

THE IMPLICATIONS OF DISRUPTIVE TECHNOLOGIES FOR INDONESIA

A COLLABORATION WITH THE ASIAN DEVELOPMENT BANK (ADB)

Policy Links is leading this collaborative project involving researchers from various University of Cambridge divisions including the IfM's Centres for Science, Technology and Innovation Policy (CSTI), International Manufacturing (CIM), Asset Management, and Business Model Innovation. The project also draws expertise from the Department of Engineering's Use Less Group and Urban Planning team, and the Judge Business School.

THE CHALLENGE >>>

There is a critical gap in knowledge on the country-specific impact on Indonesia of disruptive technologies, which in turn limits the development of enabling policies as well as a clear business case for public investments.

Indonesia is the largest economy in Southeast Asia and the 16th largest in the world. Its economic performance has been impressive over the last two decades and it is forecast to maintain consistent levels of growth in the coming years. Like all countries, however, it is worried about the potential impact of disruptive technologies such as artificial intelligence, machine learning, blockchain, big data,

and the internet of things, among others, which are radically reshaping economic activities and sources of international competitiveness.

All countries recognise the opportunities and challenges presented by the advent of these new technologies, but there is no 'one size fits all' approach to tackling them. Each country is unique, with different economic structures, different resources and different areas of specialisation. While it is always instructive to look at how other countries are developing their innovation policies, each country needs an approach that will work in its own particular economic and social context.

THE CLIENT NEED

The Asian Development Bank wants to better understand what these emerging technologies will mean for Indonesia and what policies can support the country's technological transformation.

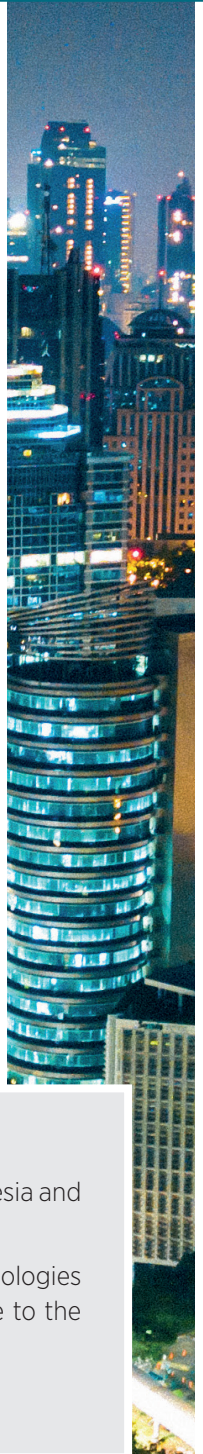
Policy Links was asked to carry out a study, from both engineering and economics perspectives, of how new technologies are likely to affect key sectors in Indonesia's economy. The study will also identify policy options to contribute to the national debate.

This project is due for completion in March 2019.

THE APPROACH >>>

In order to fully understand the implications of new technologies for Indonesia, the project has a number of different elements:

1. A study of the Indonesian economy, carried out in conjunction with a local research institute.
2. Deep analysis of key sectors that are both important to the economy and most likely to experience technological disruption.
3. Wide-ranging consultation with local stakeholders to ensure that the team's findings fully represent the realities of the Indonesian experience.
4. A review of how other countries are approaching the same challenge.
5. The publication of a final Flagship Report which pulls this analysis together and makes a set of policy recommendations for the Indonesian government.





KEY PROJECT STAGES >>



UNDERSTANDING THE INDONESIAN ECONOMY

The project is underpinned by an initial study carried out in collaboration with Indonesia's Centre for Strategic and International Studies (CSIS). CSIS has undertaken a structural analysis of the Indonesian economy, assessing its main strengths and weaknesses with a particular focus on the use of digital technologies in the key economic sectors. This has been done through a combination of desk research and analysis, surveys and interviews. Policy Links helped to define the scope of the study and has provided input and advice, particularly on technology-related issues.



ANALYSING FIVE KEY SECTORS

Policy Links then looked in more detail at five key sectors: manufacturing, finance, e-commerce, urban planning, and energy. As well as examining the potential impact of new technologies on each of these sectors, the team also looked at how other social, economic and environmental issues might affect them and supported their findings with case studies. Each of these five studies will be presented as separate Policy Briefs and their findings will be distilled into the final Flagship Report.



TALKING TO LOCAL STAKEHOLDERS

The next stage of the project is to capture stakeholder perspectives on the potential opportunities and challenges arising from disruptive technologies. This will be done by interviewing key stakeholders from industry, government and academia as well as by running a number of workshops using the roadmapping methodology developed at the IfM. This technique has been used with hundreds of organisations around the world and has proved itself to be highly effective at bringing together people with different expertise to develop a shared vision. These workshops play a critical part in the process, testing and validating the team's research findings with people who are dealing with the realities of technological disruption in the Indonesian context.



TAKING AN INTERNATIONAL PERSPECTIVE

Policy Links will also carry out a review of international policy approaches to addressing opportunities and challenges presented by these new technologies. While each country is different, it is useful to look at how others are tackling the same problems and to learn from their successes and failures. Policy Links has considerable experience of conducting these kinds of international comparisons and will further support this process by consulting widely with international experts.



DEVELOPING A CATALOGUE OF POLICY OPTIONS FOR INDONESIA

The flagship report will bring together all the findings from the different workstreams together with an assessment of how ready Indonesia's existing firms are to embrace these new technologies. It will describe the key challenges and opportunities for the Indonesian government and set out a catalogue of policy options.

ABOUT POLICY LINKS

Policy Links is a not-for-profit innovation policy consultancy