Emerging trends in the use of technology as a driver of the transition to formality: Experiences from Asia and the Pacific

Tejeshwi Nath Bhattarai
December 2018

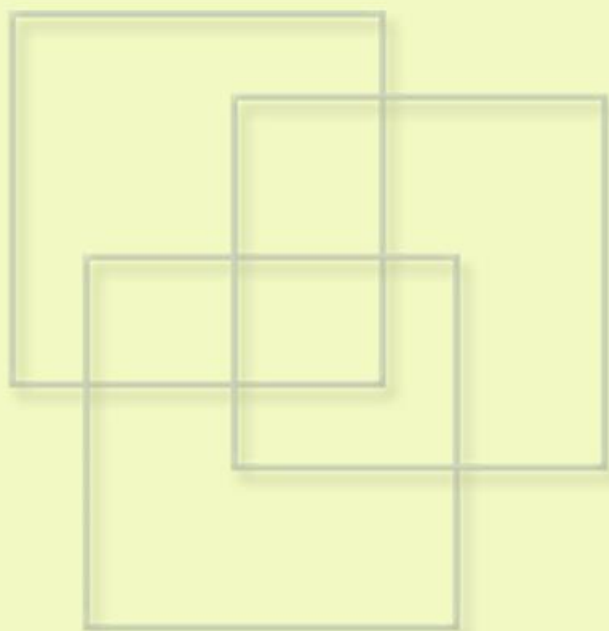**ILO Asia-Pacific Working Paper Series**

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Regional Office for Asia and the Pacific

Preface

The International Labour Organization (ILO) is devoted to advancing opportunities for women and men to obtain decent and productive work. It promotes rights at work, decent employment opportunities, more effective social protection and improved dialogue with respect to work-related issues. The *ILO Asia-Pacific Working Paper Series*, of which this paper is a part, is designed to improve the understanding of decent work issues, stimulate discussion and encourage knowledge sharing and further research that will promote decent work in Asia and the Pacific.

One topic of great importance to the ILO and its constituents is informal employment and more specifically how to make progress on the transition from the informal economy to formal economy. According to the latest available figures, more than two in three (68.2 per cent) workers in the Asia-Pacific region were in informal employment in 2016. In June 2015, during the 104th session of the International Labour Conference, the Recommendation on the Transition from the Informal Economy to the Formal Economy was adopted (R.204). The Recommendation acknowledges that while most policy-makers understand that formality generates better and more productive jobs, few have yet to make substantial progress in promoting the transition.

Since the adoption of R.204, the ILO has made efforts to generate and disseminate knowledge on good practices in the combatting informality. See, for example, the extensive FORLAC programme and its multiple outputs for the Latin American and Caribbean region. Most recently, the focus of research has turned to how informality can evolve through the spread of current and future technological developments. New technologies are not only affecting how the labour market functions, but also how labour market policies are being implemented. As a simple example, new enterprises can now register via online systems in an e-government portal, thus potentially increasing the incidence of formal, registered enterprises. New technologies are also increasingly used to handle tax registrations, commercial transactions, social security, etc.

This paper by Tejeshwi Bhattarai examines how technologies can enhance the impact of institutional public policies addressing informality. It expands on the findings of Chacaltana, Leung, and Lee (2018), where the term "e-formality" is used to capture the idea that new technologies applied in public initiatives, programmes, and policies can potentially make the transition to formalization easier. This paper extends the survey of national e-formality initiatives to the Asia-Pacific region.

<div align="center">
Tomoko Nishimoto
Assistant Director-General and Regional
Director for Asia and the Pacific
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Abstract

Informality trends across labour markets are likely to be affected by the rising diffusion of technology in many ways. On the one hand, there are apprehensions concerning the risks of job losses due to increasing automation of production processes and also fears of increasing technology-driven incidences of informal jobs in the formal sector as crowdwork continues to spread. On the other hand, governments are keen to reap development dividends, courtesy of technological advancements. The subject matter of this paper concerns the latter. One way in which technology can aid the transition to formality is by amplifying the impact of policies aimed at driving such transitions. New technologies are therefore being increasingly integrated into public policies, plans, and programmes that are either directly aimed at or indirectly contribute towards driving the transition to formality. This working paper examines such "e-formality" approaches in the Asia Pacific region. It provides an inventory of current of public initiatives, programmes, and policies that have incorporated the use of technology and have either directly or indirectly become vehicles for increased formalization or the transition towards it.

About the author

Tejeshwi Nath Bhattarai is a technical consultant on labour market policies and has produced this document as an external collaborator for RESA unit at ILO Regional Office for Asia and the Pacific, Bangkok.

Abbreviations

BPJS	Badan Penyelenggara Jaminan Sosial (Social Insurance Administration Organization)
DWT	Decent Work Technical Support Team
G2B	government to business
G2C	government to citizen
ILO	International Labour Organization
QR	quick response
SDG	Sustainable Development Goal

Introduction

There is a broad consensus, backed by empirical evidences, that informal economic units have lower incomes and face lower productivity while workers in informal employment are at greater risk of falling into poverty than others.[1] The incidence of informality, both in terms of employment and enterprise is therefore, a major challenge in ensuring conditions of decent work for all and achieving the targets laid out under the Sustainable Development Goals (SDGs). As a region, Asia and the Pacific continues to have high levels of informality. Incidence of informal employment in the region stood at 68.2 per cent of all employed persons above 15 years of age in 2016.[2]

Formality is positively correlated with levels of socio-economic development, varies by levels of education, geography, and many other factors. It is unsurprising therefore, that there exist significant differences in the incidence of informal employment and the size of the informal sector between and within countries in the region.[3] But, while policy responses to informality cannot have a 'one-size-fits-all' approach, there are still a number of common denominators across countries and regions that need to be systematically addressed while engineering a policy response to informality. Additionally, policy innovations in one part of the world or region can serve as important lessons in another.

Technology is undoubtedly an important driver of the future of work and its rising diffusion – especially of information and communication intensive technologies – is likely to have an impact on informality trends in labour markets around the world. On the other hand, government are increasingly integrating such technologies into plans, policies, and programmes that either are directly aimed at or indirectly contribute towards driving the transition to formality. These approaches have together been termed as "e-formality" by Chacaltana, Leung, and Lee (2018). That paper aimed to assess how technologies can enhance the impact of institutional public policies addressing informality,[4] and this one follows suit by taking stock of such public initiatives, programmes, and policies from countries in Asia and the Pacific.

Methodology and limitations

The policy inventory compiled as part of this document is an outcome of a systematic review, primarily based on web-sources, of existing experiences in the Asia Pacific region of public initiatives, programmes, and policies that have incorporated the use of technology and have either directly or indirectly become vehicles of formalization or the transition towards it. Tax operations, enterprise registration, and labour-related policies were reviewed from countries covered by the ILO Regional Office for Asia and the Pacific to identify the incorporation of technology in these processes, which could pave the pathway towards formalization. Important insights on such experiences from the region were also obtained from specialists at the International Labour Organization (ILO)'s Regional Office for Asia and the Pacific, Decent Work Technical Support Team (DWT) for South Asia, and multiple country offices (see Annex).

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[1] See: ILO, 2018.

[2] Ibid.

[3] Ibid.

[4] Many countries are making progress in developing strategies to approach the transition to formality in keeping with the Transition from the Informal to the Formal Economy Recommendation, 2015 (No. 204), adopted by the tripartite constituents at the International Labour Conference in 2015.

As noted by Chacaltana, Leung, and Lee (2018), countries have explored diverse strategies to increasing the transition from the informal to formal sector, which can be broadly placed under four areas of policy interventions: those seeking to (i) increase productivity or economic capacity, (ii) strengthen and enhance regulations, (iii) create and implement incentives for registration, and (iv) improve systems and measures of enforcement. As shown in figure 1, under these four broad areas, more specific policy interventions can be identified. Policies, programmes, and initiatives compiled as part of the policy inventory in this document are categorized according to this framework developed in ILO (2014). Furthermore, complied initiatives have also been tagged according to areas of e-formalization as outlined by Chacaltana, Leung, and Lee (2018): (i) formalization of economic units, (ii) registration of financial transactions: payments and bills, (iii) electronic registration of workers, and (iv) upgrading labour inspection.

Language barrier was a challenge that limited the scope of this exercise. As far as possible, Google Translate was employed to translate websites and documents – or parts of it thereof – that were unavailable in English language. Effort has been made to ensure that the review is as comprehensive as possible. However, the inventory of policies, plans, programmes, and initiatives compiled is not an exhaustive one.

Figure 1: Main strategies used for the transition to formality
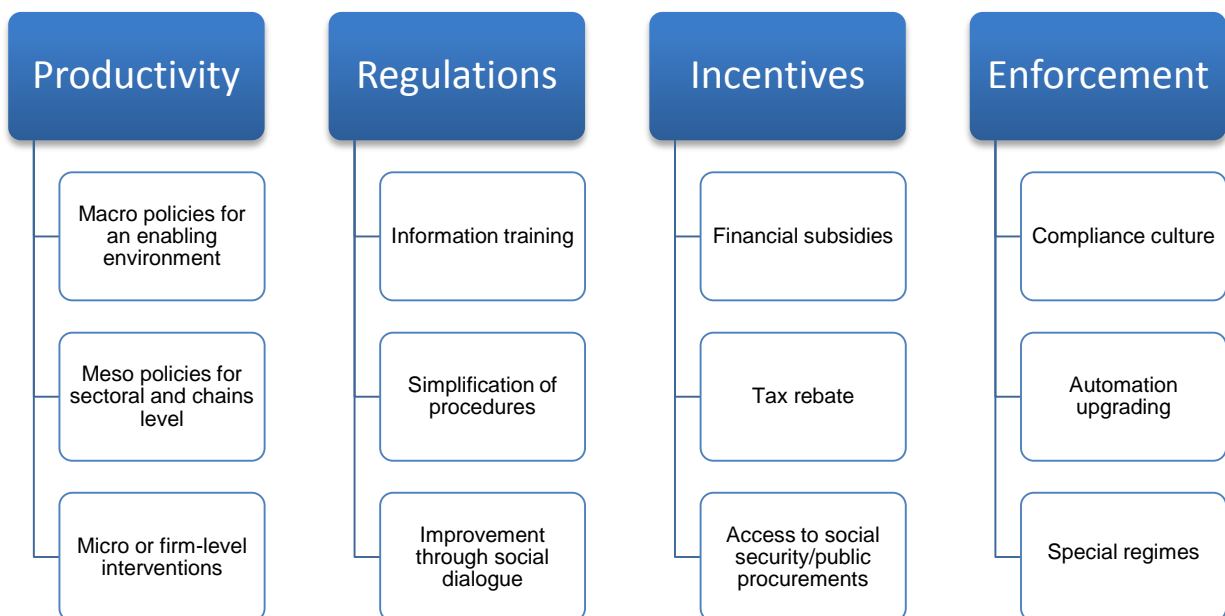
Source: ILO, 2014.

Summary of findings

In the recent years, there has been a growing recognition of technological development as a key global mega-trend that presents immense opportunities to better conditions of life. Harnessing technology for development has therefore become a key priority of governments around the world, including in the Asia and the Pacific region. Consequently, a number of governments have launched plans and initiatives to transform their respective economies and societies through increasing adoption and integration of technology for development. Use of e-technologies in government service delivery and other government to business (G2B) and government to citizen (G2C) interactions in particular have become increasingly common.

While there are considerable differences in the scale and scope of e-governance initiatives in the region, it is likely that the trend towards increasing adoption of e-technologies in public policies and service delivery will continue to grow. The fast-paced diffusion of technologies – especially information and communications intensive ones – offer an opportunity for countries to reap sustainable development dividends. Importantly, they could become an important driver of formality around the world. A key complement to promoting e-formality policies in the region is to continue efforts towards building a more digitally literate society.

With regards to e-formality, the two areas where the integration of technology in service delivery is most prevalent among countries in Asia and the Pacific, and are important pathways to formality are: registration of businesses, enterprises, or companies and registration, filing, and payment of taxes. Creating conducive business environment as expressed by improving performance rankings on the World Bank's Ease of Doing Business Index was noted to be a chief motivating factor behind efforts in multiple countries to integrate technology and simplify the processes of enterprise registration and paying taxes. Curbing tax evasion, increasing public revenues, and limiting scope for corruption by either removing or reducing the need for interactions between citizens and public officials by employing technology in service delivery, and increasing cost and time efficiency by migrating to technological platforms are other important motivations noted behind the drive to adopt and integrate technology in public programmes, plans, and initiatives.

Apart from tech-based enterprise registration and tax operations, many interesting and innovating examples have been noted from the region on e-formality trends ranging in variety from Quick Response (QR) code standardization in Singapore and Thailand, tax incentives and lottery scheme for digital payments in India, to digital currency introduction in the Marshall Islands, among many others. There are multiple examples of programmes that have been developed by governments through partnerships with various international organizations and aid agencies as well as bilateral development partners.

While examples of programmes that are developed in collaboration with the private sector are less numerous, they could become important references for any country seeking to develop policies to drive the transition to formality. The Indonesian case of collaboration between Go-Jek – a ride hailing app – and the social security administration body for employment (BPJS) to encourage and make it easier for Go-Jek partner riders to register for employment insurance through technology-based platform is an interesting model. Such experiences could inspire further policy innovation in bringing informal workers into social protection net – especially considering the trend of rising non-standard forms of employment spurred by technological developments.

In general, tech-based taxation related operations were found to be among the first steps governments have taken in integrating technology in governance and service delivery. For example, the Republic of Korea and the Philippines had already introduced online systems for tax operations by 2001. However, most developments with regards to the adoption and integration of technology in public programmes and initiatives, based on documented examples herewith, have emerged in the last decade. This might partly be related to fact that rising diffusion of information and communications intensive technology in the region has coincided with this period as shown in figure 2.

Figure 2: Trends in diffusion of information and communications technologies in Asia and the Pacific (per 100 inhabitants)
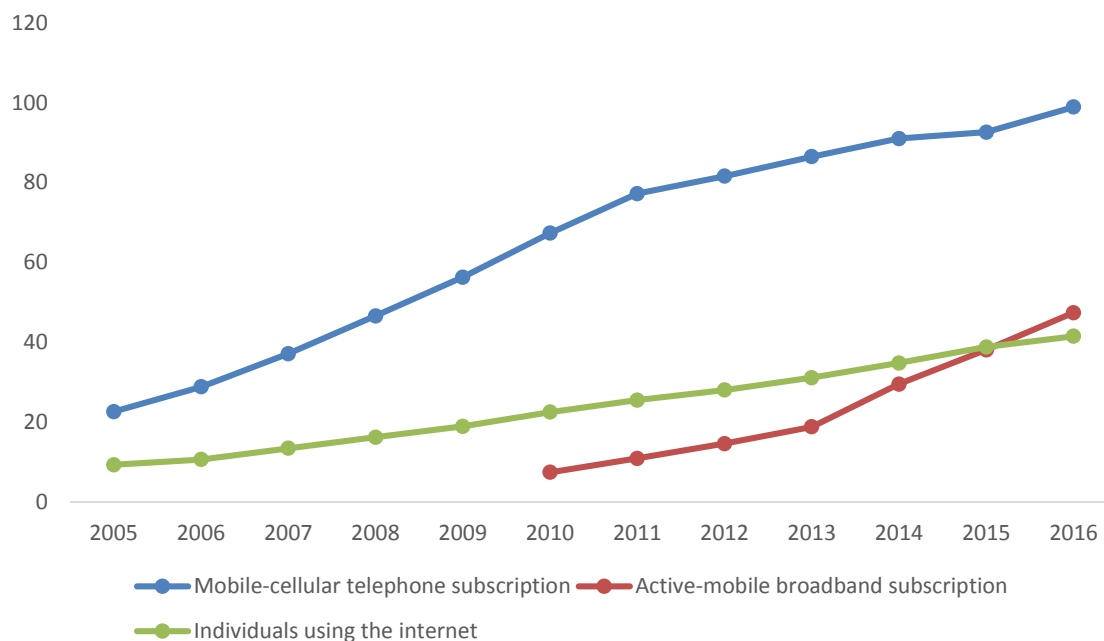
Source: ITU World Telecommunication/ICT Indicators database

Impact evaluation studies would provide clearer ideas as to whether these tech-based policies and programmes have in fact contributed to driving the transition to formality. However, since most programmes that relate to e-formality approaches are quite recent, and given the empirical challenges associated with conducting impact evaluations of programmes of such scope and nature, it is difficult to identify viable targets and to design and conduct such an evaluation. Based on web-searches and insights from ILO specialists, no existing literature was found on impact evaluations of such programmes that could be of interest to advance an impact evaluation exercise of programmes or initiatives with e-formality approach in the region.

