the institutions and businesses related to Section R, such as operas, libraries, museums, amusement parks, sports complexes, among others, often rely on the manual type of operations. Meanwhile, gambling, although conventionally conducted in casinos and other similar premises, can now be played online as well. Aside from the usual games such as Blackjack and Baccarat, gamblers can also bet online on Sports, Poker, e-Sports, and Horse Race (legalonlinecasinos, 2020). On the other hand, some of the subsectors in Section R incorporate digital technologies in their services to increase their engagement to people such as using social media platforms and/or enhancing the quality of their services.

The libraries of the University of the Philippines, De La Salle University, and Mapua University are some of the great examples. Their libraries not only have an online database and catalog, but also have books, research, scholarly

articles, and other readings that can be borrowed or downloaded online under the category of “open access”. Similarly, the National Library of the Philippines has its digital collections of books and archival resources that can be accessed online. Digitizing documents—especially the archival records—will not only preserve the original copies and prevent them from possible damages, but it also gives ordinary citizens who are interested in browsing and exploring these records.

Similar to others, COVID-19 has dealt a massive blow to the revenue aspect of the sub sectors under Section R since most of the establishments under this section are venue-based. Fortunately, institutions such as theatre and museums devised a means to adapt to the challenges of “new normal”. For museums, Art in the Park 2020, an online art event and fundraising conducted by Art Fair Philippines was held in August of 2020 (Sorilla, 2020). Aside from that, the National Museum of Fine Arts, Ayala Museum, Ateneo Art Gallery, and Malacañan Presidential Museum & Library provide an alternative experience of visiting their displays and exhibits through their virtual museums (Libot, 2020). Theatre companies such as Tanghalang Pilipino (TP) and the Philippine Educational Theatre Association (PETA) also made a digital adaptation by launching their performances online (Sorilla, 2020).

Section S: Domestic Work

Even domestic work such as home cleaning services can be availed by customers in a digitized manner using social media networks. Manila Maid, Cleaning Lady, and Lemon Cleaners, among others, offer such services ranging from Php 350 to Php 4,500 depending on the type of cleaning that the customers seek (Primer, 2019). Although these services have already been in existence since 2014, the report from IT for Change (2019) suggested that the ecosystem of these new types of work does not provide a well-defined legal framework—thus a rigid system of protection--for its workers (Garcia & Pacis, 2019).

TNC and TNVS

The alternative modes of transportation such as Grab and Uber have been in the Philippines since 2013, although the latter went out of service years later (Grab, 2019). Although these services are known by the public as transportation services that can be accessed online via a mobile phone application, it was not until 2015 when the Department of Transportation and Communication (DOTC) four memorandum circulars that contain guidelines, policies, and regulations for both the company and the employee (Land Transportation Franchising and Regulatory Board [LTFRB], 201). The four memorandum circulars were revised in 2018 wherein DOTC granted the LTFRB the regulation and supervision of TNC and TNVS (Calimon & Calsado-Amoroso, 2018). Under these memorandum circulars, the LTFRB classifies TNC as the organization that provides transportation service while the TNVS refers to the drivers working under these companies. However, due to their uniqueness in characteristics, it is still not clear whether food delivery services (e.g., GrabFood, Foodpanda, and Lalamove) and motorcycle-hailing transport services (e.g., Angkas and JoyRide) are classified under these memorandum circulars (Al-Harthy, 2017). But since all of them are similarly operating using mobile phone applications and considered to be under the gig economy, it is necessary to include the two groups in the discussion.

