

Digitalization, International Trade, and Arab Economies: External Policy Implications

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Abstract

Digitalization, along with the associated servification of economies, is both a driver and reflection of structural transformation. Digital technologies offer potential opportunities for Arab countries to diversify production and (intra-regional) trade, including complementing revealed comparative advantages in travel and transport services, enhancing participation in extant manufacturing value chains, and enhancing resilience to international shocks. Harnessing digitalization opportunities is conditional on an institutional and regulatory framework that supports access to and use of digital technologies and market platforms by micro, small, and medium-sized enterprises (MSMEs). The track record of exports of non-travel/transport services of many Arab countries is very heterogenous. The high service export growth rates for some countries demonstrate the potential that exists. However, the lack of dynamism in other Arab countries, despite proximity to large markets, suggests greater focus is needed on putting in place a supportive policy environment. Growth in digital trade is conditional on satisfying regulatory standards for data protection and the provision of services and digital products. Countries in other regions are actively pursuing digital trade cooperation, complementing trade agreements that encompass service trade and investment, and engaging in discussions on e-commerce, service regulation, and MSMEs. Many Arab countries have neglected services trade liberalization and are not engaged in international discussions to define good regulatory practices for the digital economy and identify measures to facilitate and support digital trade. This lack of attention may reduce the prospect of capturing digitalization opportunities.

Keywords: Digitalization, digital economy, value chains, trade, international cooperation, services, regulation, Arab countries.

JEL Classifications: F13, F15.

Introduction

Rapid technological developments – including in artificial intelligence, automation and robotics, 3D printing, machine learning, and data analytics – are driving the structural transformation of economies. This paper reviews some of the international policy dimensions of the digitalization of the economy, with a focus on Arab countries. Technological changes driving digitalization provide opportunities to replicate what occurred in manufacturing value chains in service sectors; creating new job opportunities in Arab economies that are well endowed with digitally savvy consumers and a young workforce. The potential for Arab countries to leverage the digital economy, as opposed to the pursuit of the traditional development path associated with production of manufactures, has been emphasized by international organizations (for example, World Bank, 2018b) and is a core feature of the national development strategies of many Arab countries (UNESCWA, 2019). Digitalization offers opportunities to diversify economic activities in Arab countries and enhance resilience to exogenous shocks.

Preconditions for successful economic transformation and the capturing of digital opportunities to realize sustainable development goals include widespread access to digital infrastructure networks (connectivity) and an enabling business environment. This paper focuses on trade and investment policies and regulatory regimes that impact the ability (incentives) of firms to sell and source digital products internationally. It is organized as follows: section 1 briefly defines terms and presents some salient stylized facts on how digital transformation is affecting economic growth and structural transformation. Section 2 discusses the trade dimensions of digital transformation and potential consequences for the organization of production and international value chains. Section 3 turns to policy, differentiating between national (unilateral or autonomous) policy – both own policies and those of foreign countries with their associated potential spillovers, focusing on trends towards restricting digital trade and data flows and the implications for Arab countries. Section 4 reflects on implications for trade agreements and international regulatory cooperation. Finally, section 5 offers concluding remarks and policy recommendations.

1. Digitization, digitalization, digital transformation, and development

The notions of digitization (converting the analog representations of tangible objects or attributes into a digital format), digitalization (applying digital technologies to existing business processes), and digital transformation (changing or developing new business processes and products using digitalization technologies) are frequently used interchangeably to denote the shift to a more digital economy. The terms capture the convergence of fixed, mobile, and broadcast information and communication technology (ICT) and computational advances that connect people, devices, and objects in real time through the Internet, and the associated structural transformation of economies, product innovation, and changing social interaction. Digitization and related ICT and software products permit more efficient management of production, product differentiation, and rapid responsiveness to changes in consumer preferences. Basic features of the digital economy are the disembodiment of production and extensive production and the intensive use of data generated by interactions

within and among firms, between firms and final consumers, and among individuals, as well as the operation of business processes, machinery, and equipment: the “Industrial Internet” or Internet of Things (IoT).

Most of the economic value proposition of the digital economy is business-to-business (B2B), reflected in firms’ use of cloud-based digital software services and platforms to manage supply chain/logistics management systems, IoT applications, business information analytics, advertising, enterprise resource planning, and human resources and customer relations functions. As digital processes become more centrally embedded in production and exchange, ICT-intensive services become central to measure and control business processes, as well as facilitate transactions within networks and between firms and customers (both consumers and other businesses).

Digital supply chains are blurring the boundaries between goods and services and thereby accelerating a dynamic that has been ongoing for decades; reflected in managerial and financial innovations that permitted the sales (purchases) of the services generated by tangible assets (machinery, equipment, factories...etc.). Leasing of durable equipment (airplanes, construction machinery, multifunction office equipment...etc.) allowed for the ownership and management of the tangible assets needed to pursue an economic activity to be unbundled from the use of equipment by firms active in a broad range of sectors. This “servicification” of the economy drove (supported) an increased specialization in firms’ core competencies and is one reason why the share of services in GDP has been rising in all countries.¹

For the middle-income countries as a group, services grew from 39.7 percent of GDP in 1990 to 54.7 percent in 2019, the latest year for which comprehensive data are available. The corresponding percentages for the Middle East and North Africa region (Arab world), as defined in the World Bank World Development Indicators, are 44.8 (42.0) percent and 51.9 (49.7) percent, respectively. These data reveal that the rate of increase in servicification in Arab countries has been only half of that observed in middle-income countries on average – a 7.5 percentage point increase compared to a 15 percentage point increase.² Relative to high-income OECD countries, where services account for 70 percent of GDP, the average share of services in Arab economies is still low, implying that significant structural transformation is yet to come.

The digitalization and digital transformation of business activity is distinct from servicification, but they are closely related in that the former has become an additional driver of the latter. Part

¹ The term “servicification” is generally used to describe the process of increasing the intensity of the share of services in GDP (value added), or, at the firm level, a shift towards services in company revenues, and/or the increasing use of services as inputs into production, both in-house and sourced arms-length. See, for example, Lodefalk (2017). The term “servitization” is used in business literature to describe the incorporation of embedded services in tangible products and the shift from a product-centric to service-centric business model. See Tronvoll et al. (2020).

² Data sourced from the World Bank WDI database: <https://data.worldbank.org/indicator/NV.SRV.TOTL.ZS>

of what is measured as an increase in the service content of production across sectors, whether agriculture, mining, or manufacturing, reflects a shift of resources to the use of digital technologies in all stages of production (Miroudot and Cadestin, 2017). Both are associated with specialization and product innovation. Digitalization allows software-enabled products and associated services to be sold on a subscription basis; reducing the need for firms that need specific service inputs to devote capital to generate the assets required to provide services inputs and instead permitting firms to buy critical inputs and outsourced activities that would otherwise require extensive investment in high-skilled specialized workers (for example, engineers) and equipment. A key feature of both trends is that they cut across all the sectors conventionally defined in the national accounts, whether agriculture, natural resources, manufacturing, commercial services, or government activities. All sectors are affected by digital innovations and associated new business models that are driving extensive margin growth; changing how value is generated and what constitutes value addition.

The digitalization of production using machine vision, automation, and additive manufacturing (3D printing) technologies is changing the organization and distribution of economic activity across countries. Additive manufacturing, automation, and robotization can support the reshoring of manufacturing by permitting scale-independent efficient production, although, to date, the evidence for such effects is scant.³ They may change the structure and pattern of international trade and Foreign Direct Investment (FDI) with the cross-border flow of digital design files (with associated payment flows reflected in the royalties and license fees category of the balance of payments) and printers (capital equipment), and the feedstock used by different types of printers becomes more important. The composition of trade in tangibles may change, with a shift away from parts, components, and final products towards processed material inputs and capital equipment.

This is not only a matter of changing technologies to produce goods. Software tools such as robotic process automation (“software bots”) that use artificial intelligence and machine learning permit firms to interact with clients in areas like customer service and marketing and can be used to inform business decision-making through data analytics fed by high-frequency monitoring and feedback from customers’ use of products. The automation of regulatory compliance (for example, block chain-based digital ledgers or software platforms that automate calculation and payment of indirect tax obligations across jurisdictions) can generate expansion along the extensive margin by specialized providers (software or platforms as a service) and by the companies that use such technologies and services. In areas like medicine and health services, the application of software-enabled services offers the prospect of significant productivity improvements as well as cheaper and higher quality services for end users by reducing commuting and waiting times and improving diagnostics and treatment, for example. The associated reduction in the need for clients to move to the location of providers will also have international trade facilitating effects, as interactions need not be limited to each geographic location (Baldwin and Forslid, 2020).

³ See e.g., Freund et al. (2019), Laplume et al. (2016), and Hallward-Driemeier and Nayyar (2018).

Process automation and related software tools will generate adjustment costs for incumbent firms while offering significant opportunities for new entrants, whether start-ups or established companies. Traditional types of service outsourcing – such as customer support (for example, call centers or IT helpdesk services) and business process management (accounting, human resources functions, procurement, or regulatory compliance activities) – may become less salient, for example. Pressure on firms and their workers to adjust to technological innovation will not be limited to manufacturing (industry) but will extend to services as well, with an increasing number of services’ activities and tasks becoming more tradable because of technical change. While technology creates new opportunities for trade in services – and an associated increase in demand for service workers in developing countries given lower factor costs – business process automation may also drive commoditization; pushing down prices for service tasks provided by incumbent suppliers. There is a major role for government policy in dealing with the inevitable adjustment pressures and costs and in creating an enabling environment that supports the ability of entrepreneurs to create or expand companies that leverage the opportunities offered by the digital economy.⁴

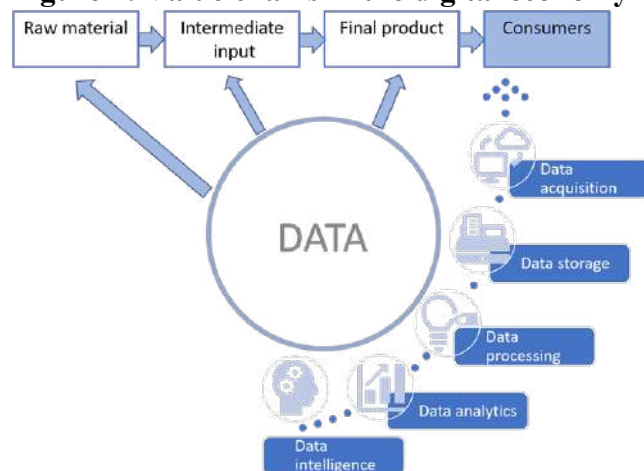
An important dimension of the digital economy is the role of data as a key input into production processes, with the ability to process information (“big data”) into actionable knowledge driving economic performance and firm-level competitiveness. Value chains are becoming increasingly data intensive and data dependent, with firms using data upstream as an input into design, research and development, and product innovation, as part of the production process and to improve logistics, distribution, and engagement with customers and clients through data acquisition, storage, modelling, and analysis (Figure 1).

Cross-border movements of data are central to this economic model. Quantifying the value of such flows is difficult; there is no commonly agreed-on methodology for collecting information or valuing data flows.⁵ Based on extant research, UNIDO (2017) has estimated that IoT, meaning the use of sensors, actuators, and data communication technology built into physical objects that enable those objects to be tracked, coordinated, or controlled across a data network or the Internet, could have an economic impact of USD 0.81 trillion to USD 1.86 trillion in developing economies. Advanced robotics and machine learning could have an economic impact of USD 0.3 trillion to USD 0.9 trillion in the developing world.

⁴ Foster et al. (2018), Crémer et al. (2019), and Ferracane and van der Marel (2019).

⁵ Bergemann et al. (2020) and the IMF (2018) discuss the challenges of valuing data. See also Opresnik and Taisch (2015).

Figure 1: Value chains in the digital economy

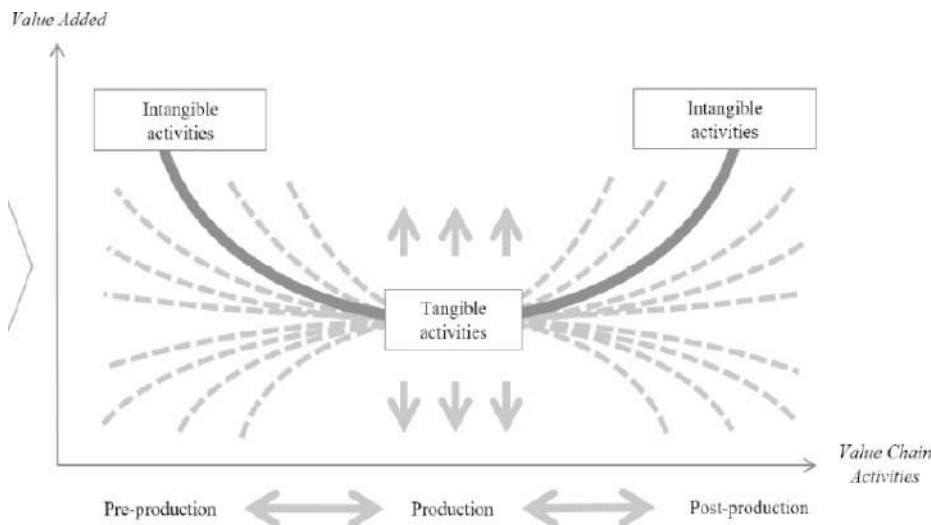


Source: WTO (2020).

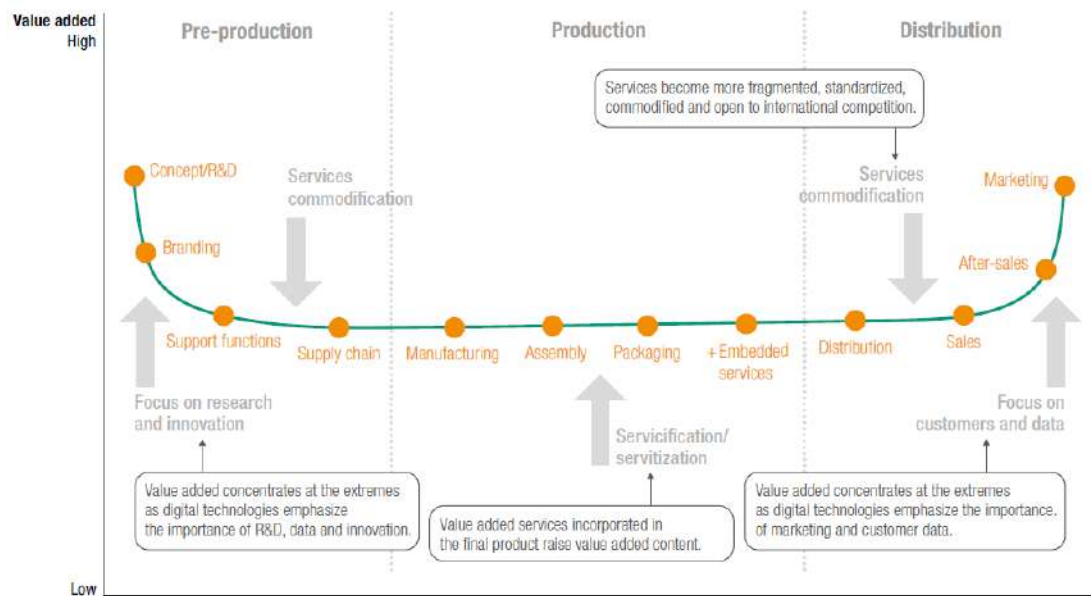
An implication of growth in the digital economy is that more of the value generated by production processes is associated with data generation and use. This may result in a deepening or flattening of the well-known “smile curve” that maps the relative contribution to the total value added of specific production tasks and activities associated with a final product (Figure 2). In many cases, most of the value added is generated in the upstream and downstream parts of the value chain that are associated with intangible outputs (services) such as design, research and development, finance, branding, intellectual property, logistics, and retail distribution. Production and assembly operations generally account for a small share of the value added; reflecting the relatively unskilled nature of the tasks involved. Digitization may deepen the smile curve with more of the value added associated with the production of a product coming from upstream and downstream activities insofar as these comprise services that can be digitized – for example, the online distribution of a digital product versus the physical retail distribution of a product, or the use of open-source software tools that lower the cost of research and development. However, digital technologies may also reduce the share of value added created at the extremes of the curve – for example, by removing the need for transport logistics or by increasing the capital intensity of assembly and production; therefore flattening the smile (bottom panel Figure 2) and potentially transforming it into what Rehnberg and Ponte (2018) characterize as a smirk.⁶

⁶ As discussed further in Section 2, companies that drive value chain specialization may want to reduce the geographical dispersion of high-value/high-skill activities that generate a significant share of value creation, including research and development, design, marketing/branding, distribution, and logistics.