Annex I.

Inventory of experiences in application of technology that could aid the transition to formality in Asia and the Pacific

The compilation of experiences from the region has been completed in the following two subsections A and B. Both subsections use the framework of ILO (2014) to categorize intervention strategies and each intervention is also classified in accordance to the taxonomy used by Chacaltana, Leung, and Lee (2018) (i.e. formalization of economic units, registration of financial transactions, electronic registration of workers, and upgrading labour inspections). However, while some interventions target one specific strategy, say financial subsidies as an area of incentives, others span across more than one, say macro policies linked to productivity and simplification of procedures under the regulations header. In order to systematically list them, the first sub-section, A, will only list policies that target one specific formalization strategy area. The second sub-section, B, will list policies that have a broader scope and can be categorized into more than one formalization strategy area. For this, policies under A are listed strategy-wise (i.e. productivity, regulation, incentives, and enforcement) whereas those in B are arranged alphabetically according to countries.

A. "e-formality" policies and programmes in Asia and the Pacific by formalization strategy areas

1. Raising productivity

a. Macro policies for enabling environment

India		
Name of the programme/initiative	(1) Bharat Interface for Money (BHIM) App	(2) Aadhar-enabled Payment System (AePS)
Objectives	BHIM App is geared towards promoting digital cashless transactions. The payment app uses Unified Payments Interface (UPI)--a payment system facilitating interbank transactions. Users can make direct fund transfers from their banks to anyone using the beneficiary's UPI ID or scanning their QR code with the BHIM App. Similarly, the app can also be used to receive money from other UPI users. The BHIM App works with all mobile devices including feature phones. Using it on feature phones will not require internet to access the service. Unlike digital wallet apps, BHIM is linked to users' bank accounts and do not have to be loaded with money separately.	AePS has been developed as a payment system to advance financial inclusion and promote digital payments in India. It is a bank-led model that allows for online transactions with user's Aadhar-linked bank account at Micro ATMs through business correspondents of any bank using Aadhar authentication. Aadhar authentication refers to the user's unique identification number and biometric information. The use of Aadhar authentication removes the need for physical signatures or PIN codes. The payment system allows users to conduct basic financial and non-financial transactions like fund transfer, cash withdrawal, cash deposit, and balance inquiry at Micro ATMs. One of the stated objectives of the AePS is to facilitate the disbursement of social security payments and other government entitlements like National Rural Employment Guarantee, social security pension, etc. of central or state-level government.

Type of technology (example: website, app, use of ICT, etc.)	Mobile payment app	Cashless/electronic payment
Target Public (public officials, workers, employers, etc.)	General public	General public
Years	Launched on 30 December, 2016	-
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	National Payments Corporation of India (NPCI)	National Payments Corporation of India (NPCI)
Costs	-	-
Period of implementation/Application	Not defined	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	10 million+ installs from Google Play Store [As of October 10, 2018]	Transactions through AePS rose to 13.7 million transactions in March 2018 compared to 6 million in April 2017 registering a more-than-double rise in AePS usage. AePS transactions amount in FY 2017-18 reached more than INR 268 billion compared to transactions of INR 22.8 billion in the previous year.
Marketing channel (social networks, TV, etc.)	Twitter, Facebook, YouTube, LinkedIn	Twitter, Facebook, YouTube, LinkedIn
Main difficulties/challenges when implementing the programme	-	-
Post implementation modifications made	-	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-	-
Evaluations	Nation-wide initiatives that enable cashless/digital payments and help create conditions for transition to formality through registration of financial transactions	
Source(s) of information	https://play.google.com/store/apps/details?id=in.org.npci.upiapp&hl=en https://gadgets.ndtv.com/apps/news/bhim-app-android-download-ios-version-supported-banks-transaction-limits-and-more-you-need-to-know-1643528 https://www.bhimupi.org.in	https://www.npci.org.in/product-overview/aeps-product-overview http://www.nird.org.in/nird_docs/cle/cle11.pdf http://cashlessindia.gov.in/aeps.html
Classification according to Chacaltana, Leung, and Lee (2018)	Registration of financial transactions	Registration of financial transactions

Thailand	
Name of the programme/initiative	PromptPay money transfer
Objectives	Launched as a part of the government's National E-payment, PromptPay is an interbank mobile payment system that has significantly lower transaction costs compared to conventional bank transfers. By facilitating money transfers and payments through a mobile app with minimal charges, the service is expected to prod people towards the formal economy. PromptPay can be registered using a Thai citizen ID number or a Thai mobile number and is linked to users' bank account. There is a one PromptPay account per citizen ID or mobile number restriction. The system is also being used by the government to make welfare payments to citizens. For transactions below THB5,000 there is no transaction fee, and the highest transaction fee--that of THB10--is levied on transactions exceeding THB100,000.
Type of technology (example: website, app, use of ICT, etc.)	Cashless/electronic payment, Mobile app
Target Public (public officials, workers, employers, etc.)	General public
Years	Launched in January 2017
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Government of Thailand - Bank of Thailand, Ministry of Finance
Costs	-
Period of implementation/Application	Not defined

Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	According to media reports, by April 2018, there have been 97 million PromptPay transactions worth THB370 billion. Similarly, 37 million savings accounts have been used to get PromptPay--25 million out of that were opened using citizen ID number and the rest through mobile number.
Marketing channel (social networks, TV, etc.)	Bank of Thailand website, Facebook, Twitter, YouTube
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	With high level of convenience in transferring money and low transaction fees involved, supported by widespread use of the service, PromptPay could be an important vehicle towards the transition to formality in Thailand. It is a nation-wide initiative that enable cashless/digital payments and helps create conditions for transition to formality through registration of financial transactions
Source(s) of information	https://www.bot.or.th/Thai/PaymentSystems/PSServices/PromptPay/Pages/default_old.aspx https://asia.nikkei.com/Economy/Thailand-rolls-out-PromptPay-money-transfer-service2 https://www.bangkokpost.com/business/finance/1439746/bot-spreading-promptpay-reach
Classification according to Chacaltana, Leung, and Lee (2018)	Registration of financial transactions

Viet Nam	
Name of the programme/initiative	No Cash Policy
Objectives	The objective of this policy is to sharply reduce the amount of cash in the economy and actively promoting electronic and digital payment methods throughout the country. The desired outcome is not just greater efficiency in terms of cost and time but also to improve documentation and transparency in transactions, including control of tax evasion. This will include the setting up of non-cash payment or electronic payment infrastructure across the country, like installation of point of sale machines and ATMs, and encouraging the use of multi-purpose magnetic cards. Furthermore, the policy envisages to reduce fees related to electronic payments for credit organizations and commercial banks while increasing the fees for cash-based payments. The policy aims to limit cash-based transactions to 10 per cent of all transactions by 2020. It also aims to sharply increase the acceptance of non-cash payment from sellers and distributors and expects increased accessibility to non-cash and electronic payment means throughout the country
Type of technology (example: website, app, use of ICT, etc.)	Cashless/electronic payment
Target Public (public officials, workers, employers, etc.)	Pan-economy
Years	2016-2020
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Policy based on Prime Ministerial Decision. All ministries, sectors, and localities to send implementation reports to the State Bank of Viet Nam for summing up progress and reporting to the Prime Minister.
Costs	-
Period of implementation/Application	Targets to be achieved by 2020
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-
Marketing channel (social networks, TV, etc.)	-
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	Macro-policy that aims to create conducive environment for the transition to formality
Source(s) of information	http://vietnamlawmagazine.vn/decision-no-2545-qd-ttg-approving-the-scheme-on-development-of-non-cash-payment-in-vietnam-during-2016-2020-5853.html

	https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_policy/documents/publication/wcms_635996.pdf
Classification according to Chacaltana, Leung, and Lee (2018)	Registration of financial transactions

b. Meso policies for sectoral and chains level

No specific policies/programmes found

c. Micro policies for firm level interventions

Fiji	
Name of the programme/initiative	FRCS Free POS App
Objectives	This point-of-sale app gives users, particularly small businesses, the minimum compliance required to run a business in compliance with Tax Administration (Electronic Fiscal Device) Regulations 2017. The FRCS POS fulfils the minimum accreditation requirements to run a business using an Android or iOS point-of-sale device. It is able to record payments, send and track invoices from the user's device, customize products with names and prices, send fiscal receipts via email, print to PDF or share via Bluetooth or different apps, and issue refunds, copy, training or pro forma (quotations).
Type of technology (example: website, app, use of ICT, etc.)	Mobile App
Target Public (public officials, workers, employers, etc.)	Business owners
Years	Launched on 23 Feb 2018 [on Google Play Store]
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Fiji Revenue and Customs Service
Costs	-
Period of implementation/Application	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	100+ installs from Google Play Store [As of October 9, 2018]
Marketing channel (social networks, TV, etc.)	FRCS website
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	By enabling businesses to use their mobile devices as a POS device compliant with the tax administration's standards, it helps boost productivity at firm-level
Source(s) of information	https://itunes.apple.com/us/app/frcs-free-pos/id1375476705?mt=8 https://play.google.com/store/apps/details?id=fj.org.frcs.pos&hl=en
Classification according to Chacaltana, Leung, and Lee (2018)	Registration of financial transactions

2. Strengthening regulations

a. Information training

Cambodia			
Name of the programme/initiative	(1) GDT Live Chat Mobile App	(2) Cambodia Tax Calendar 2018 (Cambodia Calendar Tax 2018 on Google Play Store) Mobile App	(3) GDT News Mobile App
Objectives	Developed to assist taxpayers with tax-related queries directly and to	The app shows users important dates (including	Developed to disseminate news from the General Department of Taxation

	provide information about taxation.	deadlines) for tax returns filing.	(GDT) such as legislations and other related announcements. Also features a live chat feature that enables user to post queries about taxation to the GDT.
Type of technology (example: website, app, use of ICT, etc.)	Mobile application available on Google Play Store and Apple App Store	Mobile Application available on Google Play Store and Apple App Store	Mobile Application available on Google Play Store and Apple App Store
Target Public (public officials, workers, employers, etc.)	Taxpayers, general public	Taxpayers, general public	Taxpayers, general public
Years	Launched on 10 December 2017 [On Google Play Store]	Version 1.0 launched on 21 January 2015 on Apple App Store, Launched on Google Play Store on 28 December 2017	Version 1.0 launched on 18 August 2018 [On Apple App Store]
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	General Department of Taxation (GDT)	General Department of Taxation (GDT)	General Department of Taxation (GDT)
Costs	-	-	-
Period of implementation/Application	Not defined	Not defined	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	1,000+ installs from Google Play Store [As of October 8, 2018]	5,000+ installs from Google Play Store [As of October 8, 2018]	1,000+ installs from Google Play Store [As of October 8, 2018]
Marketing channel (social networks, TV, etc.)	Facebook, GDT website	Facebook	Facebook, GDT website
Main difficulties/challenges when implementing the programme	-	-	-
Post implementation modifications made	-	Version updates, including yearly updates of calendar (as yet only on Apple App Store)	Version updates [On Apple App Store]
Alliances of programmes with other institutions (e.g. private sector sponsors)	-	-	-
Evaluations	Ease of access to information related to taxation can encourage registration and compliance		
Source(s) of information	https://www.appbrain.com/app/gdt-live-chat/pattent_sharing_aos.smartteeam.gdt.com.livechat https://play.google.com/store/apps/details?id=pattent_sharing_aos.smartteeam.gdt.com.livechat&hl=en http://www.tax.gov.kh/en/videos.php?Id=12	https://play.google.com/store/apps/details?id=com.gdt.project.taxclendarnew2018 https://itunes.apple.com/kh/app/cambodia-tax-calendar-2018/id926656830?mt=8 https://www.appbrain.com/app/cambodia-calendar-tax-2018/com.gdt.project.taxclendarnew2018	https://play.google.com/store/apps/details?id=com.auditdr.gdt.gdtnewsapp https://itunes.apple.com/kh/app/gdt-news/id1417779775?mt=8 http://www.tax.gov.kh/en/videos.php?Id=18
Classification according to Chacaltana, Leung, and Lee (2018)	-	-	-

Mongolia	
Name of the programme/initiative	Social Insurance Mobile App
Objectives	Through the social insurance mobile app, the insured can view and monitor their monthly premium payments including contributions from the employer. Users can also take control of their health insurance premiums through the app. It also features reminders and notices.
Type of technology (example: website, app, use of ICT, etc.)	Mobile App
Target Public (public officials, workers, employers, etc.)	Workers

Years	Launched on 3 January 2018 [On Google Play Store] Version 1.0 launched on 6 April 2018 [On Apple App Store]
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Social Insurance General Office
Costs	Produced internally by SIGO at no cost
Period of implementation/Application	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	10,000+ downloads from Google Play Store [As of October 10 2018]; the number of active users is around 11, 325
Marketing channel (social networks, TV, etc.)	Facebook
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	Version updates
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	Ease of access to information related to social insurance can encourage registration and compliance
Source(s) of information	http://www.ndaatgal.mn/v1/view/1257# https://play.google.com/store/apps/details?id=org.ndaatgal&hl=en_US https://itunes.apple.com/us/app/niigmiin-daatgal/id1366575787?mt=8
Classification according to Chacaltana, Leung, and Lee (2018)	Registration of workers

Nepal

Name of the programme/initiative	IRD Nepal
Objectives	The mobile app can be used to view notices and publications from the Internal Revenue Department, view legislations and regulations on taxation, access tax calculator, access tax registration information, estimate returns, and view arrears, among others.
Type of technology (example: website, app, use of ICT, etc.)	Mobile App
Target Public (public officials, workers, employers, etc.)	Taxpayers, general public
Years	Launched on 15 November 2016
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Inland Revenue Department
Costs	-
Period of implementation/Application	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	10,000+ downloads from Google Play Store [As of October 11, 2018]
Marketing channel (social networks, TV, etc.)	IRD website
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	Version updates
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	Ease of access to information related to taxation can encourage registration and compliance
Source(s) of information	https://ird.gov.np/Uploads/205b8d35-e826-4612-b034-8df428d04dcfnotice%20for%20app.pdf https://play.google.com/store/apps/details?id=com.mantraideas.irdnepal&hl=en
Classification according to Chacaltana, Leung, and Lee (2018)	-

b. Simplification of procedures

Australia		
Name of the programme/initiative	(1) Streamlining Business Registration	(2) Australian Tax Office (ATO) online service for individuals and sole traders; ATO App
Objectives	To make it easier for businesses to register by streamlining the registration process. Initiatives under this programme include: ▪ Developing a single online portal for business and company registration: Removes the need for businesses to contact multiple agencies for registration and allows for a one-stop-shop to register for multiple businesses and tax registrations ▪ Publishing Application Programmeming Interfaces (APIs): APIs for registration will enable private sector to offer alternative online registration services ▪ Assessing the efficacy of Single Business Identifier (SIB): Under this initiative the government analysed the costs and benefits associated with the SIB which would have replaced the existing Australian Company Numbers (ACNs) and Business Tax File Numbers (BTFNs) with the Australian Business Number (ABN).	With a myGov account, individuals and sole traders can complete a variety of operations online, such as: ▪ Lodge and check the progress of tax returns using myTax or notify ATO if not required to lodge ▪ View, print, or amend tax returns from 2015 onwards; ▪ View tax and activity statement account balance and transactions ▪ Pay taxes online; ▪ Make superannuation contributions for employees, etc. The ATO App lets individual taxpayers, small business owners, or self-managed superannuation fund trustees to access relevant tax information and tools in a single mobile app.
Type of technology (example: website, app, use of ICT, etc.)	Single online portal/website, publishing API codes	Online portal, Mobile App
Target Public (public officials, workers, employers, etc.)	Entrepreneurs starting their business who do not have their business registered as yet; Existing businesses that need to make an additional registration to their current/existing business (e.g. new tax registration).	Individual taxpayers, small business owners, self-managed superannuation fund trustees
Years	New streamlined business registration service moved from Beta to Live on 29 June 2018	App launched on Google Play Store in June 2013
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Department of Industry, Innovation, and Science	Australian Tax Office (ATO)
Costs	-	-
Period of implementation/Application	Not defined	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-	500,000+ downloads of ATO mobile app on Google Play Store. [As of October 4, 2018]
Marketing channel (social networks, TV, etc.)	Facebook, Twitter, LinkedIn, YouTube	Facebook, Twitter, LinkedIn, Youtube, RSS feed
Main difficulties/challenges when implementing the programme	-	-
Post implementation modifications made	-	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-	-
Evaluations	A simple registration process that either in part or completely eliminates the need to physically visit concerned authorities makes it convenient for businesses to register. This simplification of procedures,	Ease of conducting tax-related operations can encourage economic units to register and pay taxes

	it is assumed, can encourage economic units to register.	
Source(s) of information	https://www.business.gov.au/for-government/streamlining-business-registration https://www.industry.gov.au/government-to-government/digital-services/business-registration-service	https://www.ato.gov.au/General/Online-services/Individuals-and-sole-traders/ https://www.ato.gov.au/General/Online-services/ATO-app/ https://www.ato.gov.au/General/Paying-the-ATO/How-to-pay/ https://www.appbrain.com/app/australian-taxation-office/au.gov.ato.ATOTax
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units	