As of 2021, Grab is the only car-hailing TNC that is in operation—although it has GrabTaxi and GrabTricycle as well—which has around 33,000 drivers based on the latest figures (Grab, 2019; Marquez, 2020). And due to the COVID-19 pandemic, the company issued its health and safety guidelines, which include limiting the passenger capacity of every rider (Grab, 2020). Companies such as Angkas (23,164 riders), Move It, (6,836) and JoyRide (15,000) offer app-based motorcycle-hailing services. Although the services of these companies were completely disrupted by COVID-19 for almost the entire year of 2020, it was reported that Angkas and JoyRide will soon return to operation upon meeting

the guidelines of LTFRB (Ranada, 2020). Food delivery services are offered by GrabFood, FoodPanda, LalaFood, and Zomato PH, which became more in-demand in 2020 due to lockdowns and health and safety concerns from visiting food establishments. According to Rakuten Insights (2020), the frequency of using food delivery services in the Philippines gained a net increase of 17%.

Aside from the health concerns of operating amidst the pandemic, the TNVS and similar workers also face different challenges—either from customers or from the management. Even before the pandemic, cases of customers pranking the couriers such as by not paying the item or purposefully sending them a wrong address have been on rounds in local news and social media; this did not stop even during the pandemic (GMA, 2020). To address this seemingly perennial problem, Ako Bicol Rep. Alfredo Garbin Jr. filed House Bill 6958 that seeks to prevent customers from canceling their orders once paid by or in the possession of the driver, thus serving as a safety net for the latter (Espedido, 2020). Meanwhile, over 700 FoodPanda delivery men have conducted a protest in front of the Department of Labor and Employment in November of 2020 due to alleged “unfair labor practices” by the company; one rider was even arrested during the protest (Ramos, 2020; Naval, 2020).

Public Service

The current compass of the Philippine government in developing the e-government services is the e-Government Master Plan (EGMP) 2, which was patterned and a continuation of the roadmap of previous administration with a similar name. As a roadmap for 2016 to 2022, the main objective of EGMP is to integrate ICT in government institutions, agencies, and overall operation. And e-government websites are one of the basic steps that government agencies can conduct not only to integrate ICT on the institution itself but also to connect with local citizens and other government agencies. However, according to Khalid & Lavilles (2019), the majority of the government websites in the Philippines are

either on stage 1 or 2 of the United Nations Four-Stage Model. According to the maturity level used by the research, the first stage is when the government website is capable of providing basic government information and direct users to other websites, while the second stage refers to websites that can provide one-way or two-way simple communication for citizens--such as downloading forms or applications-- and has a multiple language feature on its integrated media (2019). Although there are e-government websites that have the characteristics of stage 3 (able to conduct online government transaction) or stage 4 (an online forum for citizens), the research demonstrated that initiatives to strengthen and improve e-government websites is extremely necessary, especially in local government level, as even the highly developed municipalities and cities were only at stage 2 (2019).

According to the E-Government Survey 2020 conducted by the United Nations (2020) from July of 2018 to June of 2020, the Philippines obtained a High E-Government Development Index (EGDI) and ranked as 77th out of 139 participating countries despite being classified as a “lower middle-income” country. The UN also highlighted the use of the digital social registry system of the Philippines, locally known as Listahan, to serve as a database of poor households, which, for instance, can be the basis for government-related programs such as cash assistance (DSWD, 2020). But despite getting a high score, the COVID-19 pandemic has shown the cracks of e-government systems of the Philippines in terms of preparedness and flexibility to respond to such crises. For instance, despite having the Listahan, the Department of Social Welfare and Development (DSWD), which heavily resorted to manual data gathering resulting in data discrepancy, faced a backlash from the public by failing to properly distribute cash assistance to the indigents (Parrocha, 2020). Even until October of 2020, some recipients amounting to 1,260,119 were unable to receive the 2nd half of the cash assistance under the Social Amelioration Program (SAP) (Luci-Atienza, 2020).