Figure 2: Value addition and new digital technologies



Source: Rehnberg and Ponte (2018).



Source: UNCTAD (2020).

Therefore, much depends on how digitalization affects different parts of the value chain for extant products (the intensive margin) and how it affects product innovation and the design of the associated value chain (the extensive margin). Digital technologies and servicification create adjustment pressures for incumbents and opportunities for new entrants/start-ups, but capturing these are conditional on an enabling environment (linkages to universities, technology zones, venture capital...etc.) as well as a supportive regulatory policy⁷.

In economic development literature, concern is frequently expressed that digitization and the more general shift towards servicification will have major adverse effects for developing countries. A key feature of such arguments pertains to the middle part of the smile curve:

⁷ Van der Marel (2020) discusses the comparative advantage determinants of data-enabled services trade.

assembly operations and the physical production of manufactured goods. These have historically been (unskilled) labor intensive and provided large-scale employment opportunities for workers with limited formal education. If the rising share of services in GDP is accompanied by less demand (need) for labor-intensive assembly and production tasks due to automation and digitalization, and if a trend towards reshoring the middle part of the value chain is made possible because of additive manufacturing (3D printing), the demand for relatively unskilled labor by plants assembling manufactured goods in developing countries may fall. At the same time, the potential for capturing a share of the higher value-added activities at the two extremes of the smile curve declines as the returns to these activities are eroded.

There are two types of arguments regarding the implications of such developments. One centers on the adjustment pressures this will generate in OECD countries, notably for workers and firms specialized in the upstream and downstream parts of value chains. The other concerns the implications of a development model that is not (or cannot be) based on a shift towards manufacturing. Some analysts argue the potential development payoffs to developing countries of servicification can only be limited (Rodrik, 2016; 2018). The argument is premised on the idea that sustained aggregate productivity growth, which is the key driver of real income growth, is only possible through the development of a substantial manufacturing sector because of associated dynamic productivity spillovers, complemented by a presumption that only export-oriented manufacturing growth can create large numbers of jobs for workers without a college education.

The emphasis on manufacturing activities is problematic insofar as modern manufacturing involves many services activities. Globally, much of manufacturing is undergoing a process of servicification, involving the provision (sale) of the services that are generated by products as opposed to simply the fabrication and sale of tangible goods. Thus, distinguishing between manufacturing and services sectors is rapidly becoming less meaningful. What matters from a growth perspective is moving resources into activities that generate high(er) added value and increase aggregate productivity (Balchin et al., 2016). Even if these activities are classified as manufacturing (captured as such in the nation accounts), many will, in fact, be services. Some of these services are relatively skill intensive and are associated with higher productivity, while others will be relatively less low-skilled but nonetheless offer opportunities for real wages that are higher than those offered in the agriculture or informal sector compared to the tourism industry, for example.

Can developing economies leverage servicification and digitalization to foster sustained productivity growth that, in turn, supports growth in per capita incomes while also creating decent jobs for the unskilled? While there is no presumption that digitalization will enhance welfare, and it is unambiguous that it will have implications for the distribution of income in part because of the associated structural transformation of the economy, it is not the case that – because much of the digitization-enabled activities can be characterized as services – productivity performance is likely to be negatively affected. Shepherd (2019) compiles data

showing there is significant heterogeneity in productivity levels and growth rates across sub-sectors in both manufacturing and services. There are services subsectors where productivity growth has rivaled what has been seen in major goods market success stories. While there is substantial country-level heterogeneity in the patterns of productivity in each sector of economic activity in terms of levels and growth rates, productivity growth in sectors like construction, professional services, distribution, transport, and telecommunications can be substantial. Young (2014) finds that average productivity growth in services is similar to other sectors.

An increasing share of services in GDP and employment is part and parcel of economic development and thus a basic feature of structural transformation. From a growth perspective, there is nothing inherently negative about shifting resources into services – or, in countries pursuing a development strategy that involves rapid expansion in services activities and less in the way of manufacturing production – than was the case in the past. Successful structural transformation is not conditional on achieving significant growth in the share of manufacturing assembly operations; rather, it is conditional on expanding the share of economic activities that generate higher average real wages (have higher productivity). Such activities need not involve a preponderance of the types of industries and production that drove development in the past because digital technologies allow firms to specialize and outsource services that used to be provided within the firm. Much of the value added embodied in products, whether goods or services, reflects services inputs, whether provided through the market or within the firm. Services lend themselves just as much to productivity growth as manufactured goods production, with resource allocation shifts *within* services sectors driving productivity growth in the same way as in goods-producing sectors.

The position in regards to jobs is more ambiguous, as services sometimes require higher levels of qualification and different skills from traditional manufacturing roles.⁸ Digitalization and process automation may drive greater inequality within and across countries because of technology and skills gaps (Foster and Azmeh, 2020; Lee et al. 2020). At the same time, services offer significant employment opportunities for relatively unskilled workers in sectors such as tourism, logistics, health, personal care...etc. The need for digital infrastructure means that low-income countries risk being excluded from global developments if basic connectivity is not assured. If regulatory regimes do not meet international norms or are not regarded to be adequate (equivalent) by regulators in importing countries, potentially competitive exporters may not be able to access foreign markets. As discussed below, this calls for engagement in international regulatory cooperation to attenuate the costs associated with confronting different, perhaps incompatible, digital regulatory standards in major markets, and, more importantly, being excluded from contesting a market altogether.

⁸ See Balchin et al. (2016) for discussion and case studies for a set of developing countries. A feature of this literature is that there appears to have been little focus on servicification in Arab countries.

Given that many Arab countries have a relatively large pool of educated, digitally literate young workers, and given the historical underperformance (discussed below) of Arab countries in the type of traditional specialization in manufacturing assembly operations that drove growth in many East Asian and East European nations, the digital economy offers a prospect of a complementary path for Arab countries.⁹ The ability of Arab countries to exploit the opportunities associated with digitalization and digital transformation-cum-servicification of the international economy will depend, in part, on whether the factors that led to underperformance in participation in regional and global manufacturing GVCs – high trade and transaction costs reflecting an intrusive state, associated red tape, and crony capitalism – will apply equally to the digital economy. The answer will depend, in part, on country-specific domestic political economy forces (not addressed here) and on external policies, which are discussed below.

2. Digitalization, trade in services, and merchandise GVCs in Arab countries

Traditional trade theory focuses on the exchange of final goods produced mostly with local inputs between geographically separated producers and consumers. Starting in the 1980s, intra-industry and intra-firm trade began to represent an increasing share of global trade as production was fragmented across countries. Today, trade is driven by business models in which firms in countries specialize in narrowly-defined tasks and activities as opposed to entire sectors, and lead firms coordinate production activities in global value chains (GVCs) that span a wide range of operating locations.¹⁰ GVCs are important contributors to global trade in all sectors, most obviously in manufacturing, but also in agriculture and food products, as well as in services. Whether organized as a chain (in which a sequence of activities occurs) or a network (where activities take place at the same time in different locations and combined at a central point), they generally involve production activities that are located far from the final consumer.

The feasibility of GVCs and their design depends on many factors. Trade costs, including tariffs and nontariff barriers that prevail at borders, and the efficiency of transport and logistics services, are particularly important. A stylized fact that is pertinent from a digital economy perspective is that trade costs in services are about twice as high as those for goods (Miroudot and Cadestin, 2017). The source of these trade costs is a mix of discriminatory trade and investment policies towards foreign service providers, service domestic regulation, and technical constraints on trading services.¹¹ Extensive empirical research has shown that the economic impacts of differences in regulatory policies often exceed border barriers, such as

⁹ Bellakhal and Ben Ayed Mouelhi (2020) illustrate both the challenge and the opportunity. Using a firm-level dataset of 466 small and medium-sized enterprises (SMEs) in Tunisia, they find that digitalization is positively related to firm performance; helping firms develop their activities, boost their sales, and increase exports.

¹⁰ GVCs are often regional, not necessarily global. In this paper, the term is used as shorthand to denote international production.

¹¹ Although digitization and digitalization have made many services more tradable than in the past, many services remain less tradable than goods.

tariffs (Francois and Hoekman, 2019).¹² Services trade is affected by both domestic regulation and restrictive trade policies. Average levels of services trade restrictiveness are lower today than in the 1990s; reflecting the liberalization of policies towards inward FDI and a lack of restrictions on cross-border trade of services using ICT networks and the Internet, but can be high for specific sectors and modes of supply.¹³

Digitalization will affect GVCs by changing the services content of the total value added generated in the production and sale of products, as sketched out in Figure 2. Digitalization will also give rise to new types of GVCs where the end products are new services produced through a mix of tangible and intangible inputs that are sourced (produced) in different countries. Thus, digitalization will both impact existing GVCs in which Arab countries participate and potentially drive participation in – and the development of – new GVCs. What follows first discusses the potential implications of digitalization for merchandise GVCs and then discusses GVCs in a digital economy more broadly.

2.1. Merchandise value chains

Arab countries demonstrate significant heterogeneity in terms of participation in GVCs, but, on average, underperform relative to comparators. This, in turn, largely reflects the inability of Arab countries to attract GVC investments that involve processing and assembly operations for export to regional and global markets. For some countries, this is due to endowments and a comparative advantage in the energy sector. For others, it reflects relative labor scarcity and high transport and trade costs.¹⁴ More generally, research suggests that weak institutions and governance are likely to have played an important role,¹⁵ reflected in rent-seeking (“crony capitalism” and state dominance).

A commonly used measure of GVC participation by countries is the share of Foreign Value Added (FVA) that is embedded in gross exports, meaning the value of imported inputs in the total value of exports. This share ranges between ten and 30 percent in Arab non-oil exporting countries and is less than ten percent for most oil exporters, namely Algeria, Iraq, Libya, Kuwait, and Qatar (Figure 3, panels 2 and 3). The outlier is the UAE, where the foreign value-added share of gross exports is 20 percent. The highest GVC participation is seen for the non-oil economies, notably Lebanon, Tunisia, Jordan, and Palestine; with ratios in the 25-30 percent range. Throughout 1990-2015, all GVC participation growth (from a high base) was non-regional, reflecting, at least in part, high intra-regional trade costs (De Melo and Twum, 2020).

¹² Schmidt and Steingress (2019) show that the intensity of bilateral trade is associated with regulatory convergence.

¹³ Arab countries’ services trade policies are discussed below.

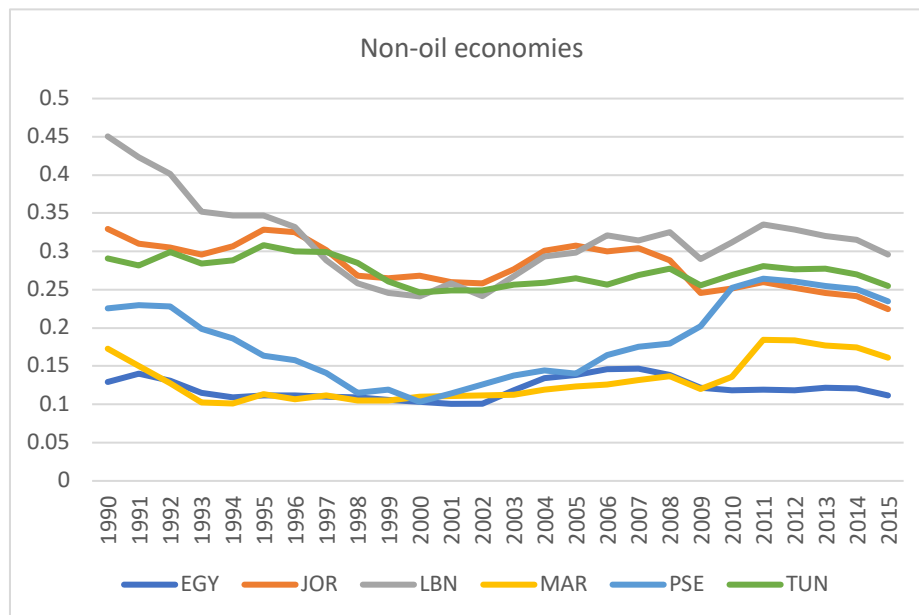
¹⁴ See Del Prete, Giovanetti and Marvasi (2017, 2018) for research focused on North African countries.

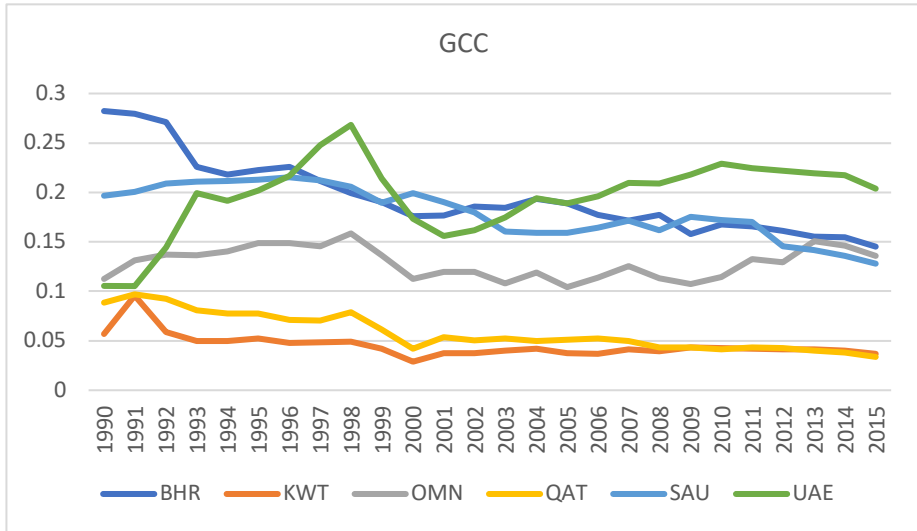
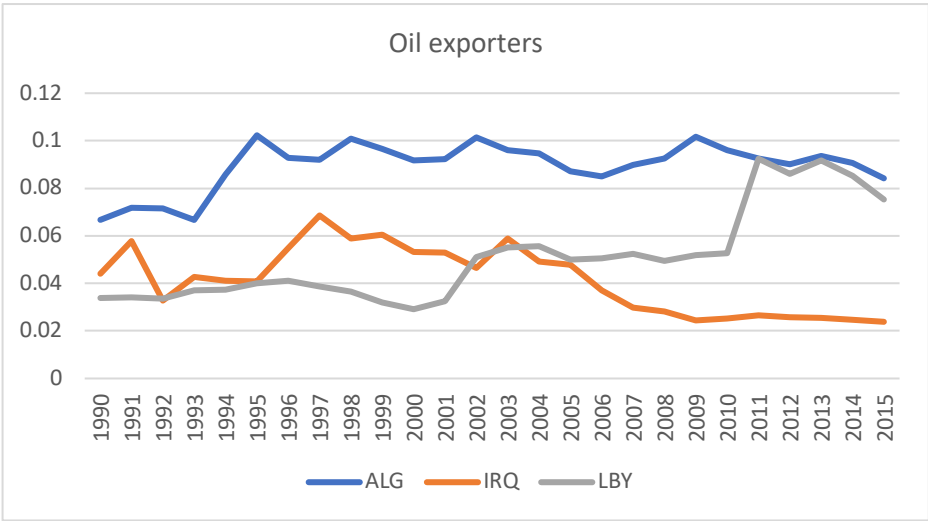
¹⁵ There is a large literature on the role of institutional quality as a determinant of successful export-oriented development, participation in GVCs and the magnitude of the gains of services trade liberation. For example, see Levchenko (2007), Nunn (2007, Nunn and Trefler (2014), World Bank (2020a), and Beverelli et al. (2017).