Bangladesh

Name of the programme/initiative	Taxpayer Online Service
Objectives	The National Board of Revenue (NBR) has an online taxpayer service portal that allows taxpayers to electronically submit the following: Income tax returns and attachments (which are also processed online) ▪ Exemption/Tax Holiday application and upload attachments ▪ Appeal application and upload attachments Furthermore, the portal also allows taxpayers to access an online guideline and download related income tax rules and regulations.
Type of technology (example: website, app, use of ICT, etc.)	Online portal
Target Public (public officials, workers, employers, etc.)	Taxpayers
Years	Launched in 2016
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	National Board of Revenue (NBR)
Costs	-
Period of implementation/Application	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-
Marketing channel (social networks, TV, etc.)	YouTube
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	Ease of conducting tax-related operations can encourage economic units to register and pay taxes
Source(s) of information	https://www.youtube.com/watch?v=jNHlNjafDiI https://www.etaxnbr.gov.bd/tpos/home https://www.thedailystar.net/business/nbr-launches-taxpayer-online-service-1305256
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units

Brunei Darussalam

Name of the programme/initiative	Single step business registration/company incorporation
Objectives	Registration of businesses and incorporation of companies can be completed in a single step by filling an application, paying requisite fees, and uploading required documents. Upon processing and approval of the application, a business registration certificate or company incorporation certificate, as the case may be, is emailed to the requesting party within a week via email. The objective behind moving to an online-based platform is to create a favourable business environment by simplifying, speeding up, and easing the registration process.
Type of technology (example: website, app, use of ICT, etc.)	Online portal
Target Public (public officials, workers, employers, etc.)	Entrepreneurs and businesses

Years	Launched in 2015
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Registry of Companies and Business Names Division, Ministry of Finance
Costs	-
Period of implementation/Application	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	Between January and September 2015, a total of 416 companies registered using the online system. Similarly, between July 27 to September, 317 owners filed application for registration.
Marketing channel (social networks, TV, etc.)	Facebook, Twitter, Instagram
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	A simple registration process that either in part or completely eliminates the need to physically visit concerned authorities makes it convenient for businesses to register. This simplification of procedures, it is assumed, can encourage economic units to register.
Source(s) of information	http://11-216.static.espeed.com.bn/index.php/news/479-new-online-system-registration-of-business-names-made-easy http://business.gov.bn/SitePages/Starting%20A%20Business.aspx https://www.roc.gov.bn/brunei-master/viewInstance/view.html?id=69d4905983746cacff75f0932b069242430a1880b5d10fd9&_timestamp=342684979710100
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units

Cambodia

Name of the programme/initiative	(1)　Online Business Registry	(2)　Online tax registration, filing and payment
Objectives	The online business registry eases the procedure to register a business and/or incorporate a company. Existing business in the Kingdom are required to re-register making use of the new digital registry.	Tax registration in Cambodia can be made online through the General Department of Taxation's online portal. There is now also an electronic payment system for taxes in Cambodia. The objectives of the undertaking, according to news media (see source), is to boost transparency, enhance revenue collection and ease business operation.
Type of technology (example: website, app, use of ICT, etc.)	Online portal	Online portal, e-payment
Target Public (public officials, workers, employers, etc.)	Entrepreneurs and businesses	Taxpayers, entrepreneurs, businesses
Years	Launched on January 4, 2016	Online tax registration - Launched in 2014, E-payment of taxes - Launched in 2017
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Ministry of Commerce	General Department of Taxation (GDT)
Costs	-	-
Period of implementation/Application	Not defined	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-	-
Marketing channel (social networks, TV, etc.)	YouTube	-
Main difficulties/challenges when implementing the programme	Slower than expected usage of the new online system, prompting the government to extend deadlines to re-register on more than one occasion. Reports of technical difficulties resulting in delays in re-registration.	Online tax registration portal and online tax payment portal accessible through the General Department of Taxation (GDT)'s website have remained inaccessible throughout the period of preparation of this document.

Post implementation modifications made	-	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-	-
Evaluations	A simple registration process that either in part or completely eliminates the need to physically visit concerned authorities makes it convenient for businesses to register. This simplification of procedures, it is assumed, can encourage economic units to register.	Ease of conducting tax-related operations can encourage economic units to register and pay taxes. Therefore, resolution of technical issues inherent in the system should be prioritized.
Source(s) of information	https://www.b2b-cambodia.com/articles/the-new-online-registration-system/ http://www.businessregistration.moc.gov.kh	https://www.b2b-cambodia.com/articles/the-new-online-registration-system/ http://tax.gov.kh/en/ https://www.khmertimeskh.com/5091468/tax-payment-goes-online/ https://www.phnompenhpost.com/business/gdt-now-allows-you-pay-tax-man-online
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units	

China

Name of the programme/initiative	Electronic Business Licence System
Objectives	To make the business registration process more convenient and efficient and thereby improve overall business environment
Type of technology (example: website, app, use of ICT, etc.)	Online portal for business registration, digital registry of enterprises
Target Public (public officials, workers, employers, etc.)	Start-ups and new businesses and enterprises
Years	To be initiated nationwide by October 2017
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	State Administration for Industry and Commerce (SAIC)
Costs	-
Period of implementation/Application	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-
Marketing channel (social networks, TV, etc.)	-
Main difficulties/challenges when implementing the programme	Regional disparities in integration of electronic systems for digital registration
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	A simple registration process that either in part or completely eliminates the need to physically visit concerned authorities makes it convenient for businesses to register. This simplification of procedures, it is assumed, can encourage economic units to register. Continuing to maintain a window-based registration system while encouraging the use of electronic registration as done in China likely allows for smoother transition to the new digital registry system.
Source(s) of information	http://qyj.saic.gov.cn/zyfb/gszjfb/201704/t20170412_261578.html http://english.gov.cn/policies/latest_releases/2016/07/05/content_281475386658204.htm http://www.china-briefing.com/news/chinas-business-registration-process-become-easier-cheaper-following-october-digitalization/ https://www.tmf-group.com/en/news-insights/articles/2017/may/china-online-business-registration/

Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units

Cook Islands

Name of the programme/initiative	E-tax - Online tax system
Objectives	Help taxpayers manage their tax returns efficiently. Taxpayers can file their tax returns and make payments online. One of the stated objectives of the e-tax system is to streamline the taxation process and enable the Revenue Management Department to bolster compliance though increased automation of its processes.
Type of technology (example: website, app, use of ICT, etc.)	Online portal
Target Public (public officials, workers, employers, etc.)	Taxpayers
Years	Launched on 6 November 2015
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Revenue Management Department - Ministry of Finance and Economic Management (MFEM)
Costs	-
Period of implementation/Application	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-
Marketing channel (social networks, TV, etc.)	Twitter, MFEM website
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	Under Phase II of the e-tax system implementation, it was made possible for tax payers to to file income tax (including company and trust returns), VAT, PAYE, and PAYE Reconciliation returns and make payments electronically. It also avails tax agents of improved functionality. Phase II was launched in 2016.
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	Ease of conducting tax-related operations can encourage economic units to register and pay taxes.
Source(s) of information	http://www.mfem.gov.ck/oldsite/index.php/latest-news-18/603-e-tax-online-official-launch https://tax.cookislands.gov.ck http://www.mfem.gov.ck/oldsite/index.php/development-partners-and-cook-islands-government-meetings/73-uncategorised/621-e-tax-online-official-launch-phase-two
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units

Fiji

Name of the programme/initiative	MyInfo portal
Objectives	Developed with the objective to avail taxpayers of the convenience of registering and updating their tax-related information online
Type of technology (example: website, app, use of ICT, etc.)	Online portal
Target Public (public officials, workers, employers, etc.)	Individual taxpayers and businesses
Years	Launched in June 2018
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Fiji Revenue and Customs Service
Costs	-
Period of implementation/Application	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-

Marketing channel (social networks, TV, etc.)	YouTube
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	Ease of conducting tax-related operations can encourage economic units to register and pay taxes.
Source(s) of information	http://www.clsassifieds.fijitimes.com/taxman-develops-online-portal-for-taxpayers/ https://www.frcs.org.fj/video-gallery/myinfo-portal/ http://www.clsassifieds.fijitimes.com/taxman-develops-online-portal-for-taxpayers/
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units

India

Name of the programme/initiative	e-Payment of taxes
Objectives	Taxpayers in India can use the e-Payment portal of the Income Tax Department to make tax payments. The payments can be made either through internet banking or a debit card of an authorized bank.
Type of technology (example: website, app, use of ICT, etc.)	Online portal
Target Public (public officials, workers, employers, etc.)	Taxpayers: individuals and enterprises
Years	-
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Income Tax Department
Costs	-
Period of implementation/Application	-
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-
Marketing channel (social networks, TV, etc.)	-
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	Ease of conducting tax-related operations can encourage economic units to register and pay taxes.
Source(s) of information	https://onlineservices.tin.egov-nsdl.com/etaxnew/Procedure.html
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units

Indonesia

Name of the programme/initiative	(1) Business licencing through Online Single Submission (OSS)	(2) One-Stop Tax Service
Objectives	The Online Single Submission (OSS) has been launched with the objective of streamlining the process of business registration, cutting down the otherwise lengthy procedure, and thereby driving more investments. The single submission mechanism makes it possible to get multiple business licences required to operate a business (such as location permit, environmental permit, building permit, etc.) from a single window irrespective of which level of government they are issued by.	Using the one-stop tax service, taxpayers can file their tax returns online.

Type of technology (example: website, app, use of ICT, etc.)	Online portal	Online portal
Target Public (public officials, workers, employers, etc.)	Entrepreneurs and businesses	Taxpayers
Years	Launched in July 2018	-
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Ministry for Economic Affairs	Directorate General of Taxes
Costs	-	-
Period of implementation/Application	Not defined	-
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-	-
Marketing channel (social networks, TV, etc.)	-	-
Main difficulties/challenges when implementing the programme	-	-
Post implementation modifications made	-	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-	-
Evaluations	A simple registration process that either in part or completely eliminates the need to physically visit concerned authorities makes it convenient for businesses to register. This simplification of procedures, it is assumed, can encourage economic units to register.	Ease of conducting tax-related operations can encourage economic units to register and pay taxes.
Source(s) of information	https://oss.go.id/oss/ https://oss.go.id/oss/portal/download/f/PedomanInggris.pdf https://asia.nikkei.com/Economy/Indonesia-starts-online-business-registration-with-one-hour-permit	https://jakartaglobe.id/business/its-tax-time-heres-how-to-pay-your-tax/ https://djponline.pajak.go.id/account/login
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units	

Iran, Islamic Rep. of	
Name of the programme/initiative	Online enterprise registration portal
Objectives	The online portal can be used to conduct operations related to enterprise registration.
Type of technology (example: website, app, use of ICT, etc.)	Online portal
Target Public (public officials, workers, employers, etc.)	Entrepreneurs and businesses
Years	-
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Department of Tax Affairs and the State Registration and Property Registration Organization
Costs	-
Period of implementation/Application	-
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-
Marketing channel (social networks, TV, etc.)	-
Main difficulties/challenges when implementing the programme	Website unavailable in languages other than Persian
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	A simple registration process that either in part or completely eliminates the need to physically visit concerned authorities makes it

	convenient for businesses to register. This simplification of procedures, it is assumed, can encourage economic units to register.
Source(s) of information	http://irsherkat.ssaa.ir
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units

Japan

Name of the programme/initiative	e-Tax and eLTAX online tax filing and payment system
Objectives	Online filing and payment of national and local taxes are possible in Japan using the e-Tax and eLTAX online portals respectively.
Type of technology (example: website, app, use of ICT, etc.)	Online portal, digital payment
Target Public (public officials, workers, employers, etc.)	Taxpayers
Years	-
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	National Tax Agency
Costs	-
Period of implementation/Application	-
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-
Marketing channel (social networks, TV, etc.)	-
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	Ease of conducting tax-related operations can encourage economic units to register and pay taxes.
Source(s) of information	http://www.eltax.jp/ http://www.e-tax.nta.go.jp/index.html https://www.eu-japan.eu/taxes-accounting/practical-guides/online-procedures-etax-eltax
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units

Kiribati

Name of the programme/initiative	Kiribati e-Tax
Objectives	The e-tax portal allows taxpayers to file tax returns and view statements online thereby making it convenient for users to manage their taxes remotely.
Type of technology (example: website, app, use of ICT, etc.)	Online portal
Target Public (public officials, workers, employers, etc.)	Taxpayers
Years	-
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Ministry of Finance and Economic Development
Costs	-
Period of implementation/Application	-
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-
Marketing channel (social networks, TV, etc.)	-
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	Ease of conducting tax-related operations can encourage economic units to register and pay taxes.
Source(s) of information	https://etax.tax.gov.ki/

Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units

Korea, Rep. of

Name of the programme/initiative	HomeTax System
Objectives	Online tax administration service that enables taxpayers to manage multiple tax related operations online, such as: E-Tax filing, E-Notice, E-Payment, E-Tax certificate, etc.
Type of technology (example: website, app, use of ICT, etc.)	Online portal
Target Public (public officials, workers, employers, etc.)	Taxpayers
Years	Initiated in 2001, Launched in 2004
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	National Tax Service (NTS)
Costs	KRW 17.7 billion (USD 13.7 million) approx.
Period of implementation/Application	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	Electronic filing of tax returns has risen over the years. According to Kim (2017), electronic tax filing as a ratio of total tax filing reached 89.2 per cent in 2013, up from 78.5 per cent in 2005.
Marketing channel (social networks, TV, etc.)	In initial stages, NTS sough cooperation from Association of Tax Professionals in raising awareness among taxpayers about Hometax and on how to use it.
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	In 2002-2004, Hometax was expanded to cover additional tax affairs. In 2005-2006, existing services such as e-Payment, e-Notice, e-Filing were expanded and upgraded. Between 2007 and 2010, services such as credit card tax payment and pre-filled returns were introduced. Since then, other additions have been made, such as integrates multiple tax-related websites.
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	Ease of conducting tax-related operations can encourage economic units to register and pay taxes.
Source(s) of information	https://etax.tax.gov.ki/ http://iobe.gr/docs/pub/PRE_Dr.%20KIM%20Jaejin_01062017_PUB_GR.pdf https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=2ahUKEwjMgefDjYXeAhVJvI8KHSYtAOcQFjABegQIChAE&url=http%3A%2F%2Fwww.mois.go.kr%2Fcmm%2Ffms%2FFileDown.do%3FatchFileId%3DFILE_00070312AUWtGj_%26fileSn%3D0&usg=AOvVaw02TcOuwtDUM6A3LaKda0IP
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units