Another example is the disparities and gaps in data of the contact tracing system of the Department of Health (DOH), which is crucial and had a direct effect

on the policy modifications of areas under a specific community quarantine (Bueza, 2020). As of July 30, 2020, only 0.68 out of 600 local government units surveyed had a “relatively good” contact tracing system, with an average of eight contacts per patient being able to be traced by the local contact tracing team (Gonzales, 2020). However, the city government of Valenzuela and Pasig decided to digitize their contact tracing system by using QR Code with pre-filled information of users in September and October of 2020, respectively, in replacement of the manual pen and paper as it will not only make the collection of data more systematized but will also mitigate the spread of COVID-19 as it requires no physical contact from people (Kabagani, 2020a, 2020b). As of December of 2020, the MYQR developed by MYEG Philippines inc. is the most widely used contact-tracing application by local government units (Business Mirror, 2020).

Plans for the Future

This section will provide an overview of the plans on digitalization of the service industry and government services. Roadmaps, frameworks, investments, among others, will be included in the discussion.

Service Industry

Table 2 shows the future roadmaps on each subsection of the service industries drafted by their respective agencies.

Table 2. *Future Plans and Roadmaps for Service Industry*

Subsection	Plan/s	Department / Institution	Goals
G & I	E-commerce Philippines 2022	Department of Trade and Industry (DTI)	Make E-Commerce contribute up to 25% to the GDP of the Philippines by 2020;
	Small Enterprise Technology Upgrading Program (SETUP) 4.0	Department of Science and Technology (DOST)	Encouraging micro, small, and medium enterprises in adopting Industry 4.0 technologies to improve their products and operations
J & N	Accelerate Roadmap PH 2022	IT & Business Process Association Philippines (IBPAP)	Facilitate the growth of the PH IT-BPM Industry by strengthening domain expertise in emerging sectors and adapt the advancements in technology
P	DepEd Digital Rise Program	Department of Education (DepEd)	(1) Teaching ICT subjects for student competency; (2) ICT-assisted teaching; (3) ICT-assisted Learning
Gig Economy	SB 1469 National Digital Careers Act of 2022	Filed by Senator Sonny Angara	A legal framework to promote and strengthen the gig economy as well as establish employment standards in digital careers

Note. Data for Section G & I from DTI (2020) and Arayata (2020), for J & N from IBPAP (2018), Section P from TeachPinas (2020), and Gig Economy from Senate of the Philippines (2020).

As can be observed in Table 2, all of the roadmaps are focused on adopting technologies—specifically, Industry 4.0 technologies--in improving the services and operations of each target subsectors. The roadmaps are also facilitating that the students, which will be the labor pool in the future, are prepared and adjusted with the growing market. However, none of the plans—not even the SB 1469—mentioned any form of address in ensuring that the rights of workers are observed and protected.

Government Services

The plans and roadmaps for the digitalization of government services have two areas of focus, the improvement of ICT infrastructure and the acceleration and promptness of conducting government operation. For the ICT infrastructure, there is the National Cybersecurity Plan 2022 and the Department Order (DO) No. 2020-009, wherein the goals of the former include (1) continuous secure that the critical "infostructures", public and military networks; (2) implement proactive cyber-resiliency measures to counter threats and attacks; (3) promote inter-agency coordination; and (4) creating a cybersecurity educated society (DICT, 2017). The latter, also known as the "Revised Locational Guidelines for Base Stations and Other Infrastructure for Cellular Mobile Telephone Service, Paging Service, Trunking Service, Wireless Local Loop Service, and Other Wireless Communications Service" drafted by the Department of Human Settlements and Urban Development (DHSUD) aims to hasten the building of network towers and other necessary ICT infrastructures by reducing the number of documents required to seek permit (Kabagani, 2020c).

On the other hand, two plans focus on the improvement and employment of digital technologies in government services. The first one is the Full Digital Transformation Act of 2020 that orders all government-owned and controlled corporations (GOCCs), instrumentalities, and local government units (LGUs) to comply with the promotion of zero-contact policy and facilitate ease of procedure to streamline government services (Dillera, 2020). The author of the proposed act Senator Win Gatchalian also pointed out that such a measure is necessary to counter the slow pace of integration of digital technology in service delivery (2020). The second one is the e-Government Master Plan (EGMP) 2022, with the concept of "One Digitized Government" as its main goal. To be more precise, the EGMP 2022 aims to (1) digitally harmonize all government agencies to optimize available ICT resources; (2) encourage information and resource-sharing and data-base building; and (3) ensure the development and protection of an integrated ICT

infostructure (DICT, 2019). The EGMP 2022 is not only eyeing government agencies as to its target institutions, but also the citizens, business sectors, and the government employees (2019).