The trend since 1990 suggests an absence of an increase in the foreign value content of gross exports, in contrast to what is observed in high-growth East Asian economies that have used GVCs as a tool for integration into the world economy and a driver of growth (World Bank, 2020b). This can be seen if a slightly different measure of GVC participation is used – the OECD’s trade in value added database – which only has data for three Arab economies (Morocco, Tunisia, and Saudi Arabia). Annex Figure 1 shows that foreign value content of exports for Vietnam has grown from 35 to 45 percent over the period 2005-2015. Both Morocco and Tunisia have seen their foreign value content of exports share increase since 2005, but the absolute levels remain far below what is observed in Vietnam. The contrast is particularly stark for a large labor-abundant country such as Egypt, which, in principle, should have been able to benefit more from exploiting GVC participation opportunities.

These characterizations of merchandise GVC participation for Arab countries are very aggregate and therefore do not capture the state of play at the industry/sector, let alone at the firm level. Some Arab nations have been much more successful in expanding GVC trade in specific sectors than the aggregate data suggest, such as Morocco and Tunisia for automotive and aeronautical products. However, the region generally has not seen the type of growth in GVC trade observed in East Asia or Eastern Europe. The reasons why this has not occurred are much analyzed, with many scholars pointing to weak institutions, high levels of red tape, high trade costs, crony capitalism and heavy involvement of the state in the economy, and specialization in tourism. Arguably, an inability to attract manufacturing investment by lead firms is of particular importance; FDI has tended to go into energy-related sectors.

Figure 3: Foreign value added in gross exports, selected Arab countries (share)





Source: EORA database.

What is of interest for this paper is how digitalization may affect the prospects for Arab countries – both those that have been successful at using GVCs to participate in the production of manufactured products, such as Morocco and Tunisia, and those that to date have not been participants in GVC production of manufactures – to participate in the international division of labor and generate jobs in new activities by exploiting digital technologies and opportunities.

Digital technologies can facilitate trade in tangible goods by reducing trade costs, which are an important determinant of GVC investments. In the last decade, there has been much focus by policymakers, including in many Arab countries, on facilitating trade in goods. Digital technologies play an important role in making this more effective and lowering trade costs. Examples include paperless trade involving the use – and acceptance by Customs – of e-invoices, e-signatures, advance clearance of consignments while goods are being transported, single windows, and use of blockchain ledger technology in supply chains linked to tax/border regulation compliance (Atkinson and Stevens, 2020). Adoption of these innovations can be expected to greatly reduce trade costs by reducing red tape, delays, uncertainty, and

opportunities for corruption at the border, in addition to reducing disincentives to engage in GVC production and associated investments.

However, alone they are unlikely to be sufficient in driving a significant increase in GVC intensity in Arab countries. This requires more fundamental changes in the investment climate that increase the attractiveness of Arab countries to large lead firms.¹⁶ One such driver that is independent of digitization trends is changing incentives for lead firms to use GVCs in countries located far away from final demand. Miroudot and Nordström (2020) use the 2018 update of the OECD Trade in Value-Added (TiVA) database to measure the number of domestic and foreign production stages in GVCs, the frequency of border crossings, and the geographic length. They find that the cross-border intensity of GVCs peaked in 2012, after which the chains started becoming more domestic or regional. They estimate that the reduction in the average length of chains since 2012 is 50 kilometers per year. This shortening of GVCs may reflect a mix of factors, including a less hospitable policy environment – reflected in increasing protectionism and associated policy uncertainty – and technological, market, and managerial forces that affect the incentives to offshore and to reshore production activities.¹⁷

Reshoring incentives may be associated with automation and the use of 3D printing technologies that permit lead firms to locate stages of production that had been offshored in the home market or closer to final consumers. Reshoring may also result from actions to reduce risk and bolster resilience of supply in the face of exogenous shocks. Popular arguments emphasize the fragility that can be associated with complex networks of production, where shocks in one area can propagate through the network, sometimes with complex consequences that are difficult to predict, but potentially serious ones from a public policy perspective.¹⁸ While more domestically focused supply chains are not necessarily more resilient than those with a strong international dimension, the observed trend towards the shortening of value chains and political pressures to source from countries that are less geographically distant may create opportunities for states located in the neighborhood of large economies. In the case of North African and Mashreq countries, the obvious opportunity is to partner with firms operating on/selling to European markets. Opportunities that are geared to African markets may be equally salient; leveraging efforts by African states to create an Africa-wide continental free trade area and build on the economic relationship between the GCC and South Asia.

On balance, Arab countries – especially those in North Africa that have increased participation in GVCs producing manufactures – are more likely to benefit than lose from the mix of digitalization and geo-political/geo-economic dynamics insofar as the latter enhances

¹⁶ Durugbo et al. (2020) survey the literature on regional supply chain management in the GCC countries, which have attracted many multinationals that have developed regional supply chain activities focused on logistics and distribution. Much of manufacturing-related FDI in the GCC has been oriented towards spare parts, maintenance, and support services.

¹⁷ See Barbieri et al. 2018; Ancarani et al. 2019; and Culota et al. 2020 for discussions of drivers and evidence on reshoring and backshoring.

¹⁸ Research has improved our understanding of the ways in which shocks propagate through input-output networks (for example, Acemoglu et al., 2012).

locational advantages that allow nearshoring, and the former reduces trade/transactions costs; making extant value chains more efficient. Greater adoption of paperless transactions, use of digital technologies to facilitate logistics and tax compliance, reducing the need for physical inspection of consignments, and improving the transparency and predictability of supply chains all have the potential to lower trade costs. That being said, this is something other countries will be doing as well. This suggests that government encouragement of digital technologies to facilitate trade will be necessary but not sufficient for sustaining, let alone expanding, manufacturing GVCs. The potential opportunity will be associated more with exogenous drivers of reshoring by lead firms. Whether this will be sufficient to offset incentives to reshore through automation of production processes is an empirical question that significantly depends on the type of tasks and services supplied by Arab countries, specifically GVCs.

2.2. Digital economy GVCs

In regards to the prospects for new digital GVCs, Sturgeon (2019) develops a useful depiction of the digital economy seen through a value chain lens. In his conceptualization, the digital economy involves a set of (two-sided) platforms (markets) that are layered on each other. The flow of value addition across layers is akin to a traditional value-added chain (left side of Figure 4), while, within layers, each two-sided market can be conceived in “supply chain” terms with products (processes) that move from producers of products and services to final demand (clients) using the respective platform. The key distinguishing feature of the digital economy is “a high degree of interoperability across layers (despite very high complexity) and the ability of platform owners to monetize data about buyers and sellers [associated with] the software-based character of digital platforms, which enables the easy scalability of successful platforms and sometimes, their emergence as dominant players in short order based on very strong network effects” (p. 13).

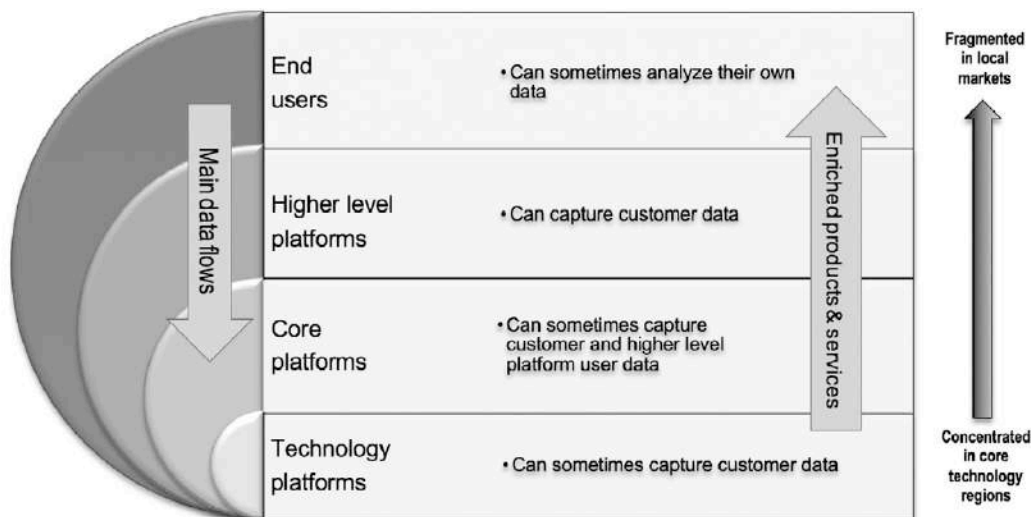
While control over the data pools generated by digital activities on and across platforms resides with core platform owners, digitalization creates new opportunities for firms in developing countries to sell to consumers and benefit from open software and common standards to create differentiated products that better satisfy local preferences/demand in ways that global players are not able to do. In practice, this may imply that digital trade opportunities may be more intra-regional (intra-Arab) than extra-regional; given the greater commonality of languages, culture and consumer preferences. It is often noted that a stylized fact of the Arab region is the limited extent of intra-regional intra-industry trade in goods and the low share of intra-Arab manufacturing GVCs in total trade. There may be greater potential for intra-regional trade in digital products and intra-regional specialization in specific digital (services) activities, i.e. regional digital platforms-cum-value chains.

The GVC literature finds that digitalization can have significant positive effects on new entry, start-ups, and expansion along the extensive margin. Arab countries are not leaders in ICT infrastructure, but they do better than many and are in time zones that facilitate targeting clients in Europe, Africa, and South Asia. Capital investment requirements for many digital-intensive

services activities are lower than for manufacturing, as new entrants can benefit from the modular nature of digital tools (open source, standardized code, APIs) available worldwide.

There are strong incentives for the products that are supplied through electronic platforms from businesses to consumers (B2C) and between businesses (B2B), whether goods or services, to be produced in GVCs, as this reduces costs by allowing different activities to be sourced from the most competitive suppliers no matter where they are physically located. The scope for firms to connect to and benefit from digital platforms will depend on the availability, cost, and quality of backbone ICT infrastructure and domestic regulation of the operation of infrastructure providers, consumer protection, data privacy...etc. This gives rise to an additional set of variables that affect digital economic activities but illustrates that the GVC concept applies to the digital economy.

Figure 4: Platform layering and data flows in the digital economy



Source: Sturgeon (2019).

For example, cloud-based real-time monitoring, data analytics software tools, and associated information “dashboards” improve supply chain “visibility” and permit knowledge about and rapid (re-)allocation of resources to respond to customer demands, in addition to addressing service quality and delivery concerns. Radio frequency identification sensor technologies provide for enhanced traceability of parts and components as well as final products. The same applies to the use of GPS technology and machine learning in a wide variety of activities ranging from agriculture to construction to transport. Software information and analysis tools also facilitate cross-border (international) operations by helping managers coordinate activities and decide whether and where to outsource; enhancing both resilience and responsiveness to supply and/or demand shocks (Verbeke, 2020; Cordon and Buatois, 2020). These tools and the platforms they run on benefit small firms as well as large multinationals, making it easier for the latter to engage with the former, including through the provision of point-of-sale, payment, financial, and logistics services (Geaneotes and Mignano, 2020). These examples illustrate the point made previously regarding the servicification of manufacturing: the traditional distinction

between (tradable, tangible, manufactured) goods and (nontradable, intangible) services is becoming increasingly blurry.

Digital business models based on the provision and use of open-source software tools facilitate entry (start-ups) and support product innovation (expansion along the extensive margin) by giving entrepreneurs low-cost access to a variety of building blocks and tools that can be sourced “off the shelf.” An implication is that digitalization may enable companies to sell products internationally from a very early stage and reduce the disadvantages faced by small and/or new firms when it comes to export. McCormick and Somaya (2020), for example, find that exporting by young firms is enabled to a greater extent (than established firms) through use of Internet technologies and using internationally mobile talent, therefore helping overcome home-country institutional and infrastructure deficiencies.

2.3. Assessing digitalization trade dynamics: services export performance

Given the linkages between digitalization and servicification and the dearth of comparable cross-country data on digitally enabled trade, a first cut in assessing digital trade performance is to consider the services export performance of Arab economies. The WTO defines four modes of supplying services across borders: (1) pure cross border transactions using ICT networks and the internet, (2) movement of a person or object to a foreign country where services are consumed, (3) commercial presence (FDI), and (4) services that are provided through temporary cross-border movement of suppliers (natural persons). All these modes are relevant to GVCs in the sense that a lead firm that manages GVCs may use all four modes to source and/or provide inputs. If the final product constitutes a service, inputs used in production or delivery of the service concerned may similarly employ one or more of these modes.¹⁹ Relative to statistics on merchandise trade, there is much less data reported on trade in services. For many developing countries, services trade data tend to be limited to the first two of these modes, with little (if any) information available on the origin and destination of disaggregated services categories. Even in high-income countries, collection of data across all four modes of supplying services across borders is not systematic.