Malaysia

Name of the programme/initiative	(1) e-portals for tax operations	(2) MyCoID portal and project
Objectives	The Inland Revenue Board (IRB) has developed multiple e-portals that allow taxpayers to carry out various tax-related operations online and even through mobile devices. The e-Daftar portal is targeted to new taxpayers. It can be used to register their tax files and get tax reference number. The e-filing portals can be used to electronically fill and submit income tax returns and the ByrHASiL portal can be used for the payment of taxes through authorized banks. The Malaysian IRB actively promotes electronic tax services and employs incentives in order to attract taxpayers	Company registration and incorporation in Malaysia has been reduced to three simple steps: register, submit relevant information, and pay through MyCoID portal; get approval from the Companies Commission of Malaysia (SSM); receive notification of registration from SSM via email. Furthermore, under MyCoID project, businesses in Malaysia are issued an incorporation number which is used for registration and transaction purposes with multiple government agencies such as the Inland Revenue Board (IRD), Employees Provident Fund (EFP), Human Resources

	towards such means of filing and payment. In case of electronic filing, for example, the IRB allows for a 15-day grace period from the official deadline. Similarly, in case of late submission of tax return, the penalty for electronic submission is 5 per cent less than for non-electronic submission.	Development Fund (HRDF), Social Security Organization (SOCSO), and Small and Medium Enterprise Corporation Malaysia (SME Corp. Malaysia). MyCoID system allows for automatic population of data for simultaneous registration with the aforementioned government agencies following incorporation.
Type of technology (example: website, app, use of ICT, etc.)	Online portals	Online portal
Target Public (public officials, workers, employers, etc.)	Taxpayers	Entrepreneurs and businesses
Years	IRB first launched electronic tax system in 2004	Project to integrate corporate identity launched in 2010, MyCoID portal for online registration launched on 31 January 2017
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Inland Revenue Board (IRB)	Companies Commission of Malaysia (SSM)
Costs	-	-
Period of implementation/Application	Not defined	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	By 2012, 37 per cent of active taxpayers were filing returns electronically compared to just 5 per cent of taxpayers in 2006.	-
Marketing channel (social networks, TV, etc.)	Seminars, talks, television advertisements, flyers, pamphlets, roadshows.	Facebook, YouTube
Main difficulties/challenges when implementing the programme	Low initial uptake of electronic system primarily due to concerns surrounding privacy and security of information sent online. Practical challenges like the impossibility of filing returns offline and uploading them later. Development of electronic system was a government-led effort with little or no consultation with the private sector.	-
Post implementation modifications made	Multiple technical upgrades and updates incorporated. Private sector involved and ideas sought through professional bodies like accountants and tax preparers to enhance the electronic system.	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-	-
Evaluations	Ease of conducting tax-related operations can encourage economic units to register and pay taxes.	A simple registration process that either in part or completely eliminates the need to physically visit concerned authorities makes it convenient for businesses to register. This simplification of procedures, it is assumed, can encourage economic units to register.
Source(s) of information	http://www.doingbusiness.org/content/dam/doingBusiness/media/Annual-Reports/English/DB14-Full-Report.pdf http://edaftar.hasil.gov.my/indexBI.php https://ez.hasil.gov.my/CI/ https://byrhasil.hasil.gov.my	https://mycoid2016.ssm.com.my https://mycoid2016.ssm.com.my/document/mycoid_booklet1.pdf https://mycoid2016.ssm.com.my/document/MyCoID2016_User_Manual.pdf http://www.maicsa.org.my/technical_announcements/2017/technical_announcements_170123_2.aspx http://www.miti.gov.my/index.php/pages/view/1537
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units	

Maldives		
Name of the programme/initiative	(1) MIRA connect	(2) Business Portal
Objectives	The MIRA portal integrates multiple tax-related operations into a single online platform that taxpayers can access from anywhere. E-registration service enables taxpayers to update business registration details such as: adding new business activities, updating changes related to registration and bank accounts, etc. E-Filing allows for convenient filing of taxes. It further allows users to view filing history, obligations, and tax assessment notices. Documents can also be submitted using this service.	A single platform that allows businesses to complete multiple actions related to starting an enterprise. The portal also consists on an online business registry where names and registration status of businesses in the country can be looked up.
Type of technology (example: website, app, use of ICT, etc.)	Online portal	Online portal
Target Public (public officials, workers, employers, etc.)	Taxpayers	Entrepreneurs and businesses
Years	-	-
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Maldives Inland Revenue Authority	Ministry of Economic Development
Costs	-	-
Period of implementation/Application	-	-
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-	-
Marketing channel (social networks, TV, etc.)	Facebook, Twitter	Facebook, Twitter
Main difficulties/challenges when implementing the programme	-	-
Post implementation modifications made	E-Payment service which will allow taxpayers to make tax payments, view payment history and pending payment obligations is expected to be added to MIRA connect portal	From 2 September 2018 onwards, most services related to starting a new business can only be done through the Business Portal viz., name reservation, business name registration, sole proprietorship registration submission, company registration submission, SME Categorization, Logo registration, Seal registration, etc.
Alliances of programmes with other institutions (e.g. private sector sponsors)	-	-
Evaluations	Ease of conducting tax-related operations can encourage economic units to register and pay taxes.	A simple registration process that either in part or completely eliminates the need to physically visit concerned authorities makes it convenient for businesses to register. This simplification of procedures, it is assumed, can encourage economic units to register.
Source(s) of information	https://www.mira.gov.mv/TPOS/Services.aspx	https://business.egov.mv
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units	

Mongolia

Name of the programme/initiative	Electronic Taxation System
Objectives	Online portal that facilitates registration as a taxpayer and other tax-related operations such as tax payments.
Type of technology (example: website, app, use of ICT, etc.)	Online portal
Target Public (public officials, workers, employers, etc.)	Taxpayers
Years	Launched in 2014
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	General Department of Taxation
Costs	-
Period of implementation/Application	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-
Marketing channel (social networks, TV, etc.)	-
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	Ease of conducting tax-related operations and can encourage greater compliance.
Source(s) of information	https://e-tax.mta.mn/portal http://lehmanlaw.mn/blog/the-mongolian-government-going-online/
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units

Myanmar

	(1) Online payment system for Taxpayer and eFiling service	(2) Myanmar Companies Online (MyCO)
Name of the programme/initiative	(1) Online payment system for Taxpayer and eFiling service	(2) Myanmar Companies Online (MyCO)
Objectives	The online payment system allows taxpayers currently to pay income tax, capital gains tax, commercial tax, stamp duty, and specific goods tax online. Online filing of tax returns is also possible through the e-Filing service.	MyCo enables new enterprises to file an online application to incorporate a company or register an entity. The entire application process, including the payment of fees can be done online. On completion of the approval process, a certificate of incorporation is sent to the applicant via email and details of the registered company will be made available online on the business registry available on the MyCO portal. It also has guidelines for relevant operations.
Type of technology (example: website, app, use of ICT, etc.)	Online portal	Online portal
Target Public (public officials, workers, employers, etc.)	Taxpayers	Enterprises and businesses
Years	-	Launched in September 2018
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Internal Revenue Department	Directorate of Investment and Company Administration
Costs	-	-
Period of implementation/Application	-	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number	-	-

of downloads of an app, etc.)		
Marketing channel (social networks, TV, etc.)	-	-
Main difficulties/challenges when implementing the programme	-	-
Post implementation modifications made	The Internal Revenue Department has invited banks and mobile money operators to submit Expression of Interest (EOI) to develop mobile banking solution for tax payments. The service is expected to debut 3-6 months after EOIs are submitted.	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-	Japan Fund for Poverty Reduction
Evaluations	Ease of conducting tax-related operations can encourage economic units to register and pay taxes.	A simple registration process that either in part or completely eliminates the need to physically visit concerned authorities makes it convenient for businesses to register. This simplification of procedures, it is assumed, can encourage economic units to register.
Source(s) of information	http://irdmyanmar.gov.mm https://www.irrawaddy.com/news/burma/internal-revenue-dept-implement-online-tax-payment-system.html	https://www.myco.dica.gov.mm/index.aspx https://www.mmtimes.com/news/myco-registry-starts-accepting-company-filings.html
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units	

Nepal

Name of the programme/initiative	(1) Portal for government tax payment	(2) Taxpayer portal	(3) OCR e-services
Objectives	Nepal's first citizen to government (C2G) electronic payment portal can be used to pay all types of taxes and duties. It can be used either with a computer or a mobile device. It relieves the taxpayers of the need to make tax payments in-person.	The portal can be used to register as taxpayer for both individuals and enterprises as well as to file multiple categories of tax returns and self-assessment forms.	The portal the entire application process for new company registration online including submitting relevant documents. However, after approval of an application, the applicant must visit the Office of Company Registrar to get the documents and the application verified. The payment of the requisite fee is not accepted online. However, the online registration process is mandatory. For people travelling from different parts of the country just to file an application, this portal provides a practical solution. The portal also features an online business registry.
Type of technology (example: website, app, use of ICT, etc.)	Online portal, digital/cashless payment	Online portal	Online portal
Target Public (public officials, workers, employers, etc.)	Taxpayers	Taxpayers	Entrepreneurs and businesses
Years	Launched in April 2018	-	Launched in February 2013
Creative entity and/or sponsor (example: labour	Financial Comptroller General's Office (FCGO)	Inland Revenue Department	Office of Company registrar in associated with the

			International Finance Corporation (IFC)
Costs	-	-	Technical support from the IFC of US$500,000
Period of implementation/Application	Not defined	-	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-	-	From October 2013 when the online registration was made mandatory to May 18 2014, 5503 companies had registered using the online system. In the same time period, 54, 675 online digital submissions were made.
Marketing channel (social networks, TV, etc.)	-	-	-
Main difficulties/challenges when implementing the programme	-	-	-
Post implementation modifications made	-	-	Online application for company registration was made mandatory in October 2013
Alliances of programmes with other institutions (e.g. private sector sponsors)	-	-	Federation of Nepalese Chamber of Commerce (FNCCI), Nepal Bar Association (NBA), Computer Association of Nepal (CAN).
Evaluations	Ease of conducting tax-related operations can encourage economic units to register and pay taxes.	A simple registration process that either in part or completely eliminates the need to physically visit concerned authorities makes it convenient for businesses to register. This simplification of procedures, it is assumed, can encourage economic units to register.	
Source(s) of information	https://rajaswa.fcgo.gov.np/#/auth/login http://blog.khalti.com/fintech-trends/government-transactions-go-digital-nepal/	https://it.ird.gov.np:8080/taxpayer/app.html	https://www.ocr.gov.np/CRO/resources/Manual/New%20Registration.pdf http://kathmandupost.ekantipur.com/news/2014-05-19/all-quiet-at-ocr-following-launch-of-electronic-registration-system.html https://www.ocr.gov.np/CRO/faces/OnlineUserLogin.jsp
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units		

Pakistan	
Name of the programme/initiative	(1) Taxpayer facilitation portals and e-payment of taxes	(2) SECP eServices portal
Objectives	Through the taxpayer facilitation portals of the Federal Revenue Board and of that of the provinces of Sindh, Punjab, Baluchistan, and Khyber Pakhtunkhwa, tax operations such as registration enrolment, returns filing, and payment can be completed electronically. However, there are differences between provinces and between federal and provincial revenue portals with regards to the specific operations that can be completed under each portal and whether the entire process or parts of it thereof can be completed online.

At the federal level, all customs and duties | Through the online portal, company registration process in Pakistan can now be completed in a matter of hours. The fees associated with the process can also be made online using credit/debit card or through online fund transfer. The portal has integrated name reservation and company registration into the same platform. For existing businesses, the portal can be used to change details of the company. |

	can now be paid electronically. Under this imitative, taxpayers will be able to make federal tax and duties' payments through internet banking or through an ATM.	
Type of technology (example: website, app, use of ICT, etc.)	Online portal, cashless/digital payment	Online portal
Target Public (public officials, workers, employers, etc.)	Taxpayers	Entrepreneurs and businesses
Years	Electronic payment of duties and taxes at Federal level launched in March 2018	SECP eServices portal launched in February 2018
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Federal Board of Revenue, State Bank of Pakistan, Sindh Revenue Board, Punjab Revenue Authority, Baluchistan Revenue Authority, and Khyber Pakhtunkhwa Revenue Authority	Securities and Exchange Commission of Pakistan (SECP) and Board of Investment (BoI)
Costs	-	-
Period of implementation/Application	Not defined	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-	-
Marketing channel (social networks, TV, etc.)	-	-
Main difficulties/challenges when implementing the programme	-	-
Post implementation modifications made	-	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	1-Link [for online payment of taxes and duties at Federal level]	-
Evaluations	Ease of conducting tax-related operations can encourage economic units to register and pay taxes.	Offline incorporation process still available after the introduction of the online portal. This is important in a country where digital literacy and internet penetration is still relatively low. A simple registration process that either in part or completely eliminates the need to physically visit concerned authorities makes it convenient for businesses to register. This simplification of procedures, it is assumed, can encourage economic units to register.
Source(s) of information	https://www.pkrevenue.com/inland-revenue/fbr-sbp-formally-launch-online-payment-for-duty-and-taxes/ http://www.fbr.gov.pk/default.aspx http://pra.punjab.gov.pk https://bra.gob.pk https://kpra.kp.gov.pk	https://www.secp.gov.pk/company-formation/registration-of-company/ https://eservices.secp.gov.pk/eServices/ https://www.dawn.com/news/1387999
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units	

Papua New Guinea		
Name of the programme/initiative	(1) Electronic payment of taxes	(2) 'Do It Online' Portal
Objectives	In order to make it convenient for the taxpayers and to overcome practical issues that cause delay in processing of tax files and with a view to modernize tax payments, the Internal Revenue Commission (IRC) is encouraging electronic payment methods. As of 1 June 2018 it stopped	The online portal of the Investment Promotion Authority (IPA) provides multiple services such as: search and register a business name; search, reserve name, and register a company;

	accepting personal cheques and company cheques for tax payments. Other methods of payments available such as: electronic fund transfer point of sale (EFTPOS), Internet banking, electronic fund transfer direct payments, Kina Automated Transfer System (KATS) credit transfer, Bank cheque/bank draft. These payment methods have been set taking into account the convenience for taxpayers in rural areas. Furthermore, the tax payment can be completed online. The payments are to be made electronically and completed forms are to be scanned and emailed to the Internal Revenue Commission with all the required details including payment details. Only in the case of income tax returns are taxpayers required to lodge the paper version.	search and incorporate a business group, etc.
Type of technology (example: website, app, use of ICT, etc.)	Cashless/Digital payment, Email	Online portal
Target Public (public officials, workers, employers, etc.)	Taxpayers	Entrepreneurs and businesses
Years	Electronic submission of tax returns and electronic fund transfer to IRC launched in 2013 under the IRC's corporate plan (2013-2017)	-
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Internal Revenue Commission (IRC)	Investment Promotion Authority (IPA)
Costs	-	-
Period of implementation/Application	Not defined	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-	-
Marketing channel (social networks, TV, etc.)	Awareness campaigns in Port Moresby and in the provinces	-
Main difficulties/challenges when implementing the programme	-	-
Post implementation modifications made	--	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-	-
Evaluations	Ease of conducting tax-related operations can encourage economic units to register and pay taxes.	A simple registration process that either in part or completely eliminates the need to physically visit concerned authorities makes it convenient for businesses to register. This simplification of procedures, it is assumed, can encourage economic units to register.
Source(s) of information	http://irc.gov.pg http://irc.gov.pg/wp-content/uploads/2016/12/2013-10-30-Electronic-Payments-Taxpayer-Guide.pdf https://www.businessadvantagepng.com/simpler-and-faster-papua-new-guinea-tax-system-on-its-way/	https://www.ipa.gov.pg/do-it-online/
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units	

