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Experimental Indicators of Digital Industries in Select Countries

Definitions, Methods, and Results

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Prepared by Brent Moulton, James Tebrake, and Martha Tovar

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ABSTRACT: The pervasive impact of digitalization on the economy and the lack of an agreed definition makes it challenging to obtain estimates of the digital economy. Nowadays, some countries have estimated the value of the digital economy by identifying digital products or industries as defined in the international classifications. This study presents the estimates of digital industries for five countries that participated in an experimental exercise, applying a simplified standard approach recommended by the international agencies as part of the national accounts framework and using publicly available and limited secondary information. The results show that the structure and evolution of digital industries vary across countries and over time and that the estimates depend significantly on the underlying data sources. The conclusions of this exercise reveal the need to upgrade the data sources to better identify the impact of digitalization and contribute to policy-making on the economic benefits of digitalization.

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WORKING PAPERS

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Prepared by Brent Moulton, James Tebrake, and Martha Tovar[1]

[1] "The authors would like to thank the National Statistical Offices of the participating countries and the NESDC of Thailand for the information and support provided to conduct the experimental estimates included in this document.

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Glossary

BEA	Bureau of Economic Analysis
CPC 2.1	Central Product Classification System
GVA	Gross Value Added
ICT	Information and communication technology
INEGI	Instituto Nacional de Estadística y Geografía (National Statistical Office of Mexico)
ISIC Rev. 4	International Standard Industrial Classification System Rev. 4
ISWGNA	Inter-secretariat Working Group on National Accounts
NESDC	National Economic Social Development Council of Thailand
NSO	National Statistical Offices
OECD	Organisation for Economic Co-operation and Development
SUT	Supply and Use Tables

Background

Digitalization is pervasive, affecting all sectors of the economy. The pervasive nature of digitalization makes it difficult to isolate and quantify its economic impact. Standard classifications do not define a “digital sector” or set of “digital establishments” whose growth and evolution can be compared to other sectors such as manufacturing and agriculture. While the task of quantifying digitalization is difficult and somewhat subjective, there is still value in trying to put a box around this activity to better understand its evolution relative to overall economic activity. A better understanding of the effect digitalization is having on the economy will assist in analyzing the evolution of labor markets, inflation dynamics, technological progress, future growth, and transmission of shocks.

This working paper outlines experimental work undertaken by the IMF Statistics Department in conjunction with the National Statistical Offices (NSOs) of Chile, Colombia, Indonesia, Mexico, and the National Economic Social Development Council (NESDC) of Thailand to quantify how and where the increasing use of digital technologies impacts their economy. The note first defines what is meant by economic activity impacted by digitalization. Based on these definitions, it proceeds to outline a method to quantify these effects. The last section presents a summary of the results and conclusions.

Definition – What is Digitalization and the “Digital Economy”

Official economic statistics are constructed using international industry and product classification systems such as the International Standard Industrial Classification System (ISIC Rev. 4) and the Central Product Classification System (CPC 2.1). These classification systems are mainly structured around what is being produced rather than how it is being produced. Digital technologies, for the most part, impact how goods and services are being produced and delivered. In addition, digital technologies are being employed by most sectors of the economy. As such, classifications such as the ISIC and CPC are not structured in a way that permits an analytically useful aggregation of digital activities. This was noted in a 2018 IMF staff report which suggested that if the digital economy encompasses all activities (industries) that simply use digitized data, the entire economy could soon be included in the concept, making it likely unclear and not particularly useful (IMF, 2018).

Therefore, instead of defining the “digital economy”, current research suggests defining a set of digital indicators that provide a unique lens on how digitalization is impacting economic activity. Given the policy relevance of this information, several countries have developed experimental (often referred to as satellite) estimates of the digital activities. While there are some similarities in the approach used to develop these estimates, the scope of each estimate depends on the set of activities and/or products that a given country considers digital. To the extent that this is a somewhat subjective assessment, some comparability issues arise among countries.

Selected Country Work

Over the last number of years several NSOs have initiated projects to estimate the contribution of digitalization to economic activity. In 2017, the U.S Bureau of Economic Analysis (BEA) produced and published a digital economy satellite account that includes three major types of digital goods and services:

- Infrastructure, or the basic physical materials and organizational arrangements that support the existence and use of computer networks and the digital economy, primarily information and communications technology (ICT) goods and services.
- E-commerce, or the remote sale of goods and services over computer networks.
- Priced digital services, or services related to computing and communication that are performed for a fee charged to the consumer.

Subsequent to the 2017 release, the BEA had made updates to their estimates. The updated estimates include not only these goods and services considered "primarily digital" but now include "partially digital" goods and services (categories that include a mix of digital and non-digital goods and services). The BEA is continuing to adapt its methodology to ensure that it aligns with user needs and with an emerging international methodology that is being developed. (BEA, 2021a).

In 2018, Statistics Canada released the paper, "Measuring digital economic activities in Canada: Initial estimates." In this paper, Statistics Canada applied concepts and definitions of the digital economy similar to the BEA. One important difference was the inclusion of some "partial" digital products that were not included in the BEA estimates. The Canadian estimates make use of the OECD's digital economy measurement framework, grouping digital products into the following categories: 1) digitally - enabled infrastructure, 2) digitally - ordered transactions (e-commerce), and 3) digitally - delivered products (Statistics Canada, 2021a).

Recently Statistics Canada has undertaken efforts to compile estimates based on updated guidance from the OECD, which takes a transaction and institutional unit approach to estimate digital activity (Guidelines for Supply-Use tables for the Digital Economy (OECD, 2020)). Estimates were developed for 2017–2019. (Statistics Canada, 2021b).