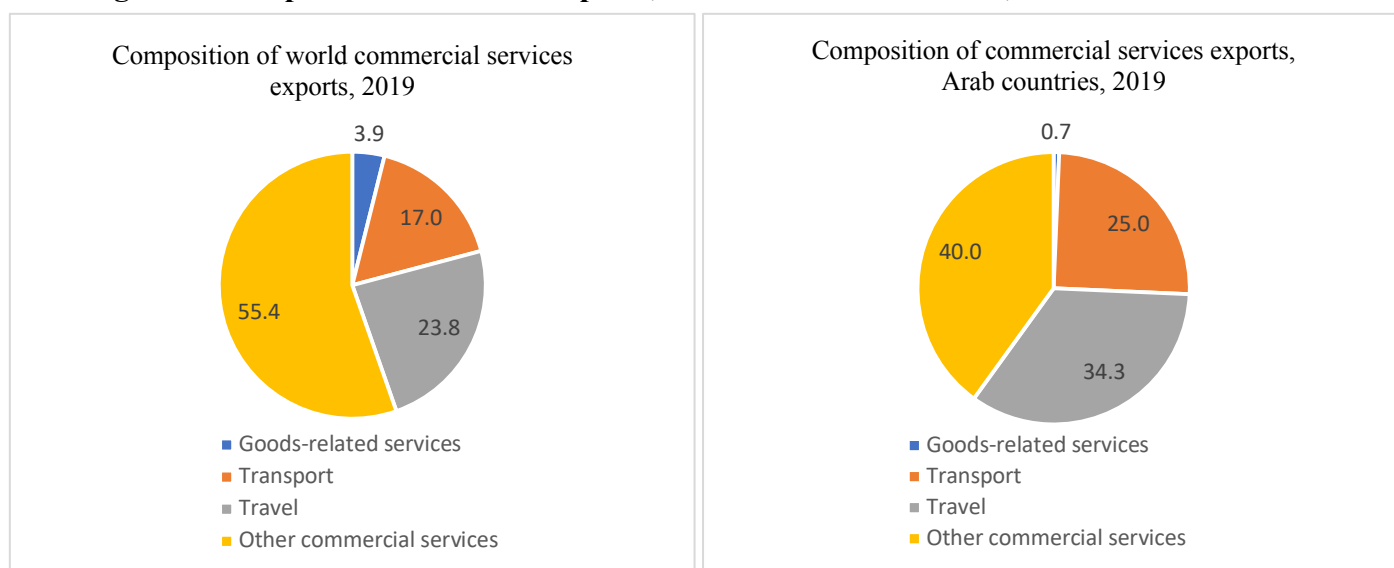
The WTO has compiled data on services trade by mode of supply, using extensive estimation based on the available direct statistical observations. This shows that total world trade in services amounted to some USD 14 trillion in 2017, compared with just over USD 17 trillion of reported merchandise exports for the same year. Sales of services by foreign affiliates (mode 3) represents the lion’s share of global services trade. An implication is that the prospects for growth in trade in services will depend, in part, on the ability to attract FDI in services sectors, which in turn will be a function of domestic policies, institutions, and fundamentals. Although mode 1 has so far been smaller than mode 3 for many countries, technological developments

¹⁹ Note that data on these 4 modes of supply reported in the balance of payments, even if complete, do not capture trade in the services and digital processes that are embodied in tangible products that are traded. Such embodied trade in services is large, accounting for about one-third of the value of global trade in merchandise. For example, see Francois and Hoekman (2010).

that facilitate trade in digital products and cross-border provision of services are likely to increase the share of mode 1 in total trade in the future.

Globally, the largest and most dynamic aggregate category of services trade, as captured by the balance of payments (modes 1, 2, and 4), is a residual category called “other commercial services,” meaning non-transport and non-travel (tourism) services. This category captures the upstream (digital) services used in GVCs, ICT services, payments for intellectual property (royalties), and contract manufacturing. It is a category of trade where Arab countries stand out in the sense that this represents a smaller share of total services exports than for the world as a whole: 40 percent of all services exports versus 55 percent for the world (including Arab economies) (Figure 5). In 2019, transport and travel accounted for almost 60 percent of total Arab services exports.

Figure 5: Composition of services exports, Arab countries vs. world, 2019



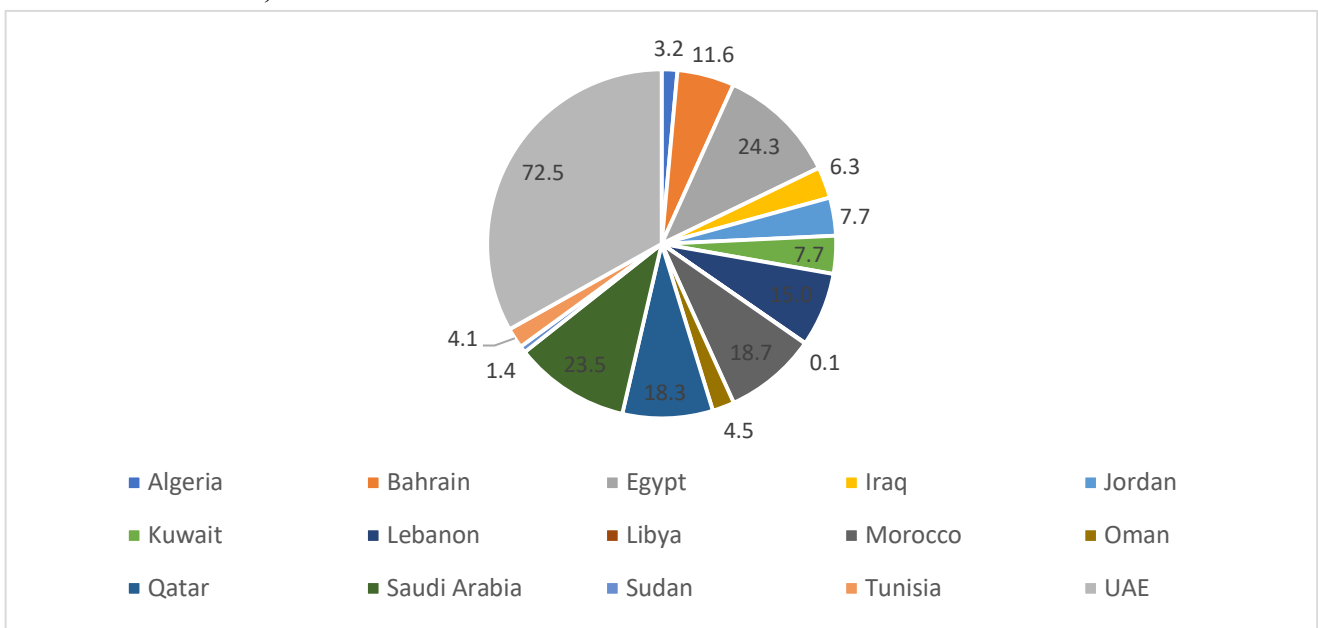
Source: WTO.

In 2019, the total commercial exports of Arab countries equaled USD 228.8 billion, or 3.8 percent of total world exports. This compares to a six percent share of world merchandise exports (including energy exports). The UAE is the only Arab country to rank among the top 40 exporters of services (#22, with USD 72.5 billion in services exports), accounting for 31.7 percent of total Arab services exports (Figure 6). Other Arab countries with significant services exports are Egypt (10.6 percent of all Arab exports), Saudi Arabia (10.3 percent), Morocco (8.2 percent), and Qatar (8 percent). Much of this reflects exports of travel (tourism) and transport services (passenger airline revenues and port logistics such as Jebel Ali and the Suez Canal).

Available data suggest that services trade has been a source of dynamism. Over the 2006-2019 period, nine Arab countries report growth rates of services exports that are above that for the world as a whole and for neighboring Turkey (Figure 7). Average annual growth rates are ten percent or higher for Bahrain, Iraq, Oman, Qatar, Sudan, and the UAE. Reflecting differences

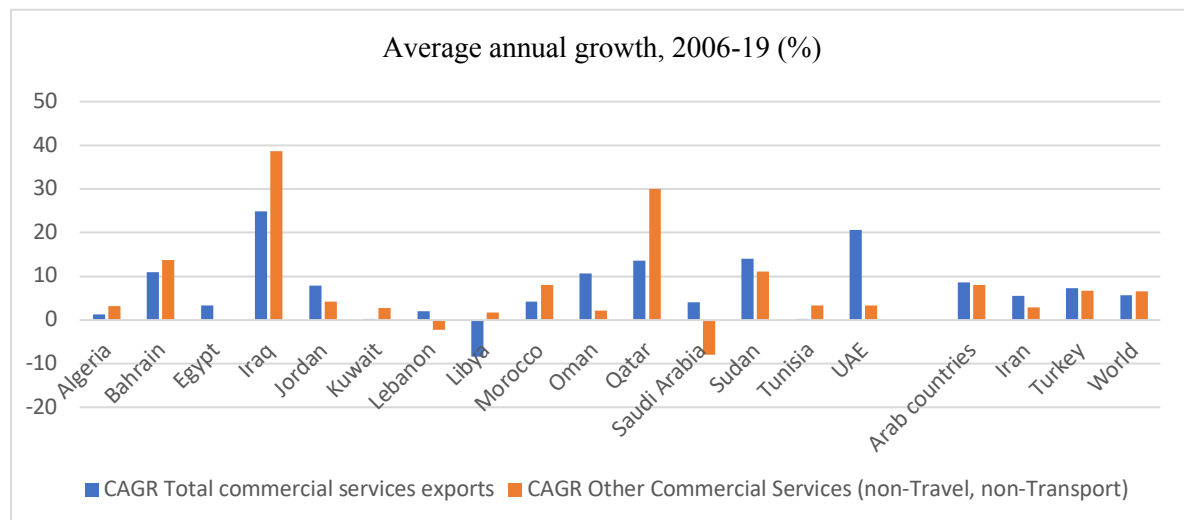
in comparative advantage and development strategies, we also observe great heterogeneity in the composition (source) of high rates of services export growth. For three of these nine countries, Bahrain, Iraq, and Qatar, the growth rate of other commercial services, excluding travel and transport, is above the average observed for total commercial services. Growth in non-transport and non-travel exports is also higher in Morocco. For other dynamic service exporters, notably the UAE, much of the growth in commercial services exports is driven by travel and transport services. Egypt and Saudi Arabia stand out as large countries with low rates of services export growth and, in the case of the latter, negative growth in other commercial services.

Figure 6: Commercial service exports, USD billion and share in total exports, selected Arab countries, 2019



Source: WTO.

Figure 7: Growth in Arab services exports to the world, 2006-2019

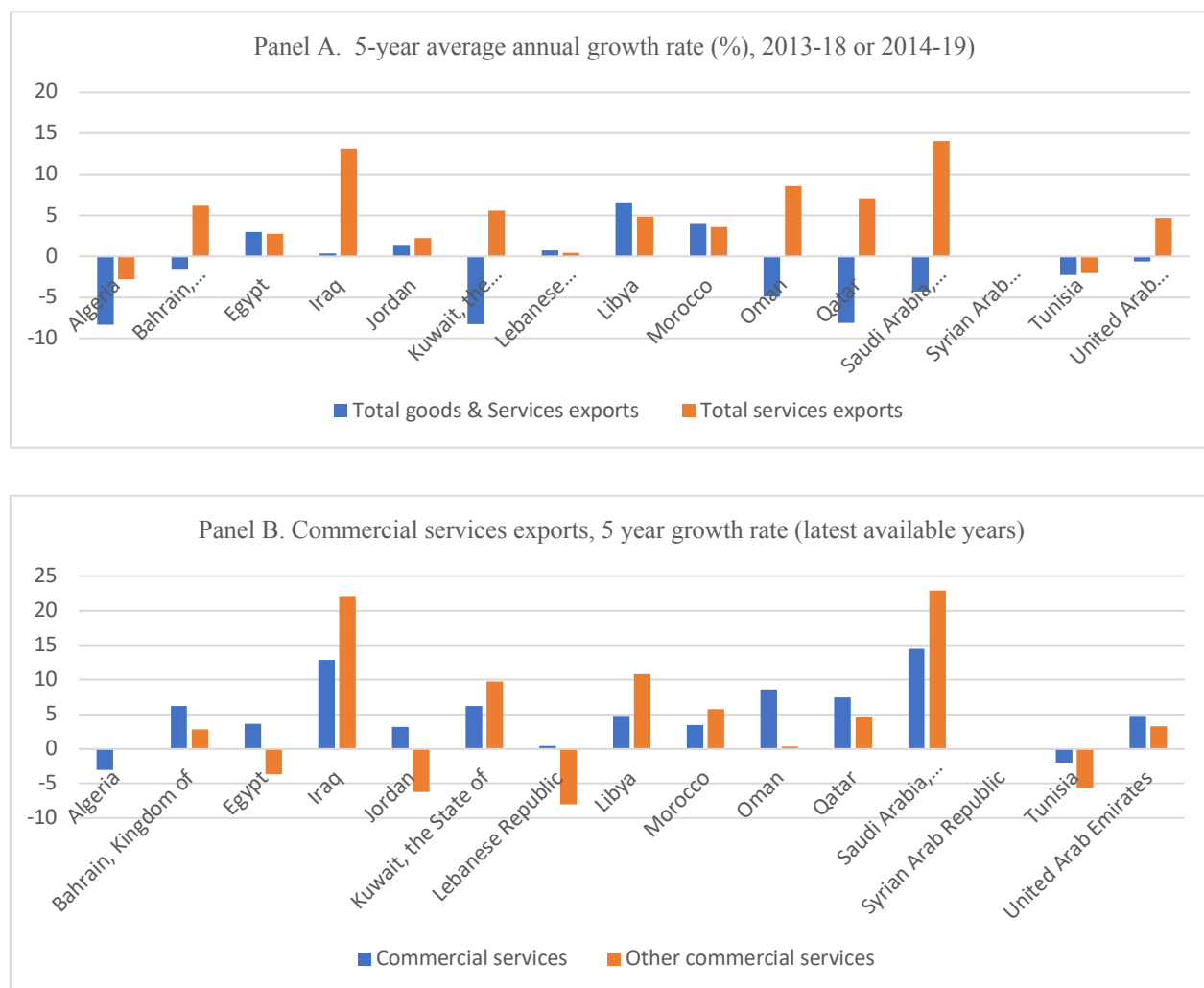


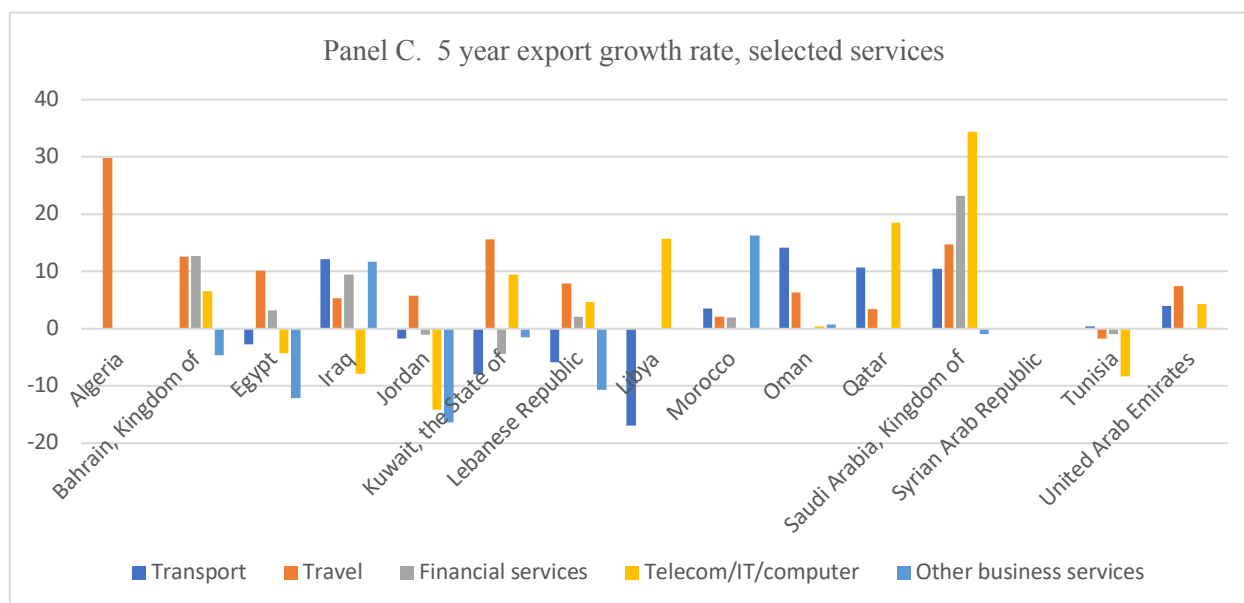
Note: 2019 or latest available year.