Philippines		
Name of the programme/initiative	(1) eFPS portal	(2) PBR online portal and kiosks
Objectives	The electronic filing and payment system (eFPS) allows taxpayers to file tax returns electronically including attachments and paying taxes due online thereon. It removes the need to file paper returns and visit any government office or banks for the purpose of filing and paying taxes. A number of taxes can be filed and paid for through this portal online, including annual income taxes for individuals, self-employed, corporations, and partnerships. Additionally, 120 e-lounges have been set up in district revenue offices from where taxpayers can avail of the eFPS services.	The Philippines Business Registry (PBR) has simplified and facilitated enterprise registration by integrating multiple agencies involved in the business registration process such as the Department of Trade and Industry (DTI), Bureau of Internal Revenue (BIR), Social Security System (SSS), Home Development Mutual Fund (Pag-IBIG), Philippine Health Insurance Corporation (PhilHealth), and Local Government Units (LGUs). It serves as a one-stop-shop for entrepreneurs making business registration process efficient and convenient. Applications can be completed online including the payment of requisite fees. PBR also has kiosks set up different LGUs around the country to facilitate business registration in remote parts.
Type of technology (example: website, app, use of ICT, etc.)	Online portal	Online portal
Target Public (public officials, workers, employers, etc.)	Taxpayers	Entrepreneurs and businesses
Years	18 years since launch (June 2001)	6 years (Online portal launched in 2012)
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Bureau of Internal Revenue	Department of Trade and Industry (DTI)
Costs	-	-
Period of implementation/Application	Not defined	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	Year-on-year, the number of taxpayers using eFPS service jumped by 44 per cent in 2018 compared to the previous year between January 1 and April 16	-
Marketing channel (social networks, TV, etc.)	Facebook, Twitter	Facebook
Main difficulties/challenges when implementing the programme	-	-
Post implementation modifications made	-	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-	-
Evaluations	Ease of conducting tax-related operations can encourage economic units to register and pay taxes.	A simple registration process that either in part or completely eliminates the need to physically visit concerned authorities makes it convenient for businesses to register. This simplification of procedures, it is assumed, can encourage economic units to register.
Source(s) of information	https://efps.bir.gov.ph/ https://efps.bir.gov.ph/eFPSFAQ.html http://business.inquirer.net/251025/bir-reports-increase-electronic-itr-filing	https://www.business.gov.ph/web/guest/the-pbr https://www.enterpriseinnovation.net/article/philippines-launches-new-online-business-registration-system?src=related http://investphilippines.org/siliconvalley/files/2012/06/PBR_March2012.pdf
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units	

Samoa

Name of the programme/initiative	eTax portal
Objectives	The portal allows taxpayers to manage their taxes online. Services such as filing tax returns, tax payments, and viewing statements are available through the portal preventing taxpayers from having to physically undertake these operations
Type of technology (example: website, app, use of ICT, etc.)	Online portal
Target Public (public officials, workers, employers, etc.)	Taxpayers
Years	-
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Samoa Inland Revenue - Ministry for Revenue
Costs	-
Period of implementation/Application	-
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-
Marketing channel (social networks, TV, etc.)	-
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	Ease of conducting tax-related operations can encourage economic units to register and pay taxes.
Source(s) of information	https://set.revenue.gov.ws
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units

Singapore

Name of the programme/initiative	(1) myTax portal	(2) BizFile eServices
Objectives	Taxpayers in Singapore are able to complete a range of tax related operations online using the myTax portal. This portal can be used by both individual as well as corporate taxpayers. Individuals, self-employed, sole proprietorship and partnership based enterprises can file their income tax form, view filing status, account summary, review payment plan, make payments, and complete other operations online. Most operations only have an estimated time of a few minutes. Similarly, companies can also complete a range of operations online.	The online portal allows users to file application for a new business name and to register person(s) and business name. Both processes can be completed online. Applying for a new business takes about 15 minutes and registering person(s) and business name takes between 10 to 20 minutes. Fees for both procedures can be paid online. The former application gets immediately approved if there is an available business name and the latter takes 3 working days. However, in case the dossier has to be referred to another agency, both applications can take between 14 working days to 2 months each.
Type of technology (example: website, app, use of ICT, etc.)	Online portal	Online portal, Cashless/electronic payment
Target Public (public officials, workers, employers, etc.)	Taxpayers	Entrepreneurs and businesses
Years		-
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Inland Revenue Authority of Singapore	Accounting and Corporate Regulatory Authority (ACRA)
Costs	-	-
Period of implementation/Application	Not defined	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of	-	-

people trained, number of downloads of an app, etc.)		
Marketing channel (social networks, TV, etc.)	Twitter, Facebook, YouTube	Twitter, Facebook
Main difficulties/challenges when implementing the programme	-	-
Post implementation modifications made	-	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-	-
Evaluations	Ease of conducting tax-related operations can encourage economic units to register and pay taxes.	A simple registration process that either in part or completely eliminates the need to physically visit concerned authorities makes it convenient for businesses to register. This simplification of procedures, it is assumed, can encourage economic units to register.
Source(s) of information	https://www.iras.gov.sg/IRASHome/e-Services/Individuals/	https://bit.ly/2Ejd53e
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units	

Solomon Islands

Name of the programme/initiative	E-tax portal	Business Registry website portal
Objectives	The portal allows users to file and pay taxes online. As of now, monthly Goods and Sales Tax, monthly PAYE summary, and annual PAYE reconciliation can be filed through the portal. Payment can be made through online banking method. However, taxpayers willing to pay in cash can still do so by visiting the Inland Revenue Department (IRD)'s counter or a bank.	The business registry website allows users to search for business names and company names and also features a portal through which users can register a business name or a company.
Type of technology (example: website, app, use of ICT, etc.)	Online portal, Cashless/Digital payment	Website, online portal
Target Public (public officials, workers, employers, etc.)	Taxpayers	Enterprises and businesses
Years	Launched in September 2018	Launched in 2010
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Inland Revenue Department (IRD)	Solomon Islands Business Registry
Costs	-	-
Period of implementation/Application	Not defined	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-	-
Marketing channel (social networks, TV, etc.)	-	-
Main difficulties/challenges when implementing the programme	-	-
Post implementation modifications made	IRD plans to make it possible to file annual income tax returns and withholding tax returns later in 2018	The business registry website was expanded in November 2016 to allow foreign investment licences and business name registrations can also be lodged online.

Alliances of programmes with other institutions (e.g. private sector sponsors)	Developed under grant and technical support from the United Nations' Pacific Financial Inclusion Programme (PFIP), and has received financial support from the Governments of Australia and New Zealand	-
Evaluations	Ease of conducting tax-related operations can encourage economic units to register and pay taxes.	A simple registration process that either in part or completely eliminates the need to physically visit concerned authorities makes it convenient for businesses to register. This simplification of procedures, it is assumed, can encourage economic units to register.
Source(s) of information	http://www.ird.gov.sb/Resource.aspx?ID=228 https://www.fijitimes.com/new-online-taxation-services-for-businesses-in-the-solomon-island/	https://www.solomonbusinessregistry.gov.sb/sb-master/ https://www.fostermoore.com/solomon/ https://www.solomonbusinessregistry.gov.sb/companies/how-to-register-a-company/ https://www.solomonbusinessregistry.gov.sb/business-names/how-to-register-a-business-name/the-registration-process/
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units	

Sri Lanka

Name of the programme/initiative	Revenue Administration Management Information System e-Services portal
Objectives	The e-services online portal can be used by taxpayers to register as a taxpayer, register for a particular tax type, file returns for different kinds of taxes including income taxes and value added taxes, make payments, and file appeals or objections.
Type of technology (example: website, app, use of ICT, etc.)	Online portal, digital database
Target Public (public officials, workers, employers, etc.)	Taxpayers
Years	Launched in 2015
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Department of Inland Revenue (IRD); technical support from the Government of Singapore
Costs	LKR 9 billion
Period of implementation/Application	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-
Marketing channel (social networks, TV, etc.)	-
Main difficulties/challenges when implementing the programme	Media reports have highlighted internal issues within the IRD on RAMIS implementation. There have also been reported concerns regarding the future of RAMIS system with the introduction of a new Inland Revenue Act in 2018. The system is expected to be either updated or replaced.
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	Ease of conducting tax-related operations and can encourage greater compliance.
Source(s) of information	http://www.ird.gov.lk/en/sitepages/default.aspx http://www.lankabusinessonline.com/sri-lanka-taxes-to-go-online/ http://island.lk/index.php?page_cat=article-details&page=article-details&code_title=140779 http://www.colombopage.com/archive_18B/Jul28_1532788341CH.php
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units

Thailand		
Name of the programme/initiative	(1) Revenue Department e-services and web-services	(2) E-registration of businesses
Objectives	A host of operations can be completed through the e-Services portal of the Revenue Department (RD). Users can file tax returns, apply to be a tax agent, make tax payments, register for value added tax and special business tax, etc. online. The website also features multiple web-services checking tax identification number PIN, or accessing VAT service.	The registration process for partnerships and private limited companies can be done online. The change has been made with a view to simplify the process. For existing partnership and private limited companies, application can be filed for amendments to their constitutive documents.

Earlier, online registration could be completed for pre-approval with the documents having to be handed over physically for final approval. However, under e-registration all the documents submitted can be signed via digital signature removing the need for submitting physical documents. |
Type of technology (example: website, app, use of ICT, etc.)	Online portal	Online portal
Target Public (public officials, workers, employers, etc.)	Taxpayers	Entrepreneurs and businesses
Years	-	Launched in April 2017
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	The Revenue Department	DBD
Costs	-	-
Period of implementation/Application	Not defined	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-	-
Marketing channel (social networks, TV, etc.)	-	Facebook, Twitter
Main difficulties/challenges when implementing the programme	-	-
Post implementation modifications made	-	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-	-
Evaluations	Ease of conducting tax-related operations can encourage economic units to register and pay taxes.	A simple registration process that either in part or completely eliminates the need to physically visit concerned authorities makes it convenient for businesses to register. This simplification of procedures, it is assumed, can encourage economic units to register.
Source(s) of information	http://www.rd.go.th/publish/30115.0.html	https://dbd.go.th
http://www.pricesanond.com/knowledge/corporate-m-and-a/dbd-goes-paperless-for-financial-statement-filings.php
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units	

Tonga

Name of the programme/initiative	(1) e-Tax portal	(2) Business Registries website
Objectives	Tonga e-Tax portal allows taxpayers to manage their tax-related operations online. The portal can be used to file a tax return, make tax payments, or view tax statements.	Applications for business name registration and business licence registration can be made online and is encouraged by the government. Additionally, some filing services cost less than paper-based filing.
Type of technology (example: website, app, use of ICT, etc.)	e-Tax, Digital/Cashless payment	Website, online portal
Target Public (public officials, workers, employers, etc.)	Taxpayers	Entrepreneurs and businesses
Years	-	Launched in December 2018
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Ministry of Revenue and Customs	Ministry of Commerce, Tourism, and Labour with the support of the Asian Development Bank (ADB) and New Zealand Companies Office
Costs	-	-
Period of implementation/Application	Not defined	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-	-
Marketing channel (social networks, TV, etc.)	-	Facebook
Main difficulties/challenges when implementing the programme	-	-
Post implementation modifications made	-	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-	-
Evaluations	Ease of conducting tax-related operations can encourage economic units to register and pay taxes.	A simple registration process that either in part or completely eliminates the need to physically visit concerned authorities makes it convenient for businesses to register. This simplification of procedures, it is assumed, can encourage economic units to register.
Source(s) of information	http://www.revenue.gov.to/etax	https://www.businessregistries.gov.to/how-to-use-online-services/# https://www.fostermoore.com/tonga/
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units	

Viet Nam

Name of the programme/initiative	(1) Electronic filing and payment of taxes	(2) Online business registry and portal for business registration
Objectives	In order to simplify procedures related to tax registration, filing, and payment, all types of enterprises are by law required to conduct electronic tax procedures such as tax registration, filing, payment and refunds with the local tax agency.	New businesses can access the online portal for business registration and file an online application for registration without having to physically visit the Business Registration Office. Online registration can be made using digital signatures. On the other side, the Business Registration Office receives, considers, and handles the entire business registration dossier online and electronically communicates the results to the applicants.
Type of technology (example: website, app, use of ICT, etc.)	Online portal	Online portal
Target Public (public officials, workers, employers, etc.)	Taxpayers	Entrepreneurs and businesses

Years	Circular on simplification of tax procedures (Circular No. 110/2015/TT-BTC) took effect from 10 September 2015	-
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Ministry of Finance	Business Registration Office (BRO)
Costs	-	-
Period of implementation/Application	Not defined	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-	-
Marketing channel (social networks, TV, etc.)	-	YouTube
Main difficulties/challenges when implementing the programme	-	-
Post implementation modifications made	-	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-	-
Evaluations	Ease of conducting tax-related operations can encourage economic units to register and pay taxes.	A simple registration process that either in part or completely eliminates the need to physically visit concerned authorities makes it convenient for businesses to register. This simplification of procedures, it is assumed, can encourage economic units to register.
Source(s) of information	http://primelaw.com.vn/mydata/download/20150817112143685.pdf http://www.vietnam-briefing.com/news/electronic-tax-transactions-ease-vietnams-tax-declaration-process.html/	https://dangkykinhdoanh.gov.vn/en/Pages/default.aspx https://dangkyquamang.dkkd.gov.vn/auth/Public/LogOn.aspx?ReturnUrl=%2fonline%2fdefault.aspx
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units	

c. Improvement through social dialogue

No specific policies/programmes found

3. Creating incentives

a. Financial subsidies

India	

Name of the programme/initiative	(1) Reduction in Merchant Discount Rates (MDR) for digital payments	(2) E-payment lottery scheme	(3) Government reimbursement of MDR charges on small retail transactions
Objectives	To promote wider usage of digital payment methods, the merchant discount rate (MDR)--the cost paid by a merchant to bank each time a card or QR-code based transaction is made by a customer; expressed as a percentage of transaction amount--has been slashed.

For merchants with a turnover of up to INR 2 million, MDR ceiling has been | Two schemes targeting consumers and businesses were launched under the e-payment lottery scheme. Consumers making transactions using RuPay cards, Unstructured Supplementary Service Data (USSD), Unified Payment Interface (UPI), and Aadhar-enabled Payment System (AEPS) are eligible for the lucky draw under this scheme. For businesses, | To promote wider usage and acceptance of digital payment methods, the government of India has moved to make small retail transactions free of merchant discount rate (MDR) charges. MDR is the cost paid by a merchant to a bank each time a digital transaction such as card payment is accepted by the merchant. This policy applies to transactions up to INR 2,000. The government will |

	fixed at 0.4 per cent for card-based payments including online payments and 0.3 per cent for QR-code based payments. In any case, for this category of merchants, MDR cannot exceed INR 200 for each transaction. For merchants with a turnover higher than INR 2 million, MDR ceiling has been fixed at 0.9 per cent for card-based payments including online payments and 0.8 per cent for QR-code based payments. In any case, for this category of merchants, MDR cannot exceed INR 1000 for each transaction.	payments accepted through POS machines are taken into account. The scheme featured a weekly draw for seven winners with a maximum prize amount of INR 100,000. It featured 7,000 weekly awards for merchants with a maximum award of INR 50,000 each. Furthermore, the scheme also had a mega award with cash prizes of INR 10 million, INR 5 million, and INR 2.5 million for consumers for all transactions between November 8 and April 13. Mega draw for merchants had prize money of INR 5 million, INR 2.5 million, and INR 500,000. Digital transactions of amount ranging between INR 50 and INR 3,000 were considered for the draws.	effectively reimburse banks the MDR charges that would otherwise have been made by merchants for such transactions. The policy applies to transactions made through debit cards, Bharat Interface for Money Unified Payment Interface (BHIM UPI) or Aadhar-enabled Payment System.
Type of technology (example: website, app, use of ICT, etc.)	Cashless/electronic payment	Cashless/electronic payment	Cashless/electronic payment
Target Public (public officials, workers, employers, etc.)	General public	General public and businesses	Small businesses, consumers, general public
Years	Circular issued on December 6, 2017.	Introduced in 2016	Announced on December 15, 2017
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Reserve Bank of India (RBI)	Conceptualized by the National Payments Corporation of India (NPIC) at the request of NITI Aayog	Government of India
Costs	-	INR 340,000,000	The impact on the exchequer of this policy is estimated to be around INR 25.12 billion
Period of implementation/Application	Not defined	9 November 2016 - 13 April 2017	2 years, starting from January 1, 2018
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-	Total winners: 15,000 Unstructured Supplementary Service Data: 100 winners from 15 banks Unified Payment System: 1,500 winners from 25 banks Aadhar-enabled Payment System: 1,500 winners from 49 banks RuPay: 11,900 winners from 234 banks	-
Marketing channel (social networks, TV, etc.)	-	-	-
Main difficulties/challenges when implementing the programme	-	-	-
Post implementation modifications made	-	-	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-	-	-
Evaluations	While the reduction in MDR can cause short-term	-	-

	revenue losses for banks, the long term effect of moving to digital payments is expected to be higher.		
	Financial subsidies designed to incentivize users (both consumers and businesses) can encourage and promote a culture of digital payments. This in turn will mean that financial transactions get registered and the underlying assumption is that registration of financial transaction facilitates compliance with and enforcement of taxation and registration related rules.		
Source(s) of information	https://www.rbi.org.in/scripts/FS_Notification.aspx?Id=11183&fn=9&Mode=0 https://www.businesstoday.in/sectors/banks/rbi-reduces-mdr-charges-for-debit-card-transactions-merchant-discount-rate/story/265487.html	https://www.livemint.com/Industry/a8rusRg3MAB4bFvFX96CIJ/Modi-govt-launches-digital-lottery-schemes-in-a-bid-to-boost.html https://www.indiatimes.com/news/world/modiji-announces-2-new-lottery-schemes-for-digital-payments-5-other-major-stories-from-today-268096.html https://digidhanlucky.mygov.in https://www.indiatimes.com/news/india/modiji-sends-a-christmas-gift-to-all-his-mitron-begins-two-lottery-schemes-for-digital-payments-268089.html	https://www.hindustantimes.com/business-news/government-to-reimburse-mdr-charges-on-small-transactions/story-9E4Y76OczIs3vOI4esvNNI.html https://timesofindia.indiatimes.com/business/india-business/govt-to-reimburse-mdr-on-transactions-up-to-rs-2000/articleshow/62085229.cms https://timesofindia.indiatimes.com/business/india-business/no-charges-on-debit-card-transactions-up-to-rs-2000/articleshow/62327512.cms
Classification according to Chacaltana, Leung, and Lee (2018)	Registration of financial transactions		