Overall, the plans to digitalize government services are more focused on ensuring that the fundamentals of e-government services, which is the ICT infrastructure and digital interconnectedness of government institutions. It is safe to assess that even the government is aware that in terms of creating optimal e-government, the Philippines is still on the emerging stage.

Evaluation and Recommendations

The service industry and government services are two of the most long-standing and important sectors of the economy and society. But despite their huge contribution, the process of improvement through digitalization is still sporadic and disintegrated largely because of poor ICT infrastructure in the Philippines. In the case of the service industry, most of the steps related to the digitalization of each subsector have been done by its private components. Although roadmaps focusing on the flourishing e-commerce and IT-BPO industry have been on rounds since the 2000s, it was only in 2016 through the e-Commerce 2016-2020 that a systematized approach for the digital economy. On the other hand, the government services have been at the constant pace of digitizing the services since the 1980s albeit each presidency has different foci from each other.

Although COVID-19 has massively shaken and derailed the pace of the economy and society of the Philippines, it has ironically hastened the digitization of and pushed for more innovations in the service industry and government services. Although some have been using Industry 4.0 technologies or have already incorporated digitalized processes in their services, the majority of the subsectors in the service industry became increasingly more reliant on doing business online or wholly embraced a new set-up. Wholesale and retail trade and food service activities utilized online delivery platforms to serve their customers that would otherwise unable or would have difficulty in going to their stores due to COVID-19. Although

some businesses were able to innovate and adapt to the new normal, others failed and were forced to shut down their businesses. The demand for TNC also surged because of the increasing demand for online services because of lockdowns and fear of contracting the virus. Meanwhile, office-based works shifted to home-based set-ups with either technical problems or psycho-social challenges due to the quick change in the work environment, most notable is the case of online classes and the various dilemmas that students face. The government services also made some adjustments due to this unexpected phenomenon such as the heavy reliance on e-government tools such as digital contact-tracing applications.

In another layer of irony, although the disruption caused by COVID-19 brought an external stimulus to push the service industry and government services to maximize the potential of digitalizing operations, this swift transition to “new normal” showed how digitally unprepared the majority of the Filipino society is. The poor ICT infrastructure and network in the Philippines, but also the majority of the Filipino population are being left behind socio-economically. In a sense, there is a huge gap that separates the already digitalized strata and those that are not even aware of the “digital alternative” reality. This is evident in the case of the shift of education services to online classes, wherein a large number of students were unable to join or either struggling to continue mainly because of lack of technical resources. The continuation of teaching via online classes is not only a good alternative for physically conducted classes, as it will help the students to continue attending classes by not risking their health, but also opens a new horizon for the education services by offering the digital alternative. But if only a few members of the Filipino society would have the capacity to enjoy the convenience of online alternatives, a massive rethinking of plans and measures is a must. Similarly, although digitalization brought the new and unique pool of professions grouped under the “gig economy” wherein more people can find new job opportunities that have never been available before, there is no legal backbone that can protect and secure the rights of the employees in case abuse of any form would happen. A good example of this is the pranks and scams that the delivery riders/couriers receive from the customers wherein posting

on social media would be their last resort of help.

In terms of global and regional competitiveness and economic sustainability, digitization of services is no more an option, but a necessary measure. More so in the middle of a pandemic wherein contactless operation in any institution is an important factor in mitigating the spread of virus, the sustainability of the economy—whether the traditional or the digital. But the digitization of service and operations, without considering the current status and transition of the majority of the population will not only be ineffective but will cost a lot in the long run.

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