Source: WTO, https://www.wto.org/english/res_e/statistics_e/trade_datasets_e.htm#TISMOS

These data reveal that services have been a source of trade dynamism for some Arab countries but also that there is substantial heterogeneity across Arab countries in both the degree of servicification and the type of services in which specialization has occurred. Focusing on the most recent five-year period in which digitalization is likely to have been most salient, we can observe that services have been a source of export dynamism for both oil exporters and other Arab countries. In Algeria, Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the UAE, negative growth in merchandise exports reflecting declining demand and world price of oil was accompanied by positive services export growth performance, on the order of five percent average annual growth or higher in the cases of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the UAE (Figure 8, Panel A). Non-transport, non-travel services exports saw particularly high growth in Iraq and Saudi Arabia at over 20 percent (Figure 8, Panel B). Conversely, Egypt, Jordan, Lebanon, and Tunisia registered negative average annual growth rates over the 2014-2019 period. Travel (tourism) revenue growth was positive in Egypt, Jordan, and Lebanon during this period (and other countries, but not Tunisia) (Figure 8, Panel C).

Figure 8: Five-year growth, last available years





Source: WTO.

Figure 8, Panel C shows that some Arab countries have experienced very rapid growth in some services associated with digitalization. The case of Saudi Arabia stands out, with financial services and telecom/information technology and computer services registering growth rates above 20 percent. Other countries report growth in exports of the latter category, including Bahrain, Kuwait, Libya, and Qatar.²⁰ This contrasts with negative export performance for these digital-intensive services activities in Egypt, Iraq, Jordan, and Tunisia.

It should be emphasized that these data are both noisy and aggregates, so that dynamism in a specific sub-sector may not be apparent from the reported data. For example, trade data for disaggregated services activities that make up the aggregate category “telecom/IT/computer” services is reported for only five Arab countries in the balance of payments information compiled by the WTO. Two countries that disaggregate this category illustrate this point. Thus, while Lebanon reports aggregate growth of some five percent for the overall ICT category, this includes 20 percent growth for computer services exports and 30 percent growth in information services. A similar conclusion occurs for Tunisia, which reports negative growth in overall ICT exports but where computer services exports – reported separately – grew 15 percent per year in the last five years.²¹

While it is important to recognize that conclusions regarding digital trade performance must be conditioned on the weak quality of the available data, the contrast between the success of some Arab countries and the absence of services export growth in other economies suggests there is both significant potential and opportunities to leverage digitalization. Whether that potential

²⁰ This is consistent with a trend observed for global trade in services, which is that computer/ICT-enabled services have been growing more rapidly than other services (WTO, 2019).

²¹ The problem with this aggregation is that international telecommunication services prices and thus revenues have been falling rapidly and historically accounted for most of the export revenue generated in this category.

will be realized will significantly depend on public policies. One question here is whether the institutional factors explaining relatively weak manufacturing GVC performance in Arab countries (that in principle are well positioned to participate in production for the EU and regional markets) may also constrain the prospects for growth in ICT-enabled digital GVCs. Although some of the trade logistics and border-clearance red tape costs that affect manufacturing GVCs will not apply to the same degree to digital GVCs, if at all, digital cross-border transactions are conditioned on domestic regulation, access to and cost of digital infrastructure, and supply and demand factors.

3. The digital trade incentive environment in Arab countries

As is the case for trade performance, whether (digital) services or GVC-based trade in manufactures, there is significant heterogeneity across Arab countries when it comes to soft and hard digital infrastructure, regulation, and services trade policies. These policy variables affect national digital trade performance. The ability of firms and countries to benefit from international digitalization opportunities depends on the prevailing ICT infrastructure and access/pricing environment,²² trade policies, and the capabilities of local entrepreneurs and companies to use digital technologies. Empirical analysis of the relative contribution of these types of variables as determinants of observed export performance for categories of other commercial services is needed to assess countries such as Tunisia and Morocco, which underperform (see above) in leveraging the nearby EU market for services outsourcing. To what extent is this a reflection of hard infrastructure? Trade policy? Regulation? The quality of economic governance/institutions? Assessment of the relative importance of such factors is impeded by data constraints, both for the categories of digital trade that are salient here and for indicators of policy.

Ma, Guo, and Zhang (2019) have compiled indicators of digital trade development for 111 countries, using a set of 13 indicators of hard and soft ICT and digital payment infrastructure, legal framework, logistics performance, use of e-commerce, and indicators of market potential. Specifically, they use mobile telephone and fixed broadband subscribers per 100 inhabitants, credit card ownership (percentage), the share of credit card owners making at least one digital payment in the past year, the quality of logistics services and trade/transport infrastructure, the use of ICT for B2B and B2C transactions, the existence of a legal framework for consumer protection for online purchases and data/privacy protection, and the value of GDP, total trade, and final consumption. Factor variance contribution rates are used as weights in calculation of overall scores for each of these factors.

Analysis of these indicators reveals two common factors: one reflecting hard and soft infrastructure variables (logistics, broadband/mobile penetration, legal framework) and the other reflecting e-commerce use and market potential. Ma et al. find that the UAE scores the highest among Arab countries in terms of digital trade development, ranking 24th overall behind most OECD member countries and China (Table 1). Apart from the UAE and Bahrain, Arab

²² World Bank (2018a,b) and UNESCWA (2019) provide indicators for Arab country digital infrastructure.

countries are average or below average performers. North African countries that are proximate to the EU such as Algeria, Egypt, Lebanon, and Tunisia suggest that digital infrastructure, while better than in many developing countries, may be a factor constraining digital trade. Several Arab nations do better on digital market potential than on digital infrastructure; reflecting the uptake of e-commerce to date. Saudi Arabia, Algeria, Egypt, Lebanon, and Jordan all rank substantially higher based on digital trade (market) potential than they do on the digital infrastructure factor, suggesting where policy efforts should focus and that such efforts may pay off in terms of expansion of digital trade.

Table 1: Digital trade potential scores and ranking, selected Arab countries, 2016-2017 (N=111)

	Digital infrastructure		Digital trade potential		Weighted overall rank
	Score	Rank	Score	Rank	
UAE	1.014	22	0.045	26	24
Bahrain	0.816	31	-0.592	108	33
Kuwait	0.182	44	-0.406	92	47
Saudi Arabia	-0.176	56	0.192	16	50
Egypt	-0.638	82	0.015	28	70
Jordan	-0.621	77	-0.115	42	74
Lebanon	-0.75	85	-0.113	40	84
Tunisia	-0.623	80	-0.396	89	87
Algeria	-1.158	101	0.035	27	96
<i>Memo items:</i>					
Switzerland	1.894	1	-0.022	30	7
USA	-0.22	58	7.96	1	1
China	-0.788	87	5.054	2	5

Note: Scores derived from a factor analysis of indicators sourced from ITU, World Bank, WEF and UNCTAD: mobile telephone and fixed broadband subscribers per 100 inhabitants, credit card ownership (%), % of credit card owners making at least one digital payment in the past year, quality of logistics services and trade/transport infrastructure (5 point ordinal scale), use of ICT for B2B and B2C transactions (7 point scale), legal framework for consumer protection for online purchases and data protection (yes, no, draft), and GDP, total trade, and final consumption (USD bn).

Source: Ma, Guo and Zhang (2019).

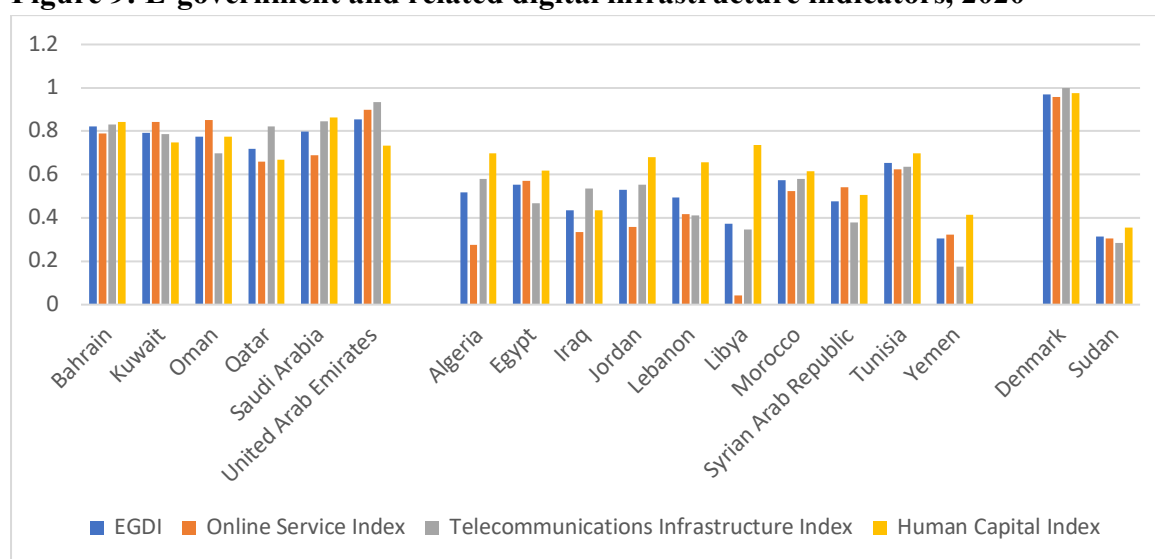
The E-government Development Index (EGDI) compiled by the UN from an e-Government survey gives a similar picture. Although there are significant differences across the GCC, on average, GCC member countries do much better than other Arab countries; all are all ranked in the top 50 countries in the world (Table 2). The GCC countries score relatively higher on all components of e-infrastructure, with indicators that are similar in magnitude to that for human capital (Figure 9). For non-GCC Arab countries, human capital levels are substantially higher than e-infrastructure and e-government indices, revealing a gap between potential capabilities and digital capacity-cum-performance. Among the non-GCC countries, this gap is smallest for Tunisia and Morocco. These data suggest that non-GCC Arab countries, especially Egypt and Mashreq countries, can potentially benefit from improving their digital infrastructure.

Table 2: EGDI global ranking, 2020

Country	Rank
United Arab Emirates	21
Bahrain	38
Saudi Arabia	43
Kuwait	46
Oman	50
Qatar	66
Tunisia	91
Morocco	106
Egypt	111
Jordan	117
Algeria	120
Lebanon	127
Syrian Arab Republic	131
Iraq	143
Libya	162
Sudan	170
Yemen	173

Source: UN (2020).

Figure 9: E-government and related digital infrastructure indicators, 2020

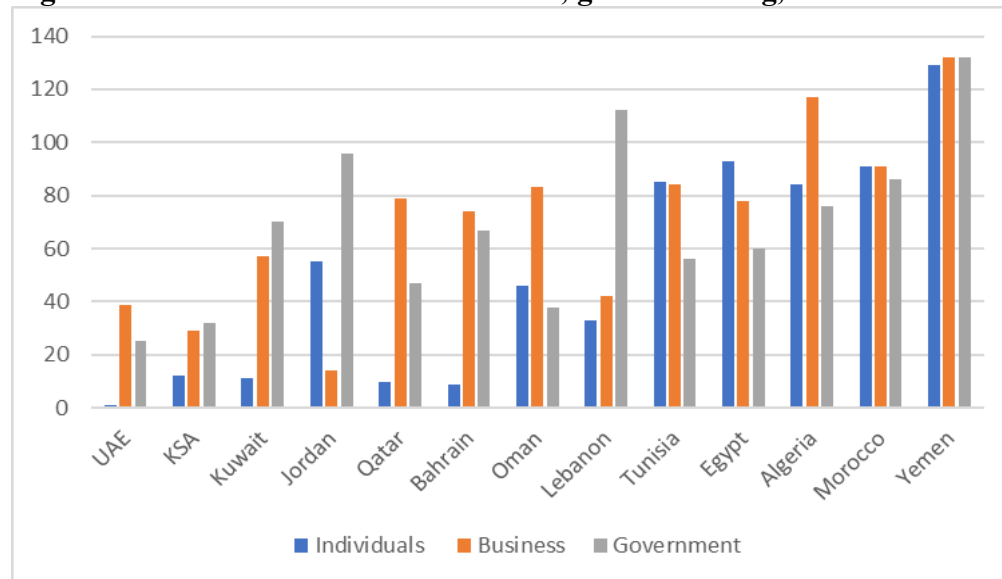


Source: UN (2020).

One feature of the digital trade environment/potential of Arab countries is that indicators of digital “readiness” differ significantly for the business community, governments, and individuals. Businesses in many Arab countries are less prepared to use digital technologies than either governments or individuals. Figure 10 shows that GCC countries rank very highly in terms of individuals’ use (readiness to use) of digital technologies, as measured by access to the web, broadband, use of social media... etc. This is less the case for businesses. The rankings in Figure 10 are based on composite indicators. One of the business digital readiness indicators that is particularly salient is plotted in Figure 11. It is the response to a survey question “to

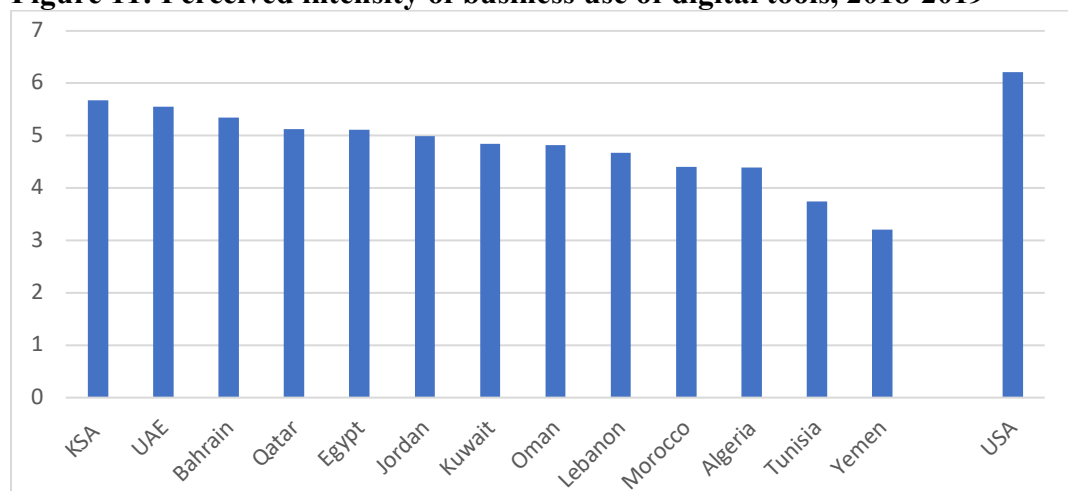
what extent do businesses make good use of the latest digital tools to sell their goods and services (e-commerce, digital payment, mobile web stores, social media stores)? [1 = not at all; 7 = to a great extent]. Morocco, Algeria, and Tunisia score worst among Arab countries.

Figure 10: Network readiness indicators, global ranking, 2018-2019



Note: Higher numbers are worse, i.e. indicate a lower global ranking.
Source: Dutta and Lanvin (2020).

Figure 11: Perceived intensity of business use of digital tools, 2018-2019



Note: Index ranging from 1 to 7. Higher numbers indicate greater use of digital tools.
Source: Dutta and Lanvin (2020).

These are just some pertinent examples of indicators that are relevant to assessing the state of play on the digital infrastructure and policy environment prevailing in Arab countries. They make clear that there is much heterogeneity, but that, on average, many Arab countries are relatively well placed from a “digital perspective.” In what follows, the focus is on external policies affecting scope for international trade in digital products and the need (scope) for international cooperation to bolster the enabling environment for digital trade and value chain participation.