Thailand	
Name of the programme/initiative	Electronic Data Capture (EDC) machine installations
Objectives	In a bid to increase cashless payment in the country, including for small-ticket items, a total of 550,000 new electronic data capture (EDC) machines were installed to support debit/credit card payment. A lower merchant discount rate (MDR) than the hitherto existing rate was planned for in order to incentivize businesses to adopt EDCs.
Type of technology (example: website, app, use of ICT, etc.)	Cashless/electronic payment
Target Public (public officials, workers, employers, etc.)	Government offices, merchants, customers
Years	EDC machine distribution drive started in 2017
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Ministry of Finance in collaboration with two banking consortiums.
Costs	-
Period of implementation/Application	Distribution to be completed by March 2018
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	480,000 EDC machines distributed by February 2018
Marketing channel (social networks, TV, etc.)	-
Main difficulties/challenges when implementing the programme	Number of merchants accepting payments through EDCs stood below target and grew slowly as of February 2018 despite the EDC distribution drive making progress. A potential reason being merchants' hesitance to accept payments through such terminals in order to prevent transactions being tracked.
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	While this programme is not a typical financial subsidy scheme, the lower MDR offered under this scheme is expected to incentivize small shops and businesses to adopt EDCs. Financial subsidies designed to incentivize users (both consumers and businesses) can encourage and promote a culture of digital payments. This in turn will mean that financial transactions get registered and the

	underlying assumption is that registration of financial transaction facilitates compliance with and enforcement of taxation and registration related rules.	
Source(s) of information	https://www.scbeic.com/en/detail/product/4211 https://www.bangkokpost.com/business/finance/1203153/half-a-million-new-credit-card-machines-to-be-installed https://www.bangkokpost.com/business/news/1406094/merchants-slow-to-adopt-edc-systems	
Classification according to Chacaltana, Leung, and Lee (2018)	Registration of financial transactions	

b. Tax rebate

India		
Name of the programme/initiative	(1) Income tax incentive on digital turnover for small businesses	(2) Cash incentive for digital payments
Objectives	In order to promote digital and cashless methods of payments, the Indian government has introduced income tax incentive for small businesses with turnover up to INR 20,000,000. Under this scheme, incentives cover both cheque-based and digital payments. While the existing rate of deemed profit is 8 per cent of the total turnover, the rate has been lowered to 6 per cent for digital turnover. This means that higher the proportion of digital or cheque-based transactions, higher the tax benefit that businesses can avail of.	The Goods and Service Tax (GST) council of India has approved cash incentives for digital transactions. Payments up to INR 100 made using Rupay card and BHIM or USSD mode will be eligible for 20 per cent cashback of the total GST amount.
Type of technology (example: website, app, use of ICT, etc.)	Cashless/electronic payment	Cashless /electronic payment
Target Public (public officials, workers, employers, etc.)	Small businesses	General public
Years	Scheme introduced in 2016	Policy approved in August 2018
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Ministry of Finance, Government of India	GST council
Costs	-	-
Period of implementation/Application	Not defined	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-	-
Marketing channel (social networks, TV, etc.)	-	-
Main difficulties/challenges when implementing the programme	-	-
Post implementation modifications made	-	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-	-
Evaluations	Tax rebates designed to incentivize users (consumers, businesses, or both) can encourage and promote a culture of digital payments. This in turn will mean that financial transactions get registered and the underlying assumption is that registration of financial transaction facilitates compliance with and enforcement of taxation and registration related rules.	
Source(s) of information	http://pib.nic.in/newsite/PrintRelease.aspx?relid=155694 https://economictimes.indiatimes.com/news/economy/policy/less-tax-for-small-traders-on-digital-transactions-government/articleshow/56065649.cms	http://ddnews.gov.in/business/gst-council-announces-cashback-digital-transactions
Classification according to Chacaltana, Leung, and Lee (2018)	Registration of financial transactions	

Korea, Rep. of		
Name of the programme/initiative	(1) Tax deductions for credit/debit card use	(2) Electronically Traceable Cash Receipt (ETCR) System
Objectives	Tax incentive mechanism has been put in place in order to encourage credit and debit card based payments. For aggregate total expenditure made within Korea on Korean credit cards by the taxpayer or his/her dependent(s) that is higher than 25 per cent of his/her gross income, a taxpayer can receive a deduction of up to KRW 3 million depending on the amount spent. The deductible amount for credit cards is 15 per cent, 30 per cent for debit cards, cash receipts, and prepaid cards, and 40 per cent for card-based payments for public transport and traditional markets.	Under this initiative, even cash payments were made electronically traceable. Customers who choose to pay in cash instead of cashless/electronic payments can ask merchants/retailers to issue ECTRs. Customers registered with the National Tax Service (NTS) can present their 'Tax Save Card' or a registered mobile number instead of a regular receipt. The ECTR data is transmitted to the NTS automatically and therefore customers need not collect ECTRs by themselves for their income tax deduction. These will be taken into account when taxpayers file their tax returns through the Home Tax Service portal. Taxpayers can get deductions on their tax liabilities of up to KRW 5 million depending on the amount they have spent in cash that is electronically traceable. Deductions amount to 20 per cent of total cash purchases that is greater than 20 per cent of of reported yearly income.
Type of technology (example: website, app, use of ICT, etc.)	Cashless/electronic payment	Electronically Traceable Cash Receipt (ETCR) System
Target Public (public officials, workers, employers, etc.)	Taxpayers	Taxpayers, general public
Years	Credit card deduction scheme launched in 1999	Launched in 2005
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Ministry of Finance and Economy, National Tax Service (NTS)	National Tax Service (NTS)
Costs	-	-
Period of implementation/Application	Not defined	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	Credit card usage increased by more than 100 per cent between 1999 and 2002. The ratio of credit card usage to private consumption expenditure rose from around 10 per cent in 1999 to 52.8 per cent in 2012.	The ratio of cash receipts to private final consumption expenditure rose from around 4 per cent to around 12.5 percent in 2015.
Marketing channel (social networks, TV, etc.)	-	-
Main difficulties/challenges when implementing the programme	-	-
Post implementation modifications made	Extension of the sunset clause every successive sunset year. Multiple changes over the years on deduction rate and amount threshold under the scheme. For detailed information see: Sung, Awasthi, and Lee (2017)	Initially, the cash receipt system only covered cash purchases more than or equal to KRW 5,000. In 2008, this floor was lifted and now it applies to all cash transactions irrespective of the amount.
Alliances of programmes with other institutions (e.g. private sector sponsors)	-	-
Evaluations	According to Kim (2017), since 1999, increasing usage of credit card has contributed to increasing the number of taxpayers as well as the tax revenue. This has enabled broadening of the tax-base to include the self-employed.	

	According to Sung, Awasthi, and Lee (2017), the ratio of taxpayers to business income earners has risen from around 30 per cent in the late 1990s to around 80 per cent at present. They accord this rise in tax compliance to the Tax Incentive for Electronically Traceable Payments. In sum, the total electronically traceable payments as percentage of final consumption expenditure rose from 45.2 percent in 2005 to 88.9 per cent in 2015. See: Sung, Awasthi, and Lee (2017).	
	Tax rebates designed to incentivize users (consumers, businesses, or both) can encourage and promote a culture of digital payments. This in turn will mean that financial transactions get registered and the underlying assumption is that registration of financial transaction facilitates compliance with and enforcement of taxation and registration related rules.	
Source(s) of information	https://home.kpmg.com/xx/en/home/insights/2011/12/korea-income-tax.html http://iobe.gr/docs/pub/PRE_Dr.%20KIM%20Jaejin_01062017_PUB_GR.pdf http://documents.worldbank.org/curated/en/105841483990962599/pdf/WPS7936.pdf	https://www.korea4expats.com/article-cash-receipt-tax-credit-card-registration.html
Classification according to Chacaltana, Leung, and Lee (2018)	Registration of financial transactions	

c. Social security coverage

No specific policies/programmes found

d. Access to public service/public procurements

No specific policies/programmes found

4. Improving enforcement

a. Compliance culture

India	
Name of the programme/initiative	Digital or cheque payment to workers
Objectives	The Labour Department of New Delhi has issued an advisory directing all employers and contractors in the city to pay workers' wages either electronically or through cash.
Type of technology (example: website, app, use of ICT, etc.)	Cashless/electronic payment
Target Public (public officials, workers, employers, etc.)	Workers
Years	Advisory issued in December 2016
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Labour Department, Government of New Delhi
Costs	-
Period of implementation/Application	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-
Marketing channel (social networks, TV, etc.)	-
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	Promoting cashless and electronic payments and routing employees' payrolls through banks has two advantages. Firstly, transactions will be registered and this could contribute to the registration of enterprises.

	Secondly, transactions routed through banks mean that workers will have access to the financial system and prevents arbitrary payments related exploitation. These could pave the path towards greater formalization.
Source(s) of information	https://economictimes.indiatimes.com/news/economy/policy/delhi-government-asks-employers-to-pay-workers-by-cheque-digitally/articleshow/56205314.cms
Classification according to Chacaltana, Leung, and Lee (2018)	Registration of economic units, Registration of financial transactions

Nepal	
Name of the programme/initiative	Electronic/bank-based payment of salaries
Objectives	The Government of Nepal has approved the labour wage procedure – based on the Labour Bylaw 2018 – which makes it mandatory to channel workers' salaries through banks. The implementation of this legislation will take place in phases. In the first phase, by October 17, 2018, public sector employees, i.e. employees of governments at all levels, state-owned enterprises, government committees and projects, universities, etc. will receive their remuneration through banks. In the second phase, private companies such as banks and financial institutions, insurance companies, travel agencies and other service industries, airline companies, hotels, community and institutional education companies, labour supply agencies, trusts, firms, (international) non-government organizations, etc. have to pay their employees through the banks by January 14, 2019. All other workers who do not fall into this criteria, including domestic workers, will have to be paid through banks before January 14, 2020. There is a provision to pay the employees in cash or cheque – in case of emergencies.
Type of technology (example: website, app, use of ICT, etc.)	Cashless/electronic payment
Target Public (public officials, workers, employers, etc.)	Workers
Years	Cabinet decision made on July 16, 2018
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Ministry of Labour, Employment and Social Security
Costs	-
Period of implementation/Application	To be completed before January 14, 2020.
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-
Marketing channel (social networks, TV, etc.)	-
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	Promoting cashless and electronic payments and routing employees' payrolls through banks has two advantages. Firstly, transactions will be registered and this could contribute to the registration of enterprises. Secondly, transactions routed through banks mean that workers will have access to the financial system and prevents arbitrary payments related exploitation. These could pave the path towards greater formalization.
Source(s) of information	https://thehimalayantimes.com/business/salaries-to-be-paid-through-banks/
Classification according to Chacaltana, Leung, and Lee (2018)	Registration of economic units, Registration of financial transactions

b. Automation/upgrading

Bangladesh	
Name of the programme/initiative	Digitized Labour Inspection Management Application (LIMA) and LIMA portal
Objectives	- To improve the collection, storage, and analysis of labour inspection data, benefitting workers and employers in all industrial sectors. - LIMA is expected to make the Department of Inspection of Factories and Establishments' (DIFE)s operations more effective by integrating data collection and management needs in a single platform. - LIMA portal reports that it can be used by factory management to get layout plan approval, license, renewal of license, report accidents, and submit annual returns for their respective establishments; workers can get summary reports on labour inspections, and can report complaints; and general users can view various reports on labour inspections and occupational safety and health (OSH) - LIMA also features a 'DIFE Complaint Box' App that allows workers and employers to register a complaint regarding workplace issues with DIFE.
Type of technology (example: website, app, use of ICT, etc.)	Mobile application, use of ICT (digital database), online portal
Target Public (public officials, workers, employers, etc.)	Workers and employers
Years	Launched in March 2018
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Ministry of Labour and Employment, Department of Inspection for Factories and Establishments (DIFE), International Labour Organization (Improving Working Conditions in the Bangladesh Ready Made Garment Sector programme); funded by Canada, the Netherlands, and the United Kingdom.
Costs	-
Period of implementation/Application	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	100+ installs of DIFE Complaint Box App from Google Play Store [As of 4 October, 2018]
Marketing channel (social networks, TV, etc.)	YouTube
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	Upgrading labour inspection through use of technologies that allow for greater transparency, better monitoring and follow-up, and improvement in data collection and processing can boost compliance. It can make labour inspections time and cost effective allowing labour inspectors to cover greater number of establishments.
Source(s) of information	https://www.ilo.org/dhaka/Informationresources/Publicinformation/Pressreleases/WCMS_619879/lang--en/index.htm http://lima.dife.gov.bd https://play.google.com/store/apps/details?id=com.dife.ikmscomplain
Classification according to Chacaltana, Leung, and Lee (2018)	Upgrading labour inspection

Pakistan	
Name of the programme/initiative	Gender Sensitive Labour Inspection System portal and database
Objectives	Created under the ILO's project on 'Promoting Gender Equality for Decent Employment', the focus of this initiative is to mainstream gender in labour inspection. The database collates information about registered labour factories, inspection staff, inspections conducted, and uses these information track emerging trends, measure performance, and assess progress. All of the information collected is gender-disaggregated and the reports take gender differences into account while analyzing factors

	such as minimum wages or the incidence of child labour. The development of the database involved the creation of gender mainstreamed checklist covering all the provision of the labour laws.
Type of technology (example: website, app, use of ICT, etc.)	Online portal and database
Target Public (public officials, workers, employers, etc.)	Workers (especially females), labour inspectors
Years	Launched in September 2015
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Department of Labour of the provinces of Sindh, Punjab, Baluchistan, and Khyber Pakhtunkhwa in association with the International Labour Organization (ILO).
Costs	-
Period of implementation/Application	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-
Marketing channel (social networks, TV, etc.)	ILO website, Flickr
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	Upgrading labour inspection through use of technologies that allow for greater transparency, better monitoring and follow-up, and improvement in data collection and processing can boost compliance. It can make labour inspections time and cost effective allowing labour inspectors to cover greater number of establishments. The focus on generating gender-disaggregated data under this initiative is important. Collecting and processing group-disaggregated data – whether it be on gender, age, education, etc. – helps better inform policy-makers which can result in a more targeted approach in policymaking on the transition to formality based on the needs of specific groups.
Source(s) of information	https://www.ilo.org/islamabad/info/public/pr/WCMS_398767/lang--en/index.htm https://www.dawn.com/news/1205046
Classification according to Chacaltana, Leung, and Lee (2018)	Upgrading labour inspection