In 2019, the Australian Bureau of Statistics released the paper "Measuring Digital activities in the Australian economy," which has been updated annually. Australian estimates of digital activities follow the BEA approach by identifying digital products from the Supply and Use Tables. The results presented follow the same domains proposed by the BEA: digital enabling infrastructure, digital media, and E-commerce. The Australian estimates cover the period 2011–2019.[1]

Current International Guidance in Accounting for Digitalization

Recent OECD guidance proposes using Supply and Use Tables (SUTs) to develop a suite of digital indicators. SUTs present the most detailed accounting of a country's economy. This makes them suitable for developing estimates of digital activities.

[1] Digital activity in the Australian economy, 2018-19 | Australian Bureau of Statistics (abs.gov.au).

The approach put forward by the OECD "*does not advocate a single measure of the digital economy. This is deliberate and reflects the fact that the tables are designed to meet a multitude of needs and demands, which cannot be met by any single measure. When fully completed, the Digital SUTs will be able to provide a raft of information on the digital economy including, among many others, the scale of: e-commerce transactions; digitally delivered services; digital intermediation platforms' and e-tailers' sales and value-added; transactions in digital goods and services; value-added of various categories of 'digitally dependent' and purely 'digital' firms; non-monetary transactions in data and free digital services and assets*" (OECD, 2020). This approach is endorsed by the Inter-secretariat Working Group on National Accounts (ISWGNA) and is being considered for inclusion in the next update of the System of National Accounts.

The OECD / ISWGNA endorsed approach aligns with the conclusion of the IMF Board Paper - MEASURING THE DIGITAL ECONOMY (IMF, 2018), February 2018, Par. 7 Pg. 7, which defines the digital sector as comprising the producers at the core of digitalization: online platforms, platform-enabled services, and suppliers of ICT goods and services. Accordingly, this approach to quantifying digitized economic activity is the one taken in this paper.

Digital Transactions, Products, and Industries

It is clear that digitalization is changing many aspects of the economy. This was particularly evident during the COVID-19 pandemic when households and businesses relied heavily on digital technologies to purchase goods and services, maintain business operations, and conduct work. These changes have key economic implications on labor markets, international trade, and economic inclusion. Yet, while the increasing digitization of economies is captured within the countries' national accounts statistics, its effects are not clearly visible for users.

This means that in order to present the effects of digitization to users, national account statistics need to be reorganized such that digital activities are first identified within the national accounting framework and subsequently grouped together. Once these activities have been grouped together, it is possible to present analytically meaningful indicators related to the increasing impact digitization is having on economic activity (size and structure).

Current research into the accounting for digitalization proposes grouping activity into three main categories, digital transactions, digital products, and digital industries.

Digital transactions

Digital transactions are grouped into two broad categories: digitally ordered and digitally delivered. Digitally ordered transactions reflect what is commonly referred to as e-commerce. These transactions are further broken down into those goods and services that are digitally ordered directly from a counterparty, through a resident digital intermediary platform, or through a non-resident digital intermediary platform.
Alternatively, the goods and services can be delivered in digital format (i.e., a movie delivered through a streaming service). These reflect digitally delivered goods and services. These kinds of transactions can be cross classified with each other such that it is possible to estimate the value of goods and services that have been both digitally ordered and digitally delivered.

Digital products

For the purposes of isolating the economic effects of digitalization, products are first categorized into four distinct groups: (i) digital products (inside the SNA production boundary), (ii) non-digital products significantly affected by digitalization, (iii) other non-digital products, and (iv) digital products (outside the SNA production boundary). Digital products are in turn classified into the following groups.[2]

i. **ICT goods** coincide with the alternative classification of Information and Communication Technology (ICT) products, as included in the CPC 2.1. This group is divided into four types of ICT goods: (i) Computers and peripheral equipment; (ii) Communication equipment; (iii) Consumer electronic equipment; and (iv) Miscellaneous ICT components and goods.

ii. **Priced digital services** – except cloud computing services and digital intermediary services, include the following broad categories: (i) Manufacturing services for ICT equipment; (ii) Business and productivity software and licensing services; (iii) Information technology consultancy and services; (iv) Telecommunications services; (v) Leasing or rental services for ICT equipment; and (vi) Other ICT services.

iii. **Priced cloud computing services** include a full suite of services related to cloud computing, such as models that the consumer simply accessing the provider's applications; the consumer deploying their own applications onto the providers infrastructure; and the consumer taking control over operating systems, storage, and deployed applications.

iv. **Priced digital intermediary services** include those kinds of services providing information on and successfully matching two independent parties to a transaction via a digital platform in return for an explicit fee. The output of these platforms typically consists of the fees paid by the producer and/or the consumer of the product being intermediated.

The non-digital products significantly affected by digitalization reflect those goods and services whose consumption is significantly facilitated by digital technologies; examples include accommodation services, food and beverage serving services, advertising and market research services, travel agencies, and publishing, for naming some.

The other non-digital products are all other products that are not classified as digital products or non-digital products significantly affected by digitalization. The framework also includes products that currently fall outside the national accounts production boundary. These include data, digital services provided by enterprises, and digital services provided by communities. Digital indicators are derived using the economic activities related to the production, consumption, and distribution of digital products and non-digital products significantly affected by digitalization.

Digital industries

Digital activities can also be grouped into seven distinct digital industries defined as follows:[3]

i. **Digitally enabling industries**. Businesses engaging in production that enable the function of information processing and communication by electronic means. Includes: Internet service providers, telecommunications companies, providers and developers of software, Computer manufacturers, and website developers. They coincide with the alternative classification of the 'Information and Communication Technologies' (ICT) sector as defined in ISIC rev. 4.