3.1 Trade-related regulatory policies

Infrastructure, hard and soft, is critical for the ability to use digital technologies and platforms to create and sell new products and services, including through GVCs. Less well understood is the importance of regulatory policies. Data-related regulatory policies will affect a broad cross-section of firms across many sectors as the use and utility of digital technologies cuts across industries. Policies towards the cross-border flow of data, services, digital products, and providers (skilled workers or entrepreneurs) will impact incentives to invest in new activities and the ability to use the different modes of supplying services, especially policies regulating the usage and movement of electronic data on the Internet across borders. In contrast to goods where border policies such as tariffs and nontariff barriers influence trade incentives, in the digital transformation context, regulatory policy frameworks may matter as much as the prevalence of explicit discrimination against foreign suppliers (Fiorini and Hoekman, 2018, 2020; Ferracane et al. 2020; van der Marel, 2020).

Relative to other regions, less is known about policies applied by Arab states to international digital transactions, impeding analysis of their incentive effects and impact on investment in and use of digital technologies. Services trade policy targets inward FDI and the cross-border movement of service providers. Cross-border flows of services and data using ICT network infrastructure have tended to be relatively unrestricted, with transmissions untaxed.²³ In recent years, many countries around the world have begun to increase restrictions on digital cross-border flows. This has taken different forms, including screening of inward FDI (Evenett, 2021), data localization requirements, and other types of local content policies (ECIPE, 2018). Such restrictive policies have targeted data flows more than cross-border trade in specific service products. There is a general trend in increasing levels of data protection, barriers to cross-border trade, and generally-applicable regulation affecting the digital economy (Figure 12).

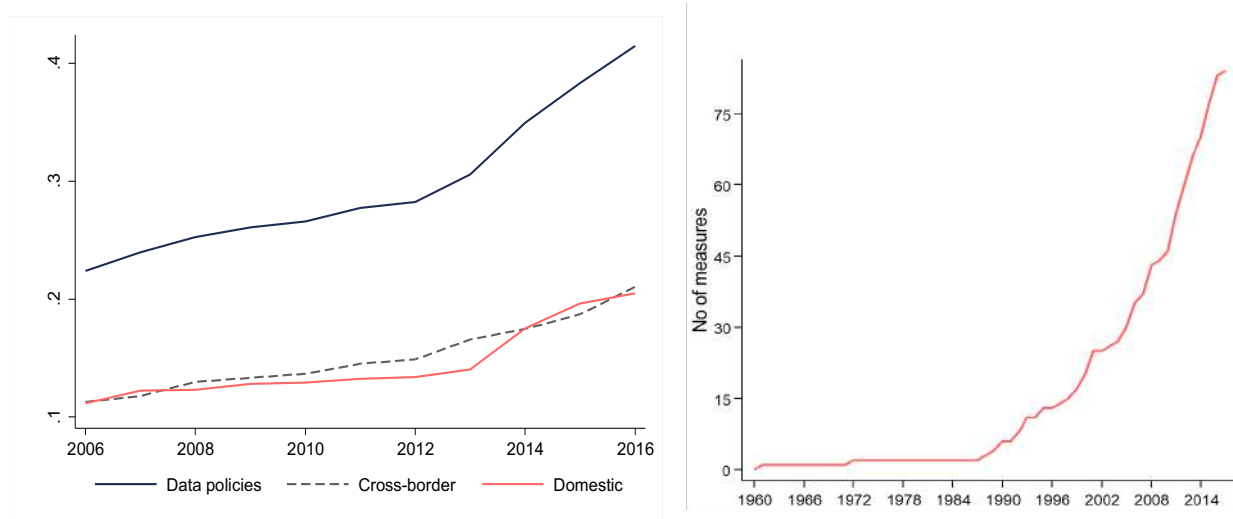
In considering the design of regulatory policies affecting international trade in services and data flows, there is both a national and an external dimension. Restrictive national regulation may have negative consequences for trade and the ability of firms to connect and use digital platforms to provide services to both local customers and foreign clients. Equally important from a digital transformation perspective is the impact of foreign regulatory regimes that impede or simply exclude domestic firms from engaging in cross-border digital transactions. Data and digital regulation, more broadly, is particularly important for firms that rely on data as a core part of their business, for example, platform companies and providers of “software as a service” (Ferracane, Kren and van der Marel, 2020).

Current regulatory regimes for data flows are highly fragmented, ranging from essentially laissez-faire approaches in some countries to more tightly regulated environments in others, whether motivated by protection of privacy and citizen rights, perceived security imperatives, or concerns about market power and abuse of dominant positions by lead firms. There are

²³ WTO members have agreed not to impose taxes on cross-border electronic transmissions (i.e. data flows).

broadly three types of regulation of data flows in the world today: jurisdictions with open data flow regimes; those where flows are conditional on attaining (satisfying) national standards; and regimes where data flows are subject to government control.²⁴

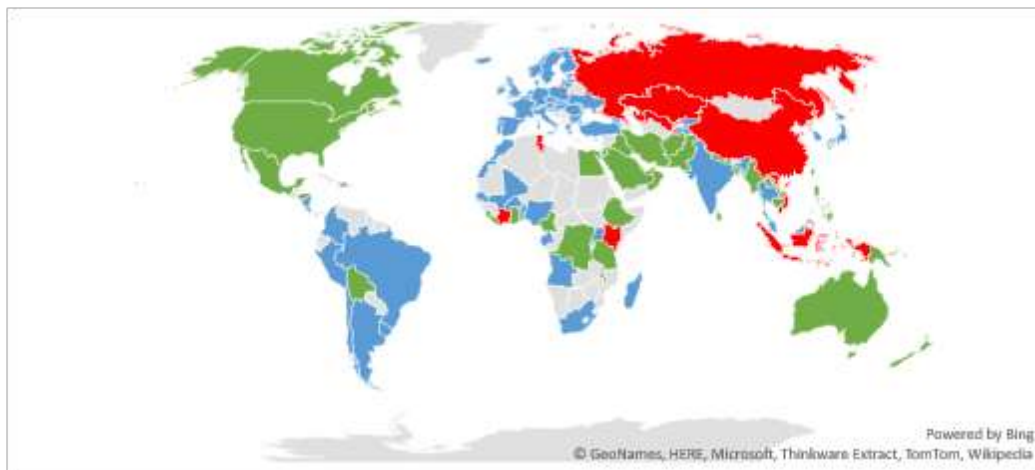
Figure 12: Global trend in number and restrictiveness of data flow policies



Source: ECIPE (2018).

As can be seen from Figure 13, Arab countries have all three types of regimes, with Tunisia being an example with strong controls; the GCC having relatively open data flow regimes; and Morocco being an example of a conditional flow regime.²⁵

Figure 13: Cross-border data transfer policies: open (green); regulated (blue); control (red)



Source: Ferracane and van der Marel (2020).

²⁴ The three major trade powers all have different regimes; the US is open; China is closed, and the EU maintains a conditional flow regime.

²⁵ Note that the characterization of Egypt as having an open data regime may reflect the absence of specific legislation. See World Bank (2018a).

The consequences of regulatory heterogeneity for trade are still poorly understood.²⁶ There is robust evidence of the negative effects created by outright barriers to trade and investment; i.e. the discriminatory policies discussed in the next subsection. Less well understood are the trade effects of different types of domestic regulation. Extant efforts to compile information on national digital trade policy stances – such as ECIPE (2018), which cover policies relating to the storage, use and cross-border transfer of data; conduct regulation for online transactions; inward FDI and data-related aspects of intellectual property rights, among other policy areas – do not cover Arab countries.

More targeted efforts that focus on specific types of cross-border data policies do cover Arab countries. An example is Ferracane and van der Marel (2020), who use data on two components of data policies: regulation of cross-border data transfers and regulation on domestic processing of data for 116 countries. They find that two countries sharing the open data model for cross-border data transfers is positively associated with bilateral trade in digital services. Similarly, sharing the regulatory safeguards' model for domestic data processing is also positively correlated with trade in digital services. The opposite is found for country-pairs with government control of data flows.

3.2 Services trade policy in Arab economies

There is substantial cross-country evidence that restrictive policies towards trade in services and digital products have adverse effects on exports and the productivity performance of firms. Beverelli et al. (2017) and Hoekman and Shepherd (2017) show that services trade policies are associated with services trade volumes and sectoral productivity performance, with one channel being the role that services play as inputs into production. Van der Marel et al. (2019) find that productivity performance in services is negatively associated with more restrictive regulation of digital trade, in part because the use of digital technologies is a channel for better services quality and productivity performance. Empirical research suggests that a combination of barriers to FDI, digital trade barriers, and restrictions on the cross-border mobility of foreign services providers has significant negative effects on performance. ICT-intensive exports depend on being open to FDI and having access to export markets through mode 1 (online) as well as mode 4 (movement of service suppliers).²⁷

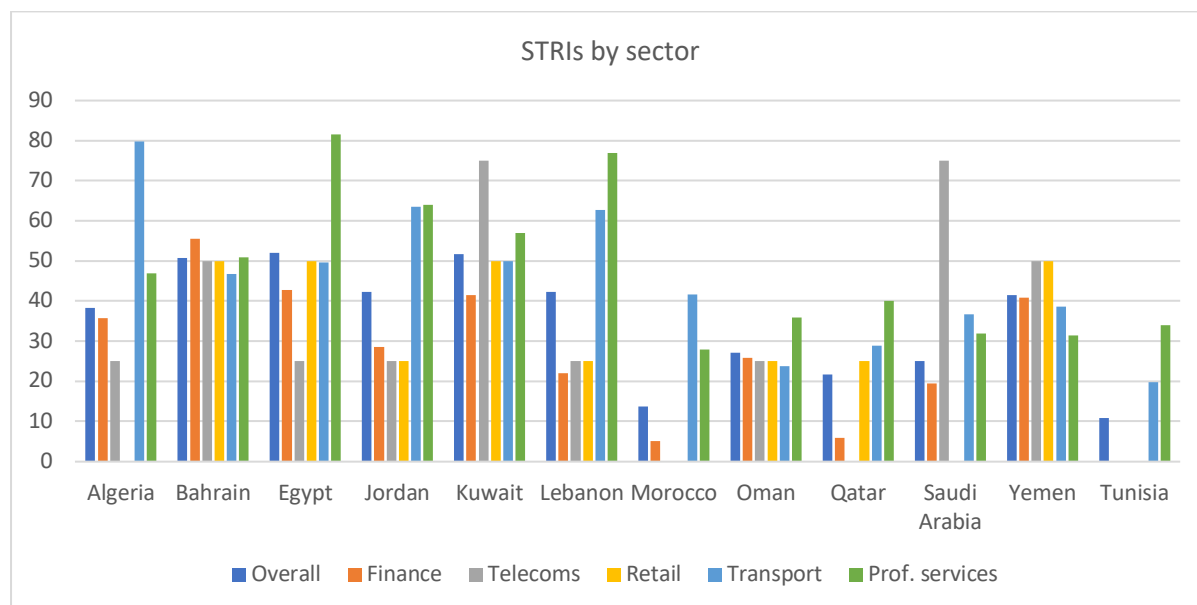
The services trade policy of Arab countries is relatively restrictive compared to the global average. Unfortunately, up-to-date comparable information is not reported by international organizations; the latest data (collected by the World Bank) spanning many Arab countries is over a decade old. The most recent joint World Bank-WTO effort to update this information to

²⁶ See Carriere-Swallow and Haksar (2019) for a discussion of such issues using a microeconomic theory lens.

²⁷ Balchin et al. (2016) and WTO (2019) survey the extant evidence and conclude that trade policy has been an important driver of developing country successes in service sector exports. Haven and van der Marel (2018) is an interesting recent analysis of Turkish manufacturing firms. They report that manufacturing firms with in-house service operations (for example, transport and distribution affiliates) are significantly less productive than firms that do not. They show that regulatory restrictions on inward FDI and services trade barriers affecting post-manufacturing services activities create incentives for firms to provide more services in-house that are less productive than specialized services firms would be in a more competitive market structure.

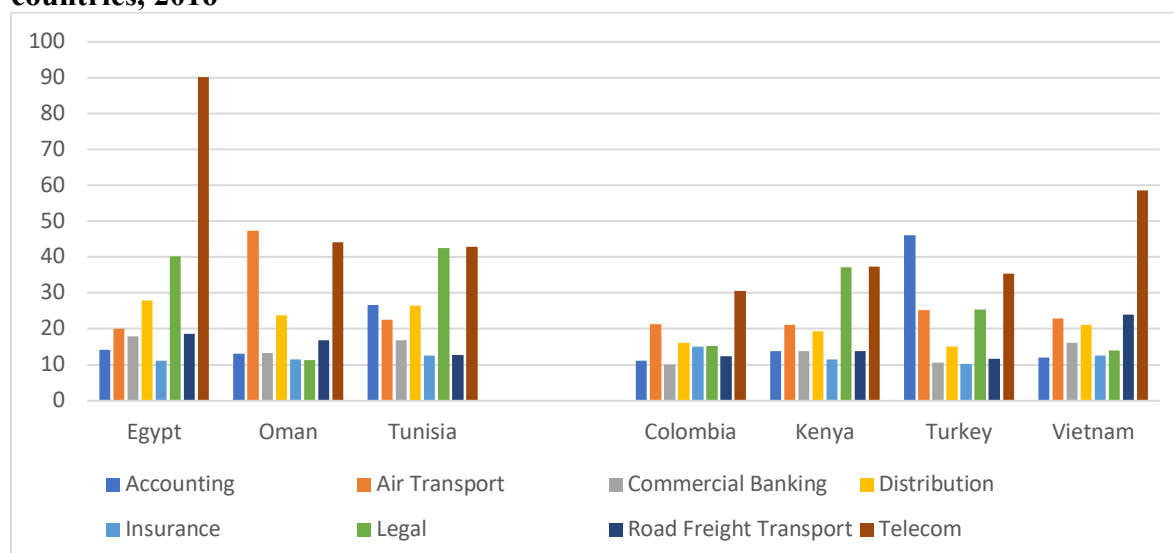
2016 did not include the majority of Arab economies. Figure 14 reports the state of play as of the late 2000s, while Figure 15 reports estimates of the ad valorem tariff equivalents of services policies for three countries for which the requisite data is available. In both cases, the measures considered encompass barriers to cross-border flows of services through ICT networks and measures that constrain foreign investment.

Figure 14: Services trade restrictiveness indicators (STRI), 2008



Source: Hoekman (2016), using World Bank 2008 STRI database.

Figure 15: Ad valorem equivalents (AVEs) of services trade policies, selected Arab countries, 2016



Source: Hoekman and Shepherd, 2020.

The estimates reported in Figure 14 suggest that, for many sectors, the three Arab countries are somewhat more restrictive than the comparators included in the figure, with all countries having a few outliers. Telecommunications services tend to be more protected in all countries, notably in Egypt. The annex reports results by sector and world regions for both the services

policy index used to calculate AVEs and estimated AVEs. These indicate that, on average, Arab countries have more restrictive services trade policies than most other regions.