Philippines	
Name of the programme/initiative	Labour Laws Compliance System - Management Information System (LLCS-MIS)
Objectives	A web based application, the LLCS-MIS integrates technology into the labour laws compliance system. It has different electronic check-lists relating to labour laws compliance and labour inspectors use this application during their field visits on tablet devices. The data is transmitted and processed in real-time. The reporting process is completed in three steps: tick. save, send. The system can also generate reports of coverage and compliance at national and regional levels, by industry, employment size, and by mode of implementation in a given time-frame. The real-time monitoring feature of the MIS facilitates LLCS to focus on monitoring specific industries. The MIS also allows for real-time monitoring of decent work indicators.
Type of technology (example: website, app, use of ICT, etc.)	Web application
Target Public (public officials, workers, employers, etc.)	Employers and workers
Years	Implemented in five phases between 2013-2015
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Department of Labor and Employment (DOLE) with assistance from the International Labour Organization (ILO)
Costs	US$206,455
Period of implementation/Application	Not defined
Scope of the programme during its implementation (example: number of views	Since its launch in 2013, the LLCS-MIS has been an important complement for the manpower of the Department of Labor and Employment (DOLE). In 2014, the LLCS was able to sharply increase

on the web, number of people trained, number of downloads of an app, etc.)	the number of establishment compliant with labour laws. The number went up from 29,248 in 2013 to 76,880.
Marketing channel (social networks, TV, etc.)	YouTube
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	Upgrading labour inspection through use of technologies that allow for greater transparency, better monitoring and follow-up, and improvement in data collection and processing can boost compliance. It can make labour inspections time and cost effective allowing labour inspectors to cover greater number of establishments.
Source(s) of information	https://www.dole.gov.ph/news/view/2784 http://www.bwc.dole.gov.ph/llcs-management-information-system-llcs-mis
Classification according to Chacaltana, Leung, and Lee (2018)	Upgrading labour inspections

Sri Lanka

Name of the programme/initiative	Labour Information System Application (LISA)
Objectives	The mobile app and database system facilitates, simplifies, and strengthens labour inspection and follow-up activities. The app automates the labour inspection process by removing the need for labour inspectors to fill-up multiple paper-based forms and record books during their visits to inspectable units. The data collected during the inspection is stored into the LISA system and the inspectors are able to write an inspection report using the app along with features such as attaching pictures taken on site. The report can be sent to the inspectable units along with a request to remedy problems noted during the inspection. The app has also facilitated effective monitoring and follow-up on non-compliance post-inspection. Additionally, complaints submitted by workers are put on the LISA system and is used by labour inspectors to inquire into them and take required steps.
Type of technology (example: website, app, use of ICT, etc.)	Mobile App, digital database
Target Public (public officials, workers, employers, etc.)	Employers and workers
Years	Launched in 2013
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Developed by the International Labour Organization (ILO) with support from the United States Department of Labor (USDOL) and implemented by the Ministry of Labour
Costs	-
Period of implementation/Application	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-
Marketing channel (social networks, TV, etc.)	`
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	Upgrading labour inspection through use of technologies that allow for greater transparency, better monitoring and follow-up, and improvement in data collection and processing can boost compliance. It can make labour inspections time and cost effective allowing labour inspectors to cover greater number of establishments.
Source(s) of information	https://www.ilo.org/asia/media-centre/articles/WCMS_353256/lang--en/index.htm https://www.ilo.org/colombo/whatwedo/events/WCMS_426630/lang--en/index.htm
Classification according to Chacaltana, Leung, and Lee (2018)	Upgrading labour inspections

c. Special regimes

Marshall Islands	
Name of the programme/initiative	Sovereign (SOV) digital currency
Objectives	Legislation concering the launch of legal tender virtual/crypto-currency has been passed with a planned initial coin offering (ICO) of 24 million units. The objective is to supplement the US dollar as legal tender in the country and the SOV is expected to be used by citizens for all of day-to-day purchases of goods and services as well as payment of taxes. The Sovereign Currency Act of 2018 notes that it will be used as "legal tender of the Marshall Islands for all debts, public charges, taxes and dues."
Type of technology (example: website, app, use of ICT, etc.)	Cryptocurrency, Cashless payment, Digital payment
Target Public (public officials, workers, employers, etc.)	General public, international investors
Years	Yet to be launched
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Republic of the Marshall Islands
Costs	-
Period of implementation/Application	Legislation concerning SOV was passed on 26 February 2018. Currency yet to be introduced.
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-
Marketing channel (social networks, TV, etc.)	-
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	Neema--a fintech start-up based in Israel
Evaluations	With virtual currency as legal tender, payments in the country are expected to increasingly migrate to electronic system. Unlike other cryptocurrencies, the SOV is not anonymous and transactions can be tracked by public authorities. This, it is assumed, can foster greater compliance with tax regimes.
Source(s) of information	https://www.dw.com/en/sovereign-cryptocurrency-marshall-islands-to-launch-world-first-digital-legal-tender/a-42810832 https://www.sov.global https://en.globes.co.il/en/article-israeli-startup-to-lead-marshall-islands-cryptocurrency-ico-1001225819
Classification according to Chacaltana, Leung, and Lee (2018)	Registration of financial transactions

B. "e-formality" policies and programmes in Asia and the Pacific not classifiable by formalization strategy area, by country

Bangladesh	
Name of the programme/initiative	Bangladesh National Portal
Objectives	The Bangladeshi Government has set up website with links to multiple government online portals catering to different citizen services. The national web portal features more than 25,000 government websites at multiple tiers. Among other services, it provides links to the Office of the Registrar of Joint Stock Companies and Firms' online portal that facilitates applying for new business name and registering it, filing returns, issuing of certified copies, submitting related documents online and downloading and printing required documents. It also provides a link to the online portal of the National Board of Revenue (NBR) wherein a user can register as a taxpayer by applying online for a Taxpayers' Identification Number (TIN).
Type of technology (example: website, app, use of ICT, etc.)	Online portal

Target Public (public officials, workers, employers, etc.)	Citizens and legal entities
Years	Launched in 2015
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Access to Information (a2i) under the Prime Minister's Office (PMO) with technical assistance from the UNDP and USAID
Costs	-
Period of implementation/Application	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-
Marketing channel (social networks, TV, etc.)	Facebook, Twitter, YouTube
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	A one-stop-shop for accessing information makes it convenient for businesses and general public to access and learn more about how to comply with relevant laws. Furthermore, the simplification of procedures surrounding tax and enterprise registration, it is assumed, can encourage economic units to register. Ease of conducting such operations can encourage economic units to register and pay taxes.
Source(s) of information	https://www.thedailystar.net/national-web-portal-launched-30049 https://bangladesh.gov.bd/index.php http://secure.incometax.gov.bd/TINHome http://app.roc.gov.bd:7781
Intervention taxonomy according to ILO (2014) framework	Regulation (Information training, Simplification of procedures)
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units

Fiji

Name of the programme/initiative	Business registration through Fiji Government Portal
Objectives	The business sub-portal of the Fiji Government Portal provides information and services to businesses. The stated objective is 'eliminating administrative bottlenecks and reducing processing time'. The sub-portal links users to the Registrar of Companies and Business System which allows for registration of businesses and company names.
Type of technology (example: website, app, use of ICT, etc.)	Online portal
Target Public (public officials, workers, employers, etc.)	Entrepreneurs and businesses
Years	-
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Registrar of Companies and Business System
Costs	-
Period of implementation/Application	-
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-
Marketing channel (social networks, TV, etc.)	-
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	Easier access to information makes it convenient for businesses and general public learn about their obligations and comply with regulations better. Furthermore, the simplification of procedures, it is assumed, can encourage economic units to register.
Source(s) of information	https://www.egov.gov.fj/g2b/default.aspx
Intervention taxonomy according to ILO (2014) framework	Regulations (Simplification of procedures, Information training)
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units

India			
Name of the programme/initiative	(1) Shram Suvida - Unified portal for Labour and Employment	(2) e-Biz - India's G2B Portal	(3) Online registration of employers under Employees' State Insurance Act
Objectives	As the Ministry of Labour and Employment (MoLE) at the federal level and respective state governments in India together enforce more than 40 labour laws, ensuring and reporting compliance becomes complicating and time-consuming--risking high rates of non-compliance. The unified portal for labour and employment therefore is aimed at ensuring simplification of formats, easing compliance, enhancing transparency in inspections and speedy redressal of grievances. The portal is primarily used for online registration of units, reporting of inspections, and submissions of annual returns on compliance from employers.

The portal provides a one-stop-shop for filing a single harmonized annual return by employers pertaining to different labour laws and labour authorities. Similarly, it also provides for online reporting of a single harmonized inspection report from labour inspectors. Since the portal integrates operations between different labour authorities, it operates by assigning a Unique Labour Identification Number (LIN) to each inspectable unit.

The Ministry of Labour and Employment notes that Shram Suvidha Portal is an 'Ease of Doing Business' labour law reform initiative by the Government of India. | e-Biz is an online one-stop-shop for government to business (G2B) services. Businesses will be able to apply for and manage all their licenses, clearances, registrations, and regulatory filings through this single web portal. The portal is expected to reduce complexity in obtaining information and services pertaining to starting and operating a business in India.

The following services are available to businesses through this portal:

- Get information on registrations, licenses, clearances required to start a business
- Make online application for new licenses or renewal of existing licenses, permissions, approvals, clearances, and registrations
- File tax returns and other regulatory reports
- Make electronic payments for statutory fees, duties, taxes, service fees, etc
- Track application status and receive SMS notification on status of application
- Communicate with concerned government departments in order to respond to queries or to submit additional documents
- Get e-copies of approved licenses, registration certificates, and other clearance letters

The launch of e-biz portal is expected to boost India's position in the World Bank's Ease of Doing Business Index. | The Employees' State Insurance Corporation (ESIC) has made it possible for employers to register under the Employees' State Insurance Act without any physical documents. The process can now be completed online.

For certain employers which are required to made advance contribution for six months, this can also be completed online.

Upon successful registration of the employer with ESIC, a computer-generated copy of registration letter (C-11) is issued which does not require any physical signature from the issuing authority and can be used as valid proof of registration. |
Type of technology (example: website, app, use of ICT, etc.)	Online portal	Online portal	Online portal for registration
Target Public (public officials, workers, employers, etc.)	Employers, workers.	Enterprises and businesses	Employers and Employees
Years	Launched in 2014	Conceived in 2009 and launched in 2013	-

Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Ministry of Labour and Employment, National Informatics Center	The portal is owned by the Department of Industrial Policy and Promotion (DIPP) - Ministry of Commerce & Industry. It was conceptualized with the support of National Institute of Smart Government (NISG) as the consulting partner and was developed and is maintained by Infosys Ltd. In a Public-Private Partnership (PPP) model	Employees' State Insurance Corporation (ESIC)
Costs	-	-	-
Period of implementation/Application	Not defined	10 years	-
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	2569729 Labour Identification Numbers (LINs) issued, 408939 inspection reports submitted, and 48365 returns submitted [As of October 9, 2018]	-	Number of online employer registration: In Previous 12 months - 113955 Current month - 1176 Total online monthly contribution: Previous 12 months - 7218513 Current month - 82077 [Figures as of October 9, 2018]
Marketing channel (social networks, TV, etc.)	Facebook, Twitter, YouTube, Instagram	-	-
Main difficulties/challenges when implementing the programme	-	Low service integration with the portal.	-
Post implementation modifications made	-	In 2015, DIPP had launched 11 additional central government services on e-Biz portal.	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-	-	-
Evaluations	Easing the application process by removing bureaucratic redundancies, it is assumed, can encourage employers to file annual labour law compliance returns, and for authorities to follow-up better. This could together pave the path towards greater formalization.	Easing access to information on business registration and streamlining the process can aid the move to formality. However, this case from India shows that the creation and operation of such portals are not always easy. In July 2014, the Finance Minister of India had announced that all central government departments and ministries would integrate their services with the e-Biz platform by the end of that year. However, that target was missed. The last update on the portal was made on 18 June, 2015 [As of October 9, 2018]. Against this backdrop, media reports suggest that the government is planning to shut down the e-biz portal due to low service integration.	The registration of establishments with the Employees' State Insurance Corporation (ESIC), and the registration of associated workers and provision of insurance benefits are important steps to formality. Easing the access to and usability of the platform for such registration, it is assumed, will encourage establishments to register with ESIC and register and make required contributions for their workers.
Source(s) of information	https://labour.gov.in/sites/default/files/e-compliance_0.pdf https://shramsuvidha.gov.in/home	http://ebiz.gov.in/content/guideme http://pib.nic.in/newsite/PrintRelease.aspx?relid=115592	http://www.esic.in/ESICInsurance1/ESICInsurancePortal/Employer_Employee%20Registration%20through%20ESIC%20portal.pdf

	https://www.youtube.com/watch?v=QNKhcxu0LAk https://www.livemint.com/Politics/wPhXFOCJSvtjjRWnEZ3gGO/Govt-to-shut-UPAera-eBiz-portal-over-low-service-integratio.html	http://www.esic.in/ESICInsurance1/ESICInsurancePortal/PortalLogin.aspx
Intervention taxonomy according to ILO (2014) framework	Regulations (Simplification of procedures), Enforcement (Automation, culture of compliance)	Regulations (Simplification of procedures, Information training)	Regulations (Simplification of procedures), Enforcement (Automation/Upgrading)
Classification according to Chacaltana, Leung, and Lee (2018)	Registration of workers	Formalization of economic units	Formalization of economic units, registration of workers

India (cont.)

Name of the programme/initiative	(4) BHIM Aadhar Pay App and BHIM Aadhar Merchant Incentive Scheme	(5) Electronic payment of minimum wages in Kerala
Objectives	The BHIM Aadhar Pay app is a biometric-based payment system developed by bringing together UPI platform and Aadhar biometrics. It enables merchants to receive digital payments from customers via Aadhar authentication. This means that the customers will not require even a bank card or a mobile phone to complete the transaction--simply their Aadhar biometric information. Merchants associated with any acquiring bank live on BHIM Aadhar Pay can accept payment from customers by authenticating customer's biometrics--regardless of the customer's bank. Both the customer and the merchant need to have their Aadhar linked to the bank account being used for the transaction.

To accept payments this way, merchants will need to have a mobile device with BHIM Aadhar app and certified biometric scanner attached to the mobile phone, kiosk, tablet or Micro-ATM/POS, mPOS.