[2] DSUT page 11.
[3] DSUT page 16.

ii. **Digital intermediary platforms charging a fee**. Businesses that receive an explicit payment for facilitating a transaction between two or more distinct but interdependent sets of users. Includes: food delivery companies, travel booking portals, platforms facilitating online auction or marketplaces that assume no ownership of stock.
iii. **Data and advertising driven digital platforms**. Businesses that are operating exclusively online that predominately generate revenue via selling data or advertising space. Includes: search engines, social media platforms, developers of zero-priced phone applications and information sharing platforms.
iv. **Firms dependent of intermediary platforms**. Independent service providers who source work from digital platforms, and businesses who sell via a third-party digital platform. Includes: businesses who sell predominately digitally but do so via their own website/digital platform.
v. **E-Tailers and digital intermediary platforms charging a fee**. Retail and wholesale businesses engaged in purchasing and reselling goods or services who receive a majority of their orders digitally. Includes: businesses receiving orders digitally that sell their own inventory and/or have set contracts with producers and suppliers.
vi. **Digital only firms providing financial and insurance services**. Businesses providing financial and insurance services that are operating exclusively digitally, with no interaction with consumers physically. Includes: online only banks and other financial service providers, online only payment system providers.
vii. **Other producers only operating digitally**. Businesses that produce their own services for sale but operate exclusively digitally. Includes: priced digital media providers, subscription-based service providers (assuming the service is delivered digitally).

This paper leveraged the methodology outlined by the OECD / ISWGNA Task Team on Digitalization to develop a set of experimental digital industry indicators for Chile, Colombia, Indonesia, Mexico, and Thailand. These indicators were developed in conjunction with the NSOs of these countries and the NESDC for Thailand. The remainder of this paper outlines the method used to produce the data and the resulting estimates.

Method Implemented in Producing the Experimental Estimates

The recommended approach is a bottom-up approach that seeks to identify digital firms by industry and then aggregate their activities to derive estimates of value added of digital industries. In the context of this study, the research team did not have access to firm level data. Therefore, a more aggregated method was used. For certain industries, such as the ICT industries, all firms were assumed to be digital firms; hence the value added of these industries was considered digital. In other industries, digital value added was estimated using ratios developed by examining the products produced by the industry, classifying them as digital or digitally influenced, and using this as a proxy for the digital value added for that industry.

To illustrate the method, consider the following hypothetical example. Assume there is a country with ten industries and 15 products. Three of these ten industries are ICT industries (e.g., Manufacture of computers and peripheral equipment, Satellite telecommunications activities, and Computer programming activities); consequently, all the value added of these industries will be considered digital.

Gross Value Added of the ICT industries:

Industry	2018	2019	2020
Manufacture of computers and peripheral equipment	30 845	34 546	36 274
Satellite telecommunications activities	8 970	10 046	11 553
Computer programming activities	5 052	5 658	6 507
Total Digitally enabling industries	44 867	50 250	54 334

Second, assume one of the industries includes corporations that act as a digital intermediary between buyers and sellers. All the value added of this industry will be considered “digital”.

Gross Value Added of digital intermediary platforms:

Digital Platform	2018	2019	2020
Digital Platform A	1 563	1 579	1 815
Digital Platform B	960	1 075	1 247
Digital Platform C	1 057	1 356	1 548
Total Digital intermediary platforms	3 580	4 010	4 610

Third, assume supplementary data has been collected that allows the compiler to identify the proportion of gross value added of the industry that is digitally ordered (Accommodation services and Travel agency, tour operator and other reservation services). This ratio is applied to the total value added of the industry to obtain estimates of digital activities for these industries.

Gross Value Added of activities relying on digital intermediary platforms:

Industry	2018	Ratio	2019	Ratio	2020	Ratio
Accommodation services and Travel Agency	33 560	26%	37 587	28%	33 828	29%
Tour operator and other reservation services.	6 501	36%	7 281	29%	5 825	21%
Total Digitally ordered	11 066		12 635		11 033	

Fourth, assume the compiler has access to e-commerce data obtained from an economic survey of retailer and wholesaler trade. Using this information, it is possible to identify those retail and wholesale trade firms receiving more than 50 percent of their orders digitally. These ratios are used to obtain the digital value added within the wholesale and retail trade industry.

Gross Value Added of E-tailers:

Industry	2018	Ratio	2019	Ratio	2020	Ratio
Retail Trade	171 395	25%	186 821	28%	199 898	35%
Wholesale Trade	135 674	5%	146 528	8%	153 854	13%
Total E-tailers	49 633		64 032		89 965	

The digital value added obtained per type of digital industry is aggregated to get the value added of digital industries. The rest of the industries not involved in any form of digitalization, either by digital firms or products, will remain as non-digital.

Gross value added Total and by Digital Industries

	2018	2019	2020
Gross value added, Total	1 097 906	1 218 449	1 302 403
Gross value added, Digital industries	109 146	130 928	159 942
GVA of Digital industries as percentage of the Total GVA	9.9%	10.7%	12.3%
Of which:			
Digitally enabling Industries	44 867	50 250	54 334
Digital intermediary platforms	3 580	4 010	4 610
Digitally ordered	11 066	12 636	11 033
E-tailers	49 633	64 032	89 965

The above example outlines the method that was used to develop the experimental estimates of digital industries for Chile, Colombia, Indonesia, Mexico, and Thailand, contained in this paper. It should be noted that an important component of this exercise was the contribution of the staff of the participating countries,[4] whose experience and knowledge of their economies helped to identify those products and industries significantly influenced by digitalization, as well as provide access to supplementary data to derive the estimates.

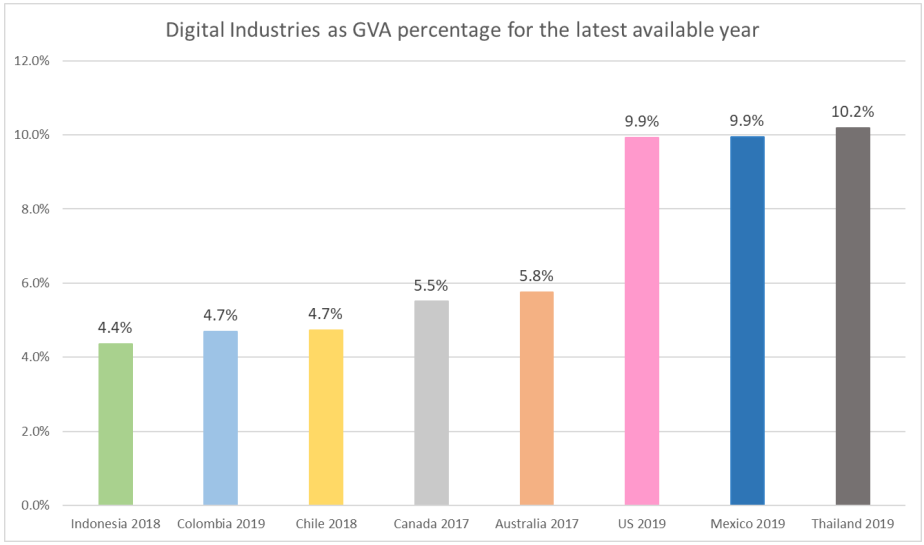
Results

This section presents the experimental estimates that were developed using the concepts, methods, and data sources noted above. In addition, published estimates from Canada, Australia, and the United States are included for comparative purposes.

The value added of digital industries is presented in figure 1. The Gross Value Added (GVA) of digital industries accounts for between 4.4 percent to 10.2 percent of total GVA for the countries included in this study. Three countries stand out: Thailand, Mexico, and the United States, with an estimated 10 percent of total GVA assigned to digital industries. The GVA of digital industries in Australia, Canada, Chile, Colombia, and Indonesia account for approximately 5 percent of the total GVA. The higher shares for Thailand, Mexico and the United States may be a result of better coverage of e-commerce activities in their system of official statistics.

[4] Except for Chile, for which the IMF staff developed the experimental estimates.

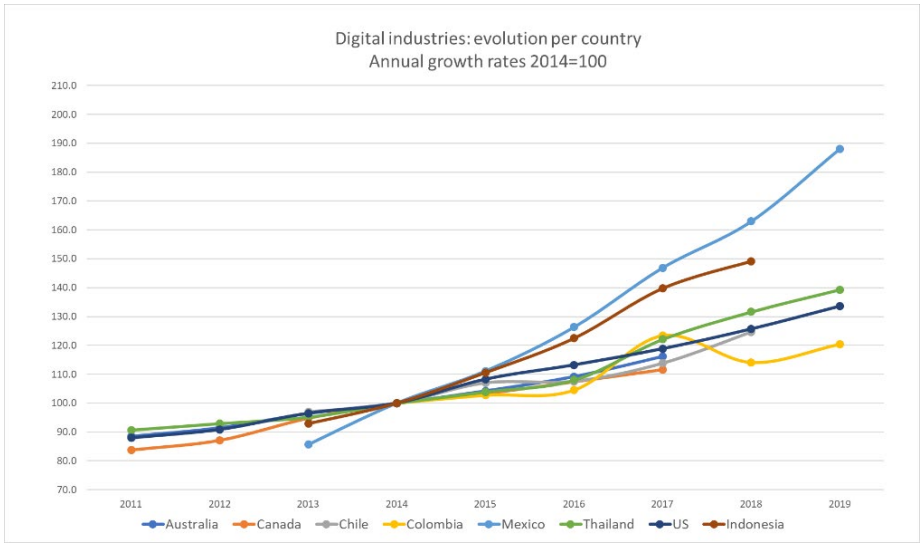
Figure1. Value Added of Digital industries for Australia, Canada, the United States, and Participating Countries



Australia and Canada 2017, Chile and Indonesia 2018, and Colombia, Mexico, Thailand, and the US 2019.

Growth in digital industries varied across countries. Mexico and Indonesia grew the fastest with an average annual growth rate of 14 and 10.0 percent, respectively. Chile and the United States registered an average annual growth rate of 5.2 percent, followed by Canada, which grew with an annual average pace of 5.0 percent. Australia with an average annual growth rate of 4.6 percent, Thailand with 4.2 percent, and Colombia with 4.1 percent grew the slowest.

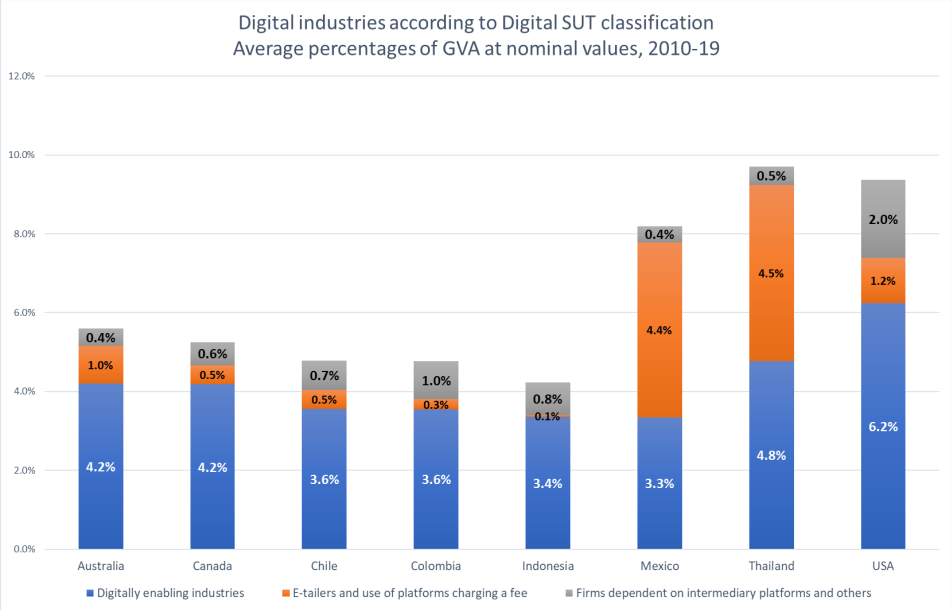
Figure 2. Digital Industries 2011–2019 for Australia, Canada, the United States, and Participating Countries



Series for Australia and Canada cover 2011–17; Chile and Indonesia 2013–18; Colombia 2014–19; Mexico 2013–19, Thailand, and the United States 2011–19.

Digital economic activity estimates have been grouped into three industrial groupings: (i) Digitally enabling industries or ICT industries; (ii) E-tailers and use of platforms charging a fee; this group comprises e-commerce plus data and advertising-driven digital platforms; and (iii) Firms dependent on intermediary platforms and others, including businesses that total or partially transact with consumers through a digital platform.

Figure 3. Digital SUTs Industries: Australia, Canada, the United States, and Participating Countries, Average GVA Percentages per Country

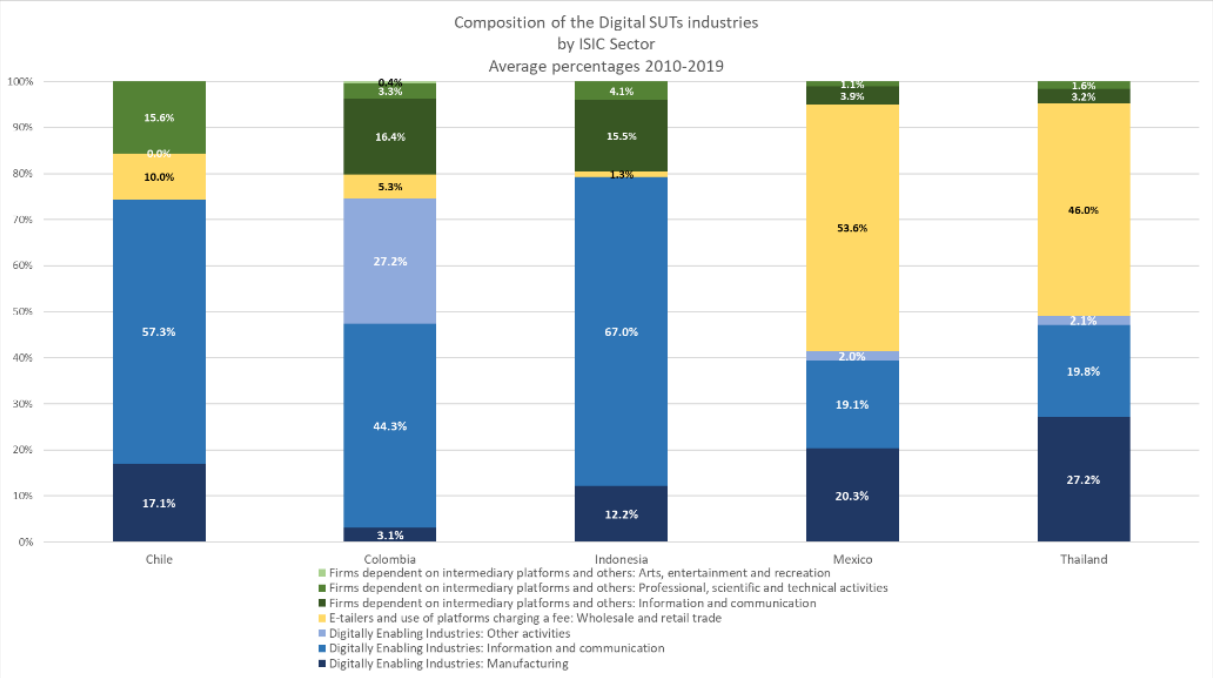


Sources: Australian Bureau of Statistics, Statistics Canada, Bureau of Economic Analysis, Banco Central de Chile and Instituto Nacional de Estadísticas of Chile, Departamento Administrativo Nacional de Estadística of Colombia, Statistics Indonesia (BPS), Instituto Nacional de Estadística y Geografía of México, Office of the National Economic and Social Development Council of Thailand, and own estimates.

Digitally enabling industries are by far the largest contributor to total digital economic activities across all countries, ranging from 6.2 percent of total GVA in the US to 3.4 percent of total GVA in Indonesia. E-commerce makes up a significant share of total digital economic activity in Mexico and Thailand, averaging 4.5 and 4.4 percent of total GVA respectively. This is explained by more robust e-commerce data sources available in these countries. The share of e-commerce in Australia, Canada, and Chile is small relative to Thailand, Mexico, and the United States.

The activity of intermediary platforms is highly significant in the United States, averaging 2.0 percent of total GVA. This is mainly due to content and media activities.

Figure 4. Composition of the Digital SUTs Industries by ISIC Sector for the participating countries, Contribution to the Total Digital Industries per Country



Sources: Banco Central de Chile and Instituto Nacional de Estadísticas of Chile, Departamento Administrativo Nacional de Estadística of Colombia, Statistics Indonesia (BPS), Instituto Nacional de Estadística y Geografía of México, Office of the National Economic and Social Development Council of Thailand, and own estimates.

The digital industries broken down by ISIC sector are presented in Figure 4 for the participating countries[5]. The manufacturing firms that enable digitalization stand out in Thailand and Mexico, contributing 27.2 and 20.3 percent, respectively, while the information and communication firms are notable in Indonesia with a share of 67.0 percent, 57.3 percent in Chile, and 44.3 percent in Colombia.

The digital industry of E-tailing only includes the ISIC sector of wholesale and retail trade; this industry is more significant in Mexico and Thailand compared to the other countries in the study, contributing 53.6 percent in Mexico and 46.0 percent in Thailand to total digital activities. Firms dependent on intermediary platforms includes activities of firms operating in the information and communication, professional and entertainment and recreation sectors. The activity of firms operating in the information and communication sector is noteworthy in Colombia, contributing 16.4 percent to total digital activities, and in Indonesia, contributing 15.5 percent to total digital activities. In comparison, the professional services whose delivery relies on intermediary platforms are highlighted in Chile with a contribution of 15.6 percent.

As noted above, these estimates can be sensitive to the available data sources, such as the case of e-commerce in Mexico. Mexico has a comprehensive business survey program[6] that includes specific modules to capture e-commerce activity across a broad range of surveys, as outlined in Box 1.

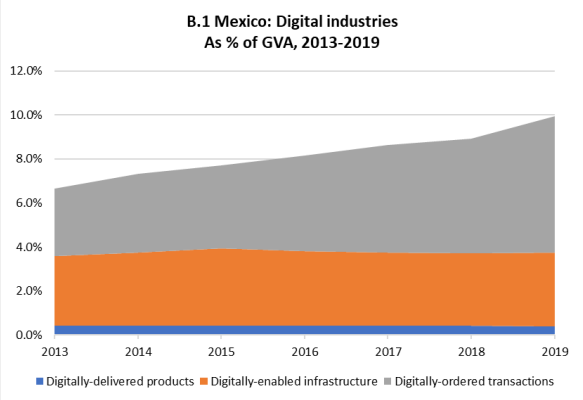
[5] Australia, Canada, and the United States do not publish this cross-classification.
[6] Comercio Electrónico (inegi.org.mx).

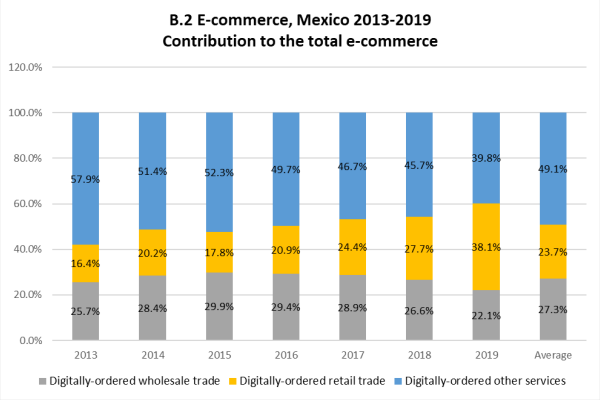
Box 1. E-commerce Estimates: Mexico's Experience

The national statistical office of Mexico (INEGI) publishes annual estimates of the GVA of e-commerce. To estimate e-commerce, INEGI uses the definition of e-commerce from the OECD: *an e-commerce transaction is the sale or purchase of goods or services conducted over computer networks by methods specifically designed for the purpose of receiving or placing of orders. The goods or services are ordered by those methods, but the payment and the ultimate delivery of the goods or services do not have to be conducted online* (OECD, 2011).

To collect data on e-commerce transactions, INEGI has introduced specific questions in the comprehensive and regular surveys used for compiling national accounts, such as the Economic Census and Annual Economic Surveys. These questions capture the share of firms' sales through the internet, email, or websites. Mexico's e-commerce is a supply approach by industries and covers wholesale and retail trade and the trade of other services (producer-consumer channel). Therefore, e-commerce series are obtained by applying the share by economic activity to the total GVA at the firm level and then aggregated by industry.

The total digital industries of Mexico account for an average of 8.2 percent of the GVA, of which 4.4 percent corresponds to e-commerce, see figure B.1. Almost half of the e-commerce activity (49.1 percent) comes from non-retail and wholesale trade industries. The wholesale trade digitally ordered products accounts for an average of 27.3 percent of total e-commerce, while the retail digitally ordered products has an average contribution of 23.7 percent of total e-commerce.





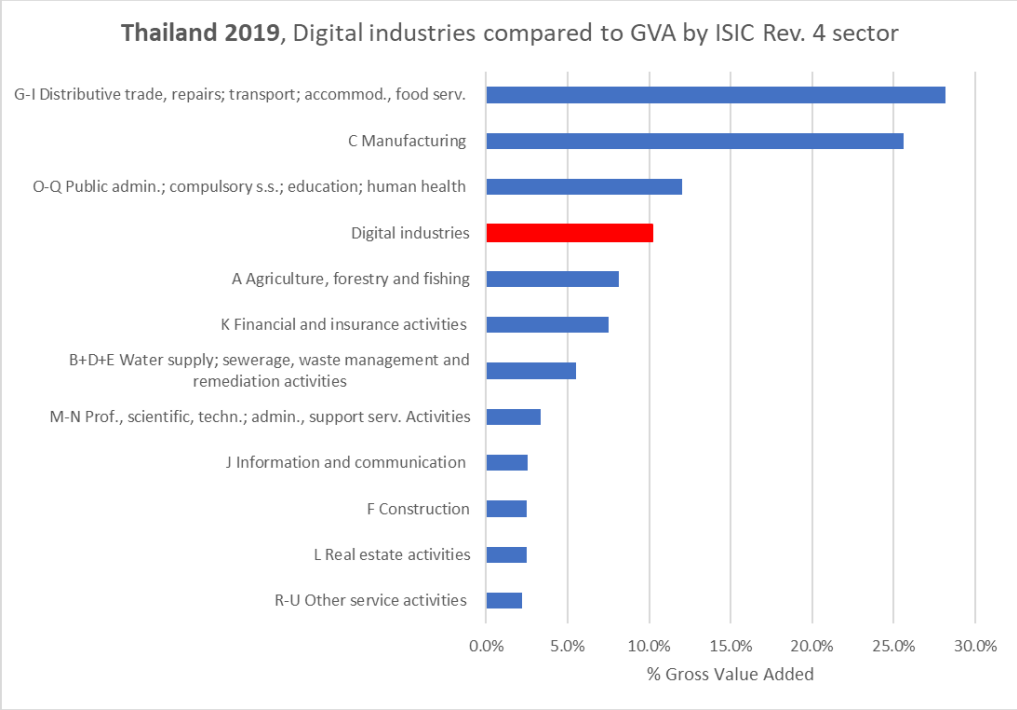
Source: INEGI and IMF staff estimates.

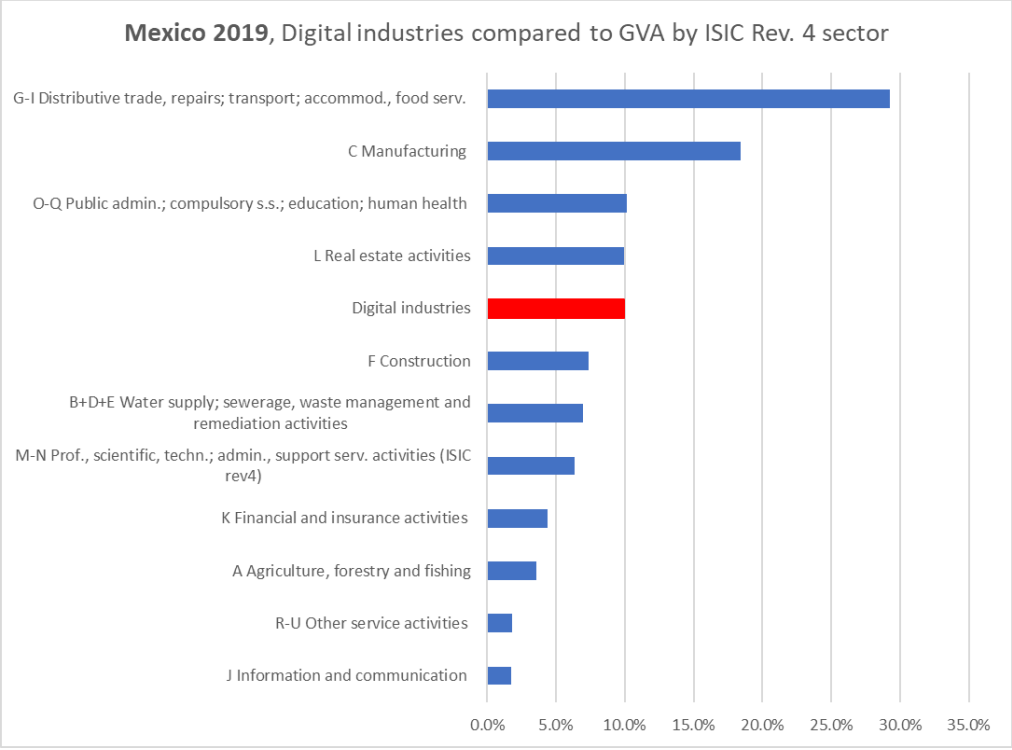
The other services digitally ordered cover services such as accommodation, transport, and professional services, ordered through the internet, email, or website. The revision and update made in Mexico's data collection instruments to incorporate transactions digitally ordered throughout all other services different than the trade activity allow computing this kind of e-commerce. E-commerce beyond trade activity constitutes a significant part of Mexico's approach. Most countries in this study do not collect this information; therefore, the contribution of e-commerce is restricted to trade activity resulting in lower estimates.

It is possible to aggregate the estimates of digital industries together to approximate an estimate for the "digital economy." This allows this sector to be compared with other sectors to better understand the structure and evolution of an economy.

In Thailand, the sum of value added of digital industries would be the third largest sector in the economy, representing 10.2 percent of GVA in 2019. In Mexico, it would be the fourth largest sector representing 9.9 percent of the GVA for the same year.

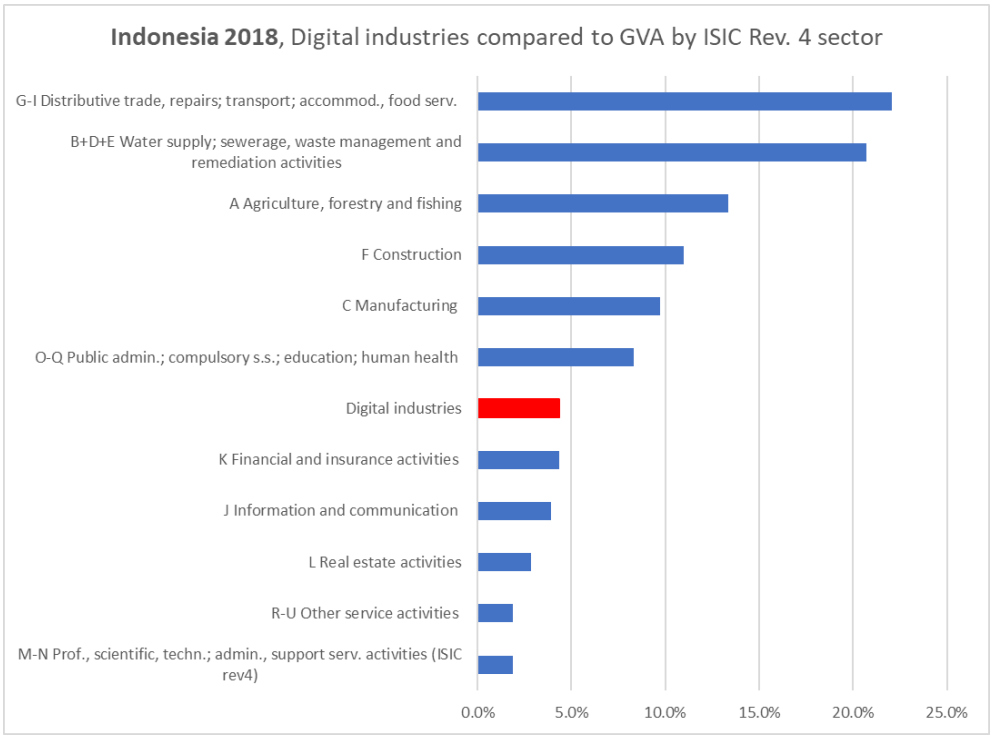
Figure 5. Digital Industries as a Share of Nominal GVA Compared to GVA, by ISIC Sector: Mexico and Thailand

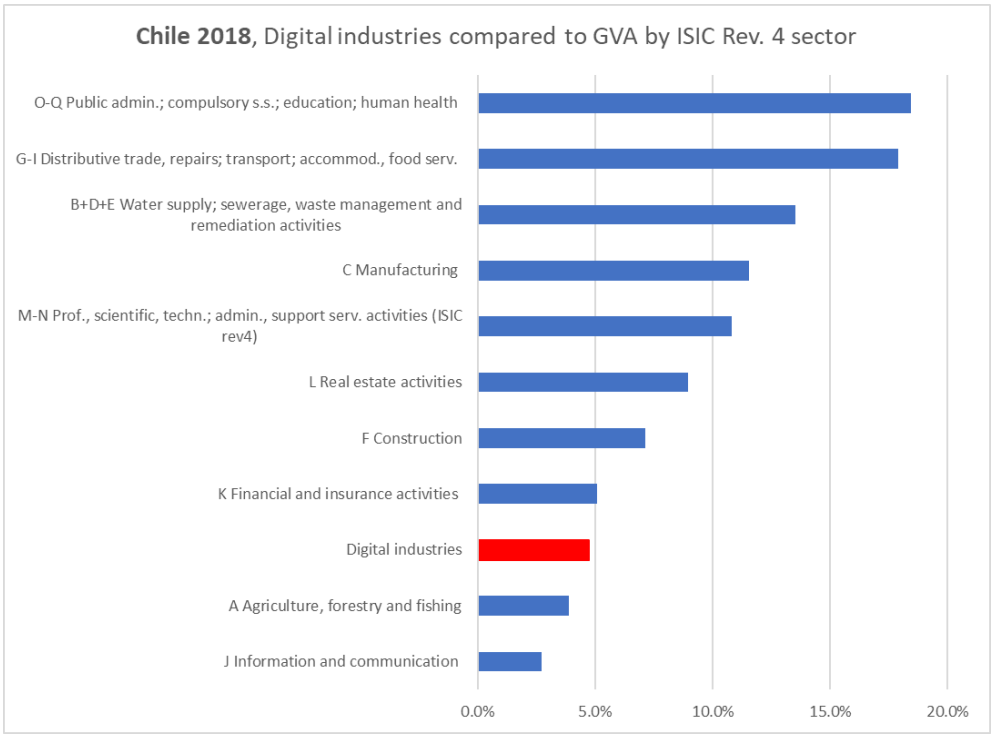




Sources: Office of the National Economic and Social Development Council of Thailand, Instituto Nacional de Estadística y Geografía of México, OECD, and IMF staff estimates.

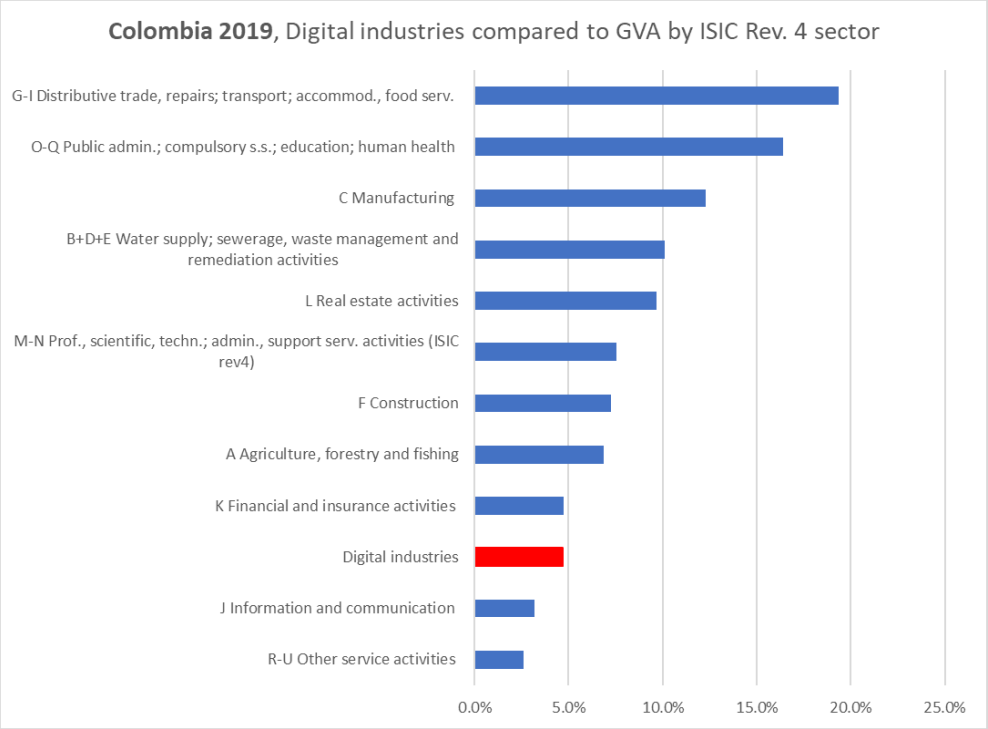
Figure 6. Digital Industries as a Share of Nominal GVA Compared to GVA, by ISIC Sector: Indonesia and Chile





Sources: Statistics Indonesia (BPS), Banco Central de Chile, Instituto Nacional de Estadísticas of Chile, OECD, and IMF staff estimates.

Figure 7. Digital Industries as a Share of Nominal GVA Compared to GVA, by ISIC Sector: Colombia



Sources: Departamento Administrativo Nacional de Estadística of Colombia, OECD, and IMF staff estimates.

Conclusions

The emergence of an internationally agreed upon definition of digital transactions, products, and industries, was a critical input into this exercise. Without these definitions, it would not be possible to produce internationally comparable estimates.

This study demonstrated that it is possible to develop digital indicators for a select set of countries using publicly available information and limited secondary information. The study also showed that the quality of the estimates depends significantly on the underlying data sources, as presented in the case of Mexico.

The estimates show that the structure and evolution of digital industries vary across countries and over time – highlighting the need for these types of data to assist decision makers with the development of policies that will leverage the economic benefits of digitalization.

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PUBLICATIONS

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