The lack of detailed panel data for applied services trade policies makes it impossible to assess trends and developments in national policies, and thus measure to what extent the weak export performance is due to policies as opposed to infrastructure. One source of information on trade policy dynamics is the Global Trade Alert (GTA) initiative, which has been tracking changes in trade policies following the global financial crisis of 2009. In the post 2008 period, Arab countries do not appear to have been very active in changing trade policies; as a group they accounted for only 3.3 percent of all new measures to restrict trade observed in the world and only 1.9 percent of liberalizing measures implemented. Saudi Arabia and Egypt are the most active Arab countries when it comes to changing trade policies and have done so mostly for merchandise trade, not services (Table 3): jointly imposing two-thirds of all new discriminatory trade measures. The two countries account for an even higher share of new services trade measures (over 70 percent of all measures taken by Arab countries).

GTA data for Arab countries suggest there has been relatively little change in services trade policies in the last decade. Most of the “action” is for trade in merchandise. Services measures account for only five percent of the 709 harmful (discriminatory) trade measures imposed since 2009 (Table 3). However, most of this constituted trade restrictions; the GTA reports virtually no services liberalization by Arab countries in this period. It also reports a total of 187 trade liberalizing measures by Arab countries during 2009-2020, of which only one pertained to services trade (by Saudi Arabia).

Table 3: Trade policy activism: number of measures and share, Arab countries, 2009-2020

	Total # of harmful measures	Share of all measures taken by Arab nations	Services share of national total	Share of all harmful services measures
Algeria	28	3.9	3.7	2.9
Bahrain	14	2.0	0.0	0.0
Egypt	152	21.4	7.0	28.6
Iraq	4	0.6	0.0	0.0
Jordan	28	3.9	7.7	5.7
Kuwait	14	2.0	7.7	2.9
Lebanon	2	0.3	0.0	0.0
Libya	1	0.1	0.0	0.0
Morocco	48	6.8	2.1	2.9
Qatar	14	2.0	7.7	2.9
S. Arabia	341	48.1	4.6	42.9
Syria	3	0.4	0.0	0.0
Tunisia	11	1.6	10.0	2.9
UAE	31	4.4	10.7	8.6
Total	709	100.0	5.2	100

Source: Global Trade Alert database.

4. International cooperation to exploit digital trade opportunities

From a trade and GVC participation perspective, both national policies and prevailing regulatory regimes in major potential export markets matter. International cooperation is also a potential tool to improve domestic economic governance and put in place trade-supportive, digital-specific regulation. International cooperation can help – and often will be required – to allow digitally-enabled trade to occur and firms to participate in and use digital platforms and GVCs.

Changes to the organization of production associated with the use and expansion of digital technologies call for adjustment in domestic policies and in international cooperation. International coordination of regulatory/digital policies can help firms capture network externalities and scale economies. To export, firms will need to meet foreign data protection norms. To import, the same is true; without a data protection and regulatory regime that satisfies home countries, firms may not be able to access and process data, impeding their ability to compete and provide value-added services to clients. Trade agreements are beginning to address these policy areas, but MENA is lagging in this regard, both with respect to intra-Arab arrangements, trade agreements with non-Arab nations, and in the WTO. The same applies to bilateral and plurilateral data adequacy and “digital economy” agreements that are/have been put in place in other regions, notably East Asia and the Pacific.

Cooperation in a global economy where digital technologies generate a growing share of total aggregate income becomes particularly important to reduce the transactions costs of international regulatory heterogeneity for a given sector or product, and to identify how best to regulate economic activities. The trade costs of regulatory heterogeneity may be reduced through coordination and learning; leading to the adoption of common norms and gradual adoption of what has been determined to constitute good regulatory practices. Trade agreements are beginning to include specific obligations on cross-border data flows, and some jurisdictions are establishing “equivalence regimes” that determine whether foreign providers will be treated in the same way as domestic firms when it comes to access and processing of data.

Intra-Arab and regional agreements

A variety of initiatives have been pursued in the past 50+ years to promote Arab cooperation, including the gradual integration of goods markets under auspices of the League of Arab States (the 1997 Pan-Arab Free Trade Agreement (PAFTA)), the 2003 Agadir Agreement between Egypt, Morocco, Tunisia, and Jordan, and the GCC spanning Saudi Arabia, Kuwait, the UAE, Qatar, Bahrain, and Oman. The GCC is the deepest integration arrangement among Arab countries. PAFTA is a shallow integration agreement that covers trade in goods that includes most Arab countries. Most Arab countries have bilateral trade agreements with the EU and EFTA countries and Turkey (which has a customs union with the EU). Many also have an agreement with the US.

In principle, PAFTA is to extend to cover services trade and investment policies as well as nontariff barriers to intra-PAFTA exchange. Talks under the auspices of the League of Arab States to this effect were initiated in 2003; culminating in an agreement in 2016 among nine PAFTA signatories²⁸ to liberalize regional trade in services. This agreement has yet to be ratified. It does not go significantly beyond what the participating countries had committed to as members of the WTO (Ghoneim, 2017).²⁹

Little progress has been achieved in these areas. The same applies to agreements that do mention services and competition policies, such as those with the EU, for example, which are mostly of a best endeavor nature and have few – if any – binding (enforceable) commitments. Excluding the GCC, Arab countries account for only seven of 250+ deep trade agreements around the globe that cover services; only four cover investment policy (Mattoo et al. 2020). Intra-regional capital and labor flows among Arab states are relatively highly integrated, but the Arab countries lag behind comparators in the use of trade agreements to encompass measures regulating digital trade.³⁰

Trade agreements between the EU and Tunisia (1998), Morocco (2000), Algeria (2002), Jordan (2002), and Egypt (2004) were part of the Barcelona Process and the Euro-Mediterranean Partnership that later became part of the European Neighbourhood Policy. Following the Arab Spring, the EU proposed a “more for more” policy, linking trade, aid, and democratic reforms and started talks on a Deep and Comprehensive Free Trade Agreement (DCFTA) with Tunisia, Morocco, and Egypt. These DCFTAs aim to improve partner country access to the EU market by encompassing a range of beyond-the-border regulatory policy areas. Talks on DCFTAs, initially meant to exemplify the “more for more” EU approach, have stalled, partly due to resistance from the Arab countries concerned; reflecting worries that this will undermine local development. This does not change the fact that, looking forward, much of the trade policymaking challenges facing Arab countries center on non-tariff policies, and that this increasingly involves regulatory standards that affect the digitization of economic activities and associated trade dynamics.

Facilitating trade in services and associated data flows and cross-border movement of services providers (natural persons) requires a focus on adopting international good practice standards, pursuing regulatory equivalence initiatives, and putting in place appropriate certification or conformity assessment systems. What was missing in the early 2000s was an understanding of the importance of addressing this regulatory agenda and focusing on the objectives, concerns, and priorities as defined by Arab polities; i.e. not taking the view that EU norms, standards and approaches are *ipso facto* the model to be adopted.

²⁸ Egypt, Lebanon, Morocco, Oman, Qatar, Saudi Arabia, Sudan, United Arab Emirates and Yemen.

²⁹ As noted by Ghoneim (2017) it is notable that Bahrain, which has a trade agreement with the United States that includes services, did not join the group, nor did Jordan or Tunisia.

³⁰ Burri and Polanco (2020) discuss the coverage of digital trade and e-commerce in recent trade agreements.

Multilateral and plurilateral cooperation

Cooperation in the regulation of digital activities need not take the form of a trade agreement. International regulatory cooperation can take the form of international standardization, coordination of the activities of national regulators, or focus on establishing the equivalence of national regulatory systems. At the December 2017 Ministerial Conference, groups of WTO members abandoned the long-standing consensus working practice and launched four “joint statement initiatives” spanning e-commerce, domestic regulation of services, investment facilitation, and measures to enhance the ability of micro and small and medium enterprises (MSMEs) to utilize trade opportunities.³¹ This shift to plurilateral engagement offers an alternative to embedding regulatory cooperation in trade agreements. Instead, they offer a mechanism for countries to cooperate on an issue-specific basis without having to liberalize substantially all trade.

The WTO e-commerce talks involve 80+ WTO members. Most are middle- and high-income nations. Five of the six GCC countries participate (Bahrain, Kuwait, Qatar, Saudi Arabia, and the UAE), but no other Arab nations are engaged in the deliberations. The focus of talks is on a mix of trade restrictive policies and digital trade facilitation (Ismail, 2020). The former includes regulation of cross-border data flows and data localization requirements, the latter includes issues like electronic signatures, e-invoicing, facilitating electronic payment for cross-border transactions, and cooperation on consumer protection (for example, combatting fraud). Services domestic regulation talks involve 63 WTO members and center on matters associated with the authorization and certification of foreign services providers (licensing, qualification, and technical standards), not on substance of regulations. The aim is to reduce the trade-impeding effects of domestic regulation by enhancing the transparency of policies, establishing good practice timeframes for processing of applications, acceptance of electronic applications by service providers, ensuring national authorizing bodies are independent and impartial, and setting mechanisms for foreign providers to request domestic review of decisions. Saudi Arabia is the only Arab country to participate in these talks.

The informal working group on MSMEs includes 90 WTO members,³² and aims to identify measures that governments can take to support the internationalization of small firms. Only Bahrain and Qatar supported the launch of such talks in 2017. The working group finalized a package of six recommendations and declarations to facilitate the participation of smaller businesses in international trade towards the end of 2020. Talks on investment facilitation have grown to encompass more than 100 participants, but, again, Arab participants are limited to GCC members (Kuwait, Qatar, Saudi Arabia, UAE) plus Yemen.³³ The agenda excludes the liberalization of inward FDI policies, protection of foreign investors, and investor-State dispute settlement; rather, the focus is solely on facilitation (Baliño et al. 2020). All investment is covered, including services. Deliberation centers on “good regulatory practices” such as

³¹ https://www.wto.org/english/news_e/news17_e/minis_13dec17_e.htm.

³² See Campos-Leal et al. (2020) and https://www.wto.org/english/news_e/news20_e/msmes_05nov20_e.htm

³³ https://www.wto.org/english/news_e/news19_e/infac_05nov19_e.htm.

transparency and predictability of investment-related policies, administrative procedures, information sharing, and ex-post monitoring and evaluation.

All four of these initiatives are relevant to the digital economy and trade, given the importance of regulation for e-commerce and dataflows, the role of FDI as a vehicle for knowledge transfers, and the importance of start-ups and new entry by (small) firms to exploit digitalization. The limited engagement by Arab countries in these efforts is striking. This is particularly so because the Open Plurilateral Agreements (OPAs) that may emerge from these talks differ from “standard” trade agreements in at least four ways (Hoekman and Sabel, 2019). First, they are open: any country able to satisfy the membership conditions can participate, in contrast to trade agreements that generally are not open to accession by additional countries. Second, insofar as agreements address costs of regulatory heterogeneity, they do not lend themselves to quid pro quo exchange of concessions because of their focus on good regulatory practice. Third, because they are domain-specific, they are limited to commitments for the issue or class of goods and services concerned. Fourth, insofar as an OPA requires only equivalent performance – not identical procedures or institutions – they permit members to produce the required outcome through their own regulatory regimes and institutions, subject to continuing reciprocal review of existing regulatory policies and their implementation, and joint evaluation of potential adaptation to changes in circumstances.

Outside the WTO, groups of countries have also begun to negotiate plurilateral agreements that are distinct from PTAs to address trade-related matters and nontrade policies. Examples include the Digital Economy Partnership Agreement between Chile, New Zealand, and Singapore,³⁴ the Digital Economy Agreement between Australia and Singapore,³⁵ the Japan-US Agreement on Digital Trade,³⁶ and negotiations between Singapore and South Korea on a digital partnership agreement.³⁷ Such initiatives provide an alternative to trade agreements and are therefore salient for Arab countries given the revealed preference for shallow trade agreements. They address cross-border transfer of data; data localization and protections for source code; encourage cooperation on compatible e-invoicing and e-payment frameworks; establish benchmarks (focal points) for regulatory reforms that support the digital economy and inclusion; and bolster the associated governance frameworks.³⁸

³⁴ Chile, New Zealand and Singapore (2020); <https://www.mfat.govt.nz/en/trade/free-trade-agreements/free-trade-agreements-concluded-but-not-in-force/digital-economy-partnership-agreement/>.

³⁵ Australia and Singapore (2020); <https://www.dfat.gov.au/trade/services-and-digital-trade/Pages/australia-and-singapore-digital-economy-agreement>

³⁶ The agreement bans data localization, barriers to cross-border data flows and conditioning access to the market on transfer of source code or algorithms and covers financial services. See: [https://ustr.gov/sites/default/files/files/agreements/japan/Agreement between the United States and Japan concerning Digital Trade.pdf](https://ustr.gov/sites/default/files/files/agreements/japan/Agreement%20between%20the%20United%20States%20and%20Japan%20concerning%20Digital%20Trade.pdf)

³⁷ <https://www.mti.gov.sg/-/media/MTI/Newsroom/Press-Releases/2020/06/22-Jun-2020-Singapore-and-the-Republic-of-Korea-launch-negotiations-on-Digital-Partnership-Agreement.pdf>. Leblond and Aronson (2019) and Armstrong et al. (2021) argue that such arrangements could become the basis for ‘single data areas’ covering like-minded countries.

³⁸ For example, see Elms (2020).

Arab countries need to determine whether to use extant trade agreement platforms to pursue international regulatory cooperation in support of digitalization and related international transactions. Arab countries have shown great hesitancy to make commitments on services trade in agreements with the EU and the offer by the EU to negotiate deep(er) comprehensive trade agreements has not elicited much enthusiasm in Mediterranean states. However, this agenda cannot simply be ignored; it is critical for firms' ability to leverage digitalization.

A first step could be to join the WTO-based initiatives, as these will establish a minimum common denominator set of provisions. Depending the design of commitments, this may permit flexibility in the sense of permitting to sign on to the specific modules or elements of an agreement. The reason why not all the Arab countries are participating in these international discussions is unclear, but given the freedom of any WTO member to decide not to sign on to what is negotiated, simply staying away from them makes little sense. On a related note, Arab governments could reflect on the content of the Asia-Pacific digital agreements and consider if and how such models – and the associated modules – might be adopted to support the ability of Arab companies to increase trade in digital products and services with each other and with the EU and other markets, including Asia and Africa.

Cooperation may also be helpful in putting in place appropriate competition policies to address the potential abuse of market power and assure a level playing field for firms seeking to use or compete with established platforms and market-leading service providers. Competition policy to prevent excessive market concentration has been found to be associated with a reduction in the benefits of the adoption of digital technologies. In practice, small (developing) countries may not be able to effectively combat anticompetitive practices by large firms that dominate segments of the global market. For Arab countries, a competition policy is likely to be particularly important in supporting the expansion of digital entrepreneurship given a long history of exclusive distribution arrangements and state involvement in some services sectors (ICT, transport), barriers to entry, and market-dominating firms (UNESCWA, 2015). As is the case for regulation of data and digital activities, participating in international deliberations on the design of competition law for a digital economy can help identify good practices for national competition policy enforcement and areas in which joint enforcement actions should be considered. Most Arab competition agencies are members of the International Competition Network, an initiative that could be used as a focal point for such an effort.³⁹

It is unclear why Arab governments appear to be missing in action in international forums and the reasoning behind the preference for not using trade agreements to put in place regulatory frameworks supportive of digital trade. Factors may include the limited extent of available research and analysis of digital economy issues for Arab countries; a bias of policymakers

³⁹ The ICN ran a survey of its members in 2020, soliciting views on dominance and market power in digital markets. This revealed that in only three of 39 responding jurisdictions had national competition laws been amended to account for the digital economy. The Egyptian authorities were the only Arab agency to respond. See: <https://www.internationalcompetitionnetwork.org/wp-content/uploads/2020/07/UCWG-Report-on-dominance-in-digital-markets.pdf>

against services activities (i.e. a pro-manufacturing bias); or preferences of incumbent firms to maintain the status quo pattern of specialization. Whatever the underlying reasons, all of these possible factors suggest similar action: raising the awareness of policymakers and stakeholders of the importance of putting in place a supportive policy and regulatory framework that encourages the use of digital technologies.