To further incentivize the uptake of BHIM Aadhar pay for transactions, the BHIM Aadhar Merchant Incentive Scheme has also been announced. Under this scheme, users registered as merchants and receiving payments via this app will be eligible for an incentive of 0.5 per cent of the transaction value with minimum amount of INR 2 and maximum of INR 50 per transaction. The maximum transaction limit under this scheme is set at INR 10,000 and maximum incentive is restricted to INR 2,000 per merchant per month. In order to be eligible for the scheme, merchants should be accepting payments using registered device and the transaction is for the sale of goods and services by a merchant establishment and payment is made using Aadhar number and biometrics. | The Government of Kerala has amended the Minimum Wages Rules to enforce the payment of minimum wages through bank for workers in certain sectors. Sectors such as private hospitals, pharmacies, clinical labs, and other allied institutions; non-teaching staff at private educational institutions; computer software; star hotels; and security services; and shops and establishments. |
| **Type of technology (example: website, app, use of ICT, etc.)** | Mobile payment platform, mobile app | Cashless/electronic payment |

Target Public (public officials, workers, employers, etc.)	Merchants, customers	Workers
Years	BHIM Aadhar platform launched in May 2017; Merchant Incentive Scheme in June 2017	Amendment made on July 8, 2015
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	National Payments Corporation of India (NPCI)	Labour Commissionerate - Kerala
Costs	-	-
Period of implementation/Application	Not defined	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)		-
Marketing channel (social networks, TV, etc.)	Twitter, Facebook, YouTube, LinkedIn	-
Main difficulties/challenges when implementing the programme	-	Amendment challenged in Kerala High Court by 188 petitions. However, the court upheld the decision of the government paving the way for electronic payment of workers in select sectors
Post implementation modifications made	On 14 August, 2017 the BHIM Aadhar Merchant Incentive Scheme was extended upto 31 March 2018. Subsequently, on 27 March, 2018 the scheme was extended up to 31 March, 2019.	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-	-
Evaluations	This scheme not only provides for a cashless payment platform which could have to a macro- productivity impact in the economy, but also uses incentive mechanisms to encourage merchants to accept payments based on such platforms. Together, it is assumed, these can induce the move towards formalization.	This amendment to the Minimum Wages Rule covers workers in certain sectors of the economy. Promoting cashless and electronic payments and routing employees' payrolls through banks has two advantages. Firstly, transactions will be registered and this could contribute to the registration of enterprises. Secondly, transactions routed through banks mean that workers will have access to the financial system and prevents arbitrary payments related exploitation. These could pave the path towards greater formalization.
Source(s) of information	https://www.npci.org.in/product-overview/bhim-aadhaar http://meity.gov.in/writereaddata/files/BHIM%20Aadhaar%20Merchant%20incentive%20schemes.pdf http://meity.gov.in/writereaddata/files/BHIM_Aadhaar_scheme_2018.pdf https://www.businesstoday.in/current/economy-politics/pm-narendra-modi-launch-bhim-aadhaar-pay-app-how-it-works/story/249990.html	https://timesofindia.indiatimes.com/city/kochi/paying-minimum-wages-through-bank-hc-upholds-amendment/articleshow/63702430.cms https://english.manoramaonline.com/news/kerala/2018/04/11/salary-banks-amended-kerala-minimum-wages-act.html
Intervention taxonomy according to ILO (2014) framework	Productivity (Macro), Incentive (Financial subsidies)	Productivity (Meso), Enforcement (Compliance culture)
Classification according to Chacaltana, Leung, and Lee (2018)	Registration of financial transactions	Registration of financial transactions, formalization of economic units

Indonesia

Name of the programme/initiative	Go-Jek and BPJS collaboration for partner riders' social security contributions
Objectives	Indonesian ride-hailing platform Go-Jek and social security administration body for employment BPJS have partnered to make it easier for Go-Jek partner riders to register for employment-related insurance with BPJS Employment. Under the programme, riders can receive benefits in the form of Work Accident Insurance and Death Insurance coverage for only IDR 16,800 per month. For partner riders of Go-Jek who want to join the programme, online registration can be made using a custom-made website developed by Go-Jek and BPJS. This means that registration can be done anywhere, and at anytime. The payment of monthly fees is also automated with fees directly being debited from partner riders' Go-Jek balance.
Type of technology (example: website, app, use of ICT, etc.)	Website, Mobile App
Target Public (public officials, workers, employers, etc.)	Go-Jek partner riders
Years	Launched towards the end of 2017
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Collaborative effort between ride-hailing platform Go-jek and social security aministration body for employment BPJS
Costs	-
Period of implementation/Application	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	According to Kompas.com (in source), since launch, each month an average of 7,000 Go-Jek partner riders have applied to become BPJS Employment participants
Marketing channel (social networks, TV, etc.)	Internal drive within Go-Jek to get partner riders registered
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	An interesting model of public-private collaboration to facilitate the transition to formality, especially in the context of non-standard forms of work. The extension of employment-related insurance to workers, aided by tech-based platform that simplify access, can aid the transition to formality.
Source(s) of information	https://ekonomi.kompas.com/read/2018/05/14/104200926/go-jek-permudah-mitra-driver-jadi-peserta-bpjs-ketenagakerjaan https://jakartaglobe.id/business/go-jek-drivers-join-bpjs-ketenagakerjaan/
Intervention taxonomy according to ILO (2014) framework	Productivity (Micro), Regulation (Simplification of procedures)
Classification according to Chacaltana, Leung, and Lee (2018)	Electronic registration of workers

Japan

Name of the programme/initiative	Policies to promote cashless payment under consideration
Objectives	The Japanese government is reportedly considering extending limited period tax breaks and to small and mid-sized enterprises and businesses to introduce cashless payments. Also reportedly under consideration are distributing bank card readers to small shops and businesses, giving customers who use cashless payments redeemable coupon points to for future purchases, QR-code standardization, and subsidies for businesses that provide digital settlement infrastructure.
Type of technology (example: website, app, use of ICT, etc.)	Cashless and digital payment
Target Public (public officials, workers, employers, etc.)	Businesses--especially small and mid-sized, customers
Years	-

Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	-
Costs	-
Period of implementation/Application	-
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-
Marketing channel (social networks, TV, etc.)	-
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	Cashless and electronic payments have greater traceability and incentives to promote their usage, it is assumed, can be important drivers of the transition to formality.
Source(s) of information	https://asia.nikkei.com/Economy/Japan-to-promote-e-payment-with-subsidies-and-tax-breaks
Intervention taxonomy according to ILO (2014) framework	Incentives (Tax rebates, Financial subsidies)
Classification according to Chacaltana, Leung, and Lee (2018)	Registration of financial transactions

Maldives	
Name of the programme/initiative	MIRA Mobile App
Objectives	The MIRA mobile app makes it easy for taxpayers to access tax related information at anytime and from anywhere. Various fees, including company annual fees can also be paid through the app. It also has an inbuilt tax calendar and allows taxpayers to set reminders for deadlines. Updates and news from the Internal Revenue Authority can be viewed through the app.
Type of technology (example: website, app, use of ICT, etc.)	Mobile App
Target Public (public officials, workers, employers, etc.)	Taxpayers
Years	Launched on 4 August 2017 [On Google Play Store]
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Maldives Inland Revenue Authority
Costs	-
Period of implementation/Application	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	5,000+ downloads on Google Play Store [As of 10 October 2018]
Marketing channel (social networks, TV, etc.)	Facebook, Twitter, YouTube
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	Ease of access to information related to taxation and of conducting tax-related operations and can encourage greater compliance.
Source(s) of information	https://play.google.com/store/apps/details?id=com.mira.miramobile&hl=en https://www.youtube.com/watch?v=09q_PQD27qU
Intervention taxonomy according to ILO (2014) framework	Regulation (Simplification of procedures, Information training)
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units

New Zealand		
Name of the programme/initiative	(1) myIR - online services and mobile application	(2) Online Guide to starting a business and links to relevant online portals
Objectives	Taxpayers can use the myIR online portal for filing tax returns, managing tax related operations, updating details, making payments, and contacting Inland Revenue Department (IRD). The Inland Revenue Department (IRD) has also launched a mobile application for Appple devices through which small and medium enterprises can manage their Goods and Services Tax (GST). By updating online services to simply procedures and to making it easier to access relevant information, the IRD is facilitating the transition towards online services for taxpayers.	Website hosted by the Ministry of Business, Innovation and Employment--business.govt.nz-- provides easy step-by-step guide to starting a business. It helps entrepreneurs and businesses to get relevant information regarding choosing a business name, deciding on a business structure, getting a New Zealand Business Number (NZBN), securing business name, registering a company, registering enterprise for goods and service tax (GST), and registering trademark. It also redirects users to websites or online portals relating to those services. Services such as looking up a business name, getting NZBN, securing and registering a company, registering for GST, and registering trademark are available online.
Type of technology (example: website, app, use of ICT, etc.)	Online portal, Mobile application	Website
Target Public (public officials, workers, employers, etc.)	Taxpayers	Entrepreneurs and businesses
Years	myIR mobile app launched in January 2015	-
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Inland Revenue Department (IRD)	Ministry of Business, Innovation and Employment
Costs	-	-
Period of implementation/Application	Not defined	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	In 2014, 67 per cent of all tax returns and around 83 per cent of all payments were made online	-
Marketing channel (social networks, TV, etc.)	Twitter, YouTube	-
Main difficulties/challenges when implementing the programme	-	Facebook, Twitter, LinkedIn
Post implementation modifications made	-	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-	-
Evaluations	Ease of access to information related to taxation and of conducting tax-related operations and can encourage greater compliance.	A simple registration process that either in part or completely eliminates the need to physically visit concerned authorities makes it convenient for businesses to register. This simplification of procedures, and the ease of access to relevant information related to enterprise registration, it is assumed, can encourage economic units to register.
Source(s) of information	http://www.ssc.govt.nz/making-tax-easier-kiwis-case-study-inland-revenue https://www.sushmobile.com/apps/myir https://www.ird.govt.nz/help/demo/personal-accounts/personal-accounts-online-services-demo.html https://www.ird.govt.nz/help/demo/business-accounts/	https://www.business.govt.nz https://www.business.govt.nz/getting-started/taking-the-first-steps/10-step-guide-to-starting-a-business/

Intervention taxonomy according to ILO (2014) framework	Regulation (Simplification of procedures, Information training)	Regulation (Simplification of procedures, Information training)
Classification according to Chacaltana, Leung, and Lee (2018)	Formalization of economic units	

Singapore

Name of the programme/initiative	Singapore Quick Response Code (SGQR) standardization
Objectives	In order to make it convenient and efficient for both consumers and businesses to use and accept QR-based payments, Singapore has introduced standardized QR codes, i.e. a single QR code that combines QR codes of the various electronic payment service providers.
Type of technology (example: website, app, use of ICT, etc.)	Cashless/electronic payment
Target Public (public officials, workers, employers, etc.)	Customers and Businesses
Years	Launched in September 2018
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Monetary Authority of Singapore, multiple international payment schemes, banks, e-wallets and acquirers, and government agencies
Costs	-
Period of implementation/Application	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	Adopted by about 27 different payment schemes at launch
Marketing channel (social networks, TV, etc.)	YouTube, Twitter
Main difficulties/challenges when implementing the programme	-
Post implementation modifications made	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-
Evaluations	Making QR-code based payment options convenient to use by launching one QR code that works across multiple payment systems is aimed at encouraging greater uptake of this mode of payment – especially among small businesses. Not only does this improve productivity at micro or firm-level but, moving from cash to non-cash payment methods improves traceability of transactions, and is assumed to improve compliance with tax laws. Furthermore, being a pan-nation initiative to make payments system more convenient and efficient, it is likely to have a macro impact on the overall economy.
Source(s) of information	http://www.mas.gov.sg/sgqr/index.html https://www.businesstimes.com.sg/government-economy/singapores-payments-transformation-pushes-ahead-with-single-qr-code
Intervention taxonomy according to ILO (2014) framework	Productivity (Macro, Micro)
Classification according to Chacaltana, Leung, and Lee (2018)	Registration of financial transactions, Formalization of economic units

Thailand

Name of the programme/initiative	(1) Electronic payment of fishers	(2) Standardized QR codes
Objectives	Ministerial order from the Ministry of Labour requires fishers in Thailand to be paid electronically through bank accounts.	The move to standardize QR codes comes with multiple benefits. Firstly, merchants and vendors will only have to display a single QR code to accept payment irrespective of the particular merchant used by the consumer as long as it is part of the standardized QR code system. Similarly, the customers need not scan different QR codes depending on the merchant they use as one QR code works for all merchants participating. The standardized QR code

		will be globally-operable allowing consumers to make payments using the same QR code everywhere the standard has been adopted. QR code standardization in Thailand is expected to particularly spur cashless payment uptake from small-ticket goods and services providers such as motorbike taxis, street vendors, wet markets, small shops, etc.
Type of technology (example: website, app, use of ICT, etc.)	Cashless/electronic payment	Cashless/electronic payment
Target Public (public officials, workers, employers, etc.)	Workers in the fishing industry	Consumers and businesses
Years	Minsterial Order issued on 1 November 2017	Five major banks allowed to offer standardized QR code based payments to the public from November 2017
Creative entity and/or sponsor (example: labour ministry, ministry of education, etc.)	Ministry of Labour	Bank of Thailand, Private and public financial institutions, non-bank payment service providers, international card schemes such as VISA, MasterCard, and UnionPay.
Costs	-	-
Period of implementation/Application	Not defined	Not defined
Scope of the programme during its implementation (example: number of views on the web, number of people trained, number of downloads of an app, etc.)	-	Standardized QR code, according to the Bank of Thailand, has reached almost 2 million merchants
Marketing channel (social networks, TV, etc.)	-	Youtube, Bank of Thailand website
Main difficulties/challenges when implementing the programme	Challenges pertaining to effective implementation and enforcement of the order, making workers in the industry aware of the requirement, improving financial literacy among workers, and addressing concerns of migrant fishing industry workers from neighbouring countries like Cambodia and Viet Nam such as having ATMs that support foreign languages.	-
Post implementation modifications made	-	-
Alliances of programmes with other institutions (e.g. private sector sponsors)	-	-
Evaluations	Promoting cashless and electronic payments and routing employees' payrolls through banks has two advantages. Firstly, transactions will be registered and this could contribute to the registration of enterprises. Secondly, transactions routed through banks mean that workers will have access to the financial system and prevents arbitrary payments-related exploitation. These could pave the path towards greater formalization. Given that ministerial order is complemented by strict labour inspection and high compliance through effective enforcement, the ministerial order could be a major breakthrough in reducing workers' abuses in the Thai fishing industry--and paving path towards the transition to both-- employment and enterprise based-formality in this sector.	Making QR-code based payment options convenient to use by launching one QR code that works across multiple payment systems is aimed at encouraging greater uptake of this mode of payment – especially among small businesses. Not only does this improve productivity at micro or firm-level but, moving from cash to non-cash payment methods improves traceability of transactions, and is assumed to improve compliance with tax laws. Furthermore, being a pan-nation initiative to make payments system more convenient and efficient, it is likely to have a macro impact on the overall economy.

Source(s) of information	https://shiptoshorerights.org/wp-content/uploads/ilo-shiptoshore_banking-final-report_EN.pdf https://www.hrw.org/news/2018/07/15/thailand-labor-abuses-persist-fishing-fleets	https://www.bot.or.th/Thai/AboutBOT/Activities/event/Documents/ADBI_bancha.pdf https://asia.nikkei.com/Business/Digital-payment-in-Thailand-gets-boost-from-QR-code-push https://www.finextra.com/pressarticle/71573/five-banks-exit-thai-regulatory-sandbox-with-qr-payment-codes https://www.nfcworld.com/2017/05/09/352214/thailand-to-get-standardised-qr-code-payments-in-move-towards-cashless-society/
Intervention taxonomy according to ILO (2014) framework	Productivity (Meso), Enforcement (Compliance culture)	Productivity (Macro, Micro)
Classification according to Chacaltana, Leung, and Lee (2018)	Registration of financial transactions, Formalization of economic units	

References

Chacaltana, J.; Leung, V.; Lee, M. 2018. *New technologies and the transition to formality: The trends towards e-formality*. (Geneva, ILO).

International Labour Organization (ILO). 2018. *Women and men in the informal economy: A statistical picture (third edition)* (Geneva).

—. 2014. *Panorama Temático Laboral: Transición a la Formalidad en América Latina y el Caribe*. (Lima).

Kim, J. 2017. *e-Tax administration in Korea & its achievements* (Korea Institute of Public Finance); Available at: http://iobe.gr/docs/pub/PRE_Dr.%20KIM%20Jaejin_01062017_PUB_GR.pdf [Accessed: 10 Oct. 2018].

Sung, M. J.; Awasthi, R.; Lee, H.C. 2017. *Can tax incentives for electronic payments reduce the shadow economy? : Korea's attempt to reduce underreporting in retail businesses* (Washington D.C., World Bank).

World Bank. 2013. *Doing business 2014: Understanding regulations for small and medium-size enterprises* (Washington, D.C.)

Emerging trends in the use of technology as a driver of the transition to formality: Experiences from Asia and the Pacific

Informality trends across labour markets are likely to be affected by the rising diffusion of technology in many ways. On the one hand, there are apprehensions concerning the risks of job losses due to increasing automation of production processes and also fears of increasing technology-driven incidences of informal jobs in the formal sector as crowdwork continues to spread. On the other hand, governments are keen to reap development dividends, courtesy of technological advancements. The subject matter of this paper concerns the latter. One way in which technology can aid the transition to formality is by amplifying the impact of policies aimed at driving such transitions. New technologies are therefore being increasingly integrated into public policies, plans, and programmes that are either directly aimed at or indirectly contribute towards driving the transition to formality. This working paper examines such "e-formality" approaches in the Asia Pacific region. It provides an inventory of current of public initiatives, programmes, and policies that have incorporated the use of technology and have either directly or indirectly become vehicles for increased formalization or the transition towards it.