One area for action is to invest in filling the data gaps to generate better and more timely information on the value and origin/destination of digital trade flows and to improve information on prevailing digital trade policies. As noted above, too much of the policy terrain is terra incognita. Collecting statistics on digital trade will require firm surveys, including the financial sector and payment processors. Collecting data on services and digital trade policies can use the techniques developed at the OECD and the World Bank to collect information on applied policies. It need not rely on cooperation with these agencies; it could be undertaken by regional research organizations like the Economic Research Forum (ERF) and employ machine learning techniques to reverse-engineer the confidential methodologies used to estimate STRIs (see Hoekman and Shepherd, 2020).

Structured engagement with businesses

Another area of focus is to foster engagement between policymakers and digital businesses and entrepreneurs. This could take the form of multi-stakeholder dialogues organized around specific GVCs or around key elements of digital supply chains. Doing so could usefully involve engagement with and by companies, both established and start-ups, with a view to identify where regulatory reform is needed to support international activities. Hoekman (2016) argues that rather than seeking to address trade problems through traditional government-to-government negotiations and trade agreements, bottom-up, specific initiatives may be more effective in mobilizing the engagement and support of business on both sides of a border. Building mechanisms that bring together key actors involved in, and concerned with, the operation of (regional) digital-intensive value chains to help identify policy frictions and gaps that can be addressed through international cooperation.

“Value chain partnerships” (Bitzer and Glasbergen, 2015) can be conceptualized as tools to facilitate and frame deliberation and cooperation among the relevant government agencies that regulate value chain-based activities, the actors that operate them and are affected by their policies, and connect to the research community to assess the effects policies on value chain operations (Findlay and Hoekman, 2020).⁴⁰ Value chains are multi-sector and cross-cutting by nature, spanning a large variety of activities associated with international production networks. Value chain platforms can leverage the knowledge of firms involved as suppliers and buyers to identify and address policy barriers impeding growth in what, in principle, could be dynamic, job creating activities. Modern approaches to industrial policy stress on the importance of communication between actors with a stake in an economic activity (in this case, digital value chains and related expansion along the extensive margin) to identify and address specific

⁴⁰ Bakker et al. (2019) review the literature on multi-stakeholder initiatives from a multi-disciplinary perspective.

constraints and market failures that inhibit investment in profitable new activities (Sabel, 2012; Ross-Schneider 2015; Devlin and Pietrobelli, 2019).⁴¹ Similarly, effective public-private communication and collaboration is important in leveraging opportunities and fostering investment in/adoption of new digital technologies (Maskus and Saggi, 2013).

5. Conclusion

Is digital transformation going to make the prospect of Arab countries' integration, trade, and exchange even more difficult than it has been? Much depends on the policy environment that is put in place, but, in principle, there are good prospects for Arab countries to benefit from the shift to a more digital economy. Arab economies have not been significant players in the international fragmentation of production; reflecting a variety of factors, including high trade and transactions costs and crony capitalism-driven rent seeking. These factors also inhibited entry by new firms and the growth of successful start-ups. The digital economy offers significant opportunities for Arab countries to build on investments that have been made in tertiary education and the large, digitally-savvy cohort of young people across Arab nations. Realizing the export growth potential is conditional on supportive policies and cooperation among Arab countries and with major non-Arab markets to permit firms and entrepreneurs to sell and source services and digital products to/from foreign countries.

Digitalization dynamics bring about risks; perhaps the greatest of which is being left behind. The opportunity cost of inaction and neglect of digital trade will be associated with less diversification of economic activity and reduced resilience to shocks. Dependence on (specialization in) tourism and transport proved a risk for several Arab countries during the COVID-19 pandemic; a more balanced portfolio of services exports, whether embodied in goods or disembodied, can increase resilience to shocks. During the global financial crisis, services proved more resilient to the aggregate demand shock. During the COVID-19 pandemic, non-travel, non-transport services proved relatively robust, with e-commerce growing rapidly in many countries. Whether digital trade is more or less resilient to shocks compared to manufacturing or other sectors is an empirical question.⁴² The experience during 2020 was that both digital trade and manufacturing demand were resilient, with the former supporting the latter through e-commerce.

Another risk of digitalization is that it will bring more inequality as a result of unequal access to quality digital infrastructure/ICT networks or differences in capabilities across individuals, reflecting divergence in human capital. Digitalization will generate adjustment costs insofar as use of new technologies reduces demand for the services of some workers/firms. There is

⁴¹ Many countries have trade and investment promotion bodies aimed at increasing and diversifying exports (moving along the extensive margin and upgrading participation in GVCs). Many countries also have put in place mechanisms to facilitate imports; aimed at reducing the transactions costs associated with moving goods across borders and along transport/transit corridors. Such mechanisms are, by design, multi-sectoral and bring together public and private actors, but generally do not reflect the value chain nature of international production, nor do they encompass an explicit focus on digitalization-related issues in the way that multi-stakeholder value chain partnerships could.

⁴² Bahn et al. (2021) discuss the potential impacts of digitalization on agriculture in Arab countries.

nothing distinct about the adoption and use of digital technologies; it is simply another dimension of skill-biased technical change. What is new is that formerly nontraded activities may be affected. This calls for domestic policies that help to address the adjustment costs. Such a need is not digital-trade specific, but a general one.

Is there a risk for existing GVC-based production? The potential for growth in digitally-enabled economic activities and expansion in tradable services need not be accompanied by the erosion of the successes achieved in some Arab countries in the last few decades to increase participation in GVCs and grow manufacturing. Although new technologies may change the way products are produced, the reshoring of GVCs by lead firms producing manufactures for the EU market, while are likely to be limited, offer an opportunity that can be leveraged through the use of digital technologies to lower transactions costs. Digitalization can reduce some of the cost factors that have impeded GVC investments in Arab countries, including “red tape” related trade costs. Geopolitical forces are driving multinationals to reduce their reliance on a small number of GVCs and diversify to increase resilience and reduce the political risk associated with the US-China rivalry. Arab countries are well positioned to benefit from these changing incentives. Active support for the digitalization of government services and use of digital technologies to facilitate trade and address weaknesses in governance will help to improve the business environment for GVC investments. The digital economy offers new opportunities both in regards to “traditional” GVC activities centered around production components and assembly of manufactured products, and digitally-enabled services.

Benefitting from the opportunities will require policy action in a range of areas. First and foremost, improving the institutional environment. This is a topic that is addressed by other papers in this project, and on which there is extensive literature. From a trade policy perspective, there are several necessary conditions. In part, these are akin to well-known trade policy principles: putting in place a predictable, open trade regime. This has been a challenge for many Arab countries, the GCC being the exception. The fact that there is no Customs authority and border clearance associated with cross-border services transactions is a positive factor in this regard. However, services trade can be and sometimes is subject to policies that are restrictive. Whether this is intentional may not be clear, but a basic principle here should be to identify where services regulatory policies discriminate against foreign companies and foreign products. As noted above, there is too little transparency in Arab countries regarding what applied services policies are. Regularly compiling and publishing the type of information on regulatory measures needed to construct STRIs and DTRIs should be a priority. This can be pursued through joint action among (groups) of Arab countries by mandating (and resourcing) a regional organization to undertake this task, for example.

For trade in services and participation in digital value chains to be feasible, it is not enough to put in place a supportive domestic regulatory framework, including a competition policy that disciplines the scope for anti-competitive practices by digital platforms. What is equally important is that this framework meets international good practice standards and that trading partners accept (recognize) that the regulatory regime is “good enough” to allow firms to

operate on their markets and access and use data that is created in their jurisdictions. The EU, for example, is putting in place stronger regulatory preconditions for data to move in and out of its market. These developments call for international cooperation; the conclusion of agreements on the requisite standards and norms for mutual recognition of equivalence of regulatory regimes. Doing so can build on (expand) existing trade agreements. However, most Arab countries that are part of the EU Neighborhood Policy are not vigorously negotiating a digital economy-centric agenda. Instead, they have shown reluctance to engage in these matters. The same applies to efforts to extend PAFTA to encompass services, which have shown limited ambition.

An alternative is to pursue domain-specific bilateral or plurilateral arrangements. The stylized fact is, again, that many Arab governments do not appear to be focusing on participation in such initiatives. Most Arab countries are not engaged in ongoing efforts in the WTO to agree on what constitutes good practice in the areas of e-commerce, services regulation, investment facilitation, or measures to assist MSMEs exploit trade opportunities. They offer an alternative to expanding the coverage of trade agreements with specific trade partners, a track that, to date, has been opposed by many Arab nations, in stark contrast with trends in other parts of the world. Continuing to neglect – or actively oppose – international cooperation and agreements on all matters digital can only reduce the prospect of the region benefiting from the inevitable digital transformation of the economy.

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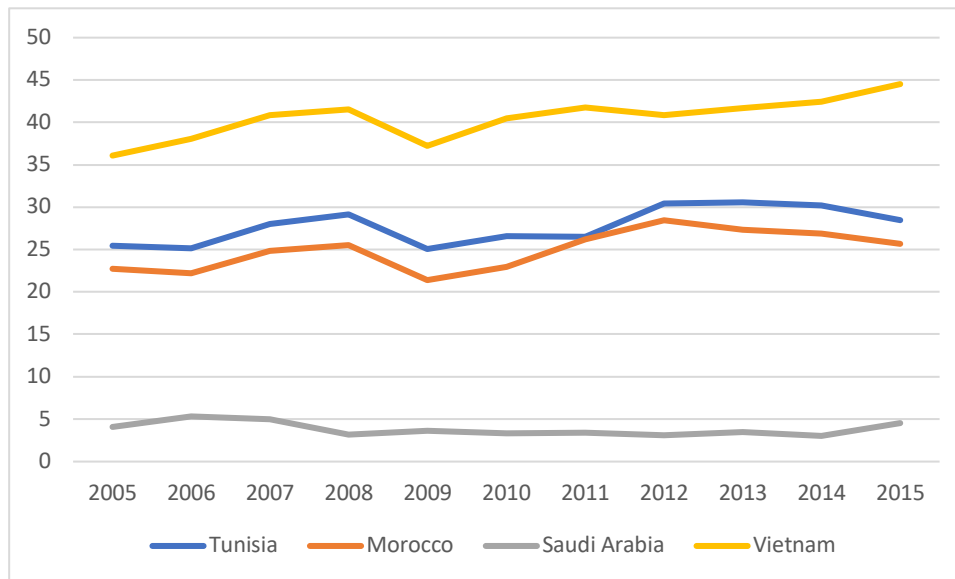
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Annexes

Annex Figure 1: Foreign value added in gross exports, selected Arab countries and Vietnam (%)



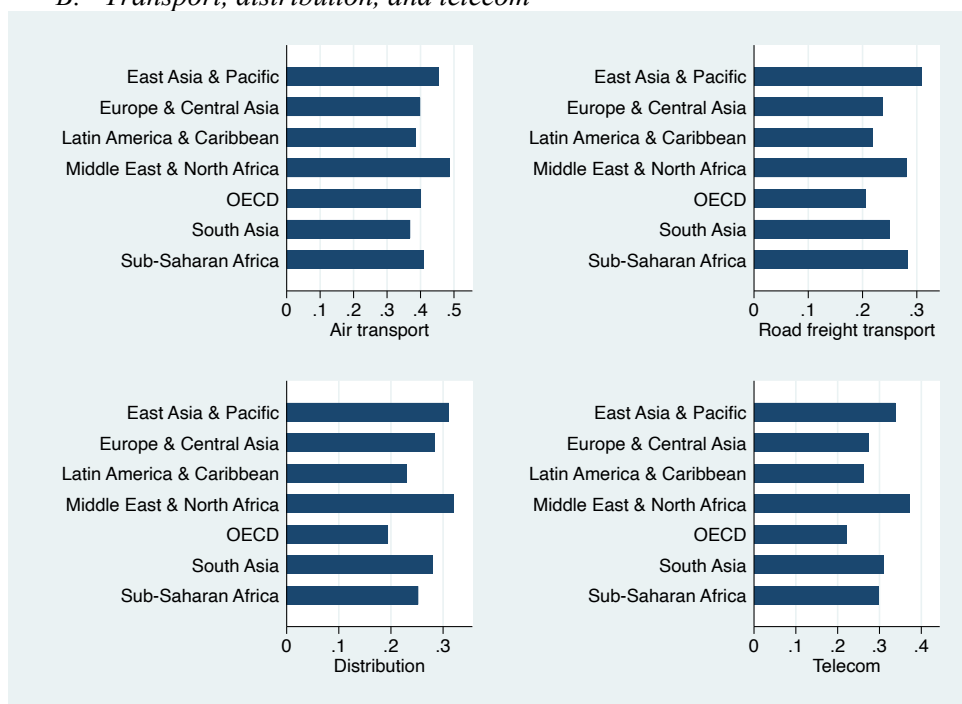
Source: OECD TIVA database.

Annex Figure 2: Average services trade policy indices by region/country group

A. Business and financial services



B. Transport, distribution, and telecom



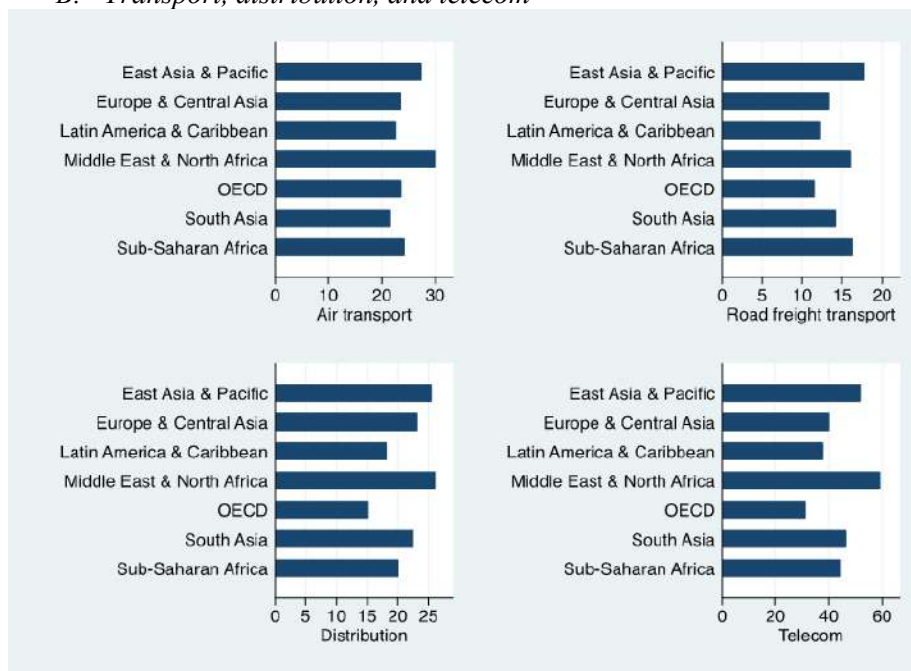
Source: Hoekman and Shepherd (2020)

Annex Figure 3: Estimated ad valorem equivalents of services trade policy

A. Business and financial services



B. Transport, distribution, and telecom



Source: Hoekman and Shepherd (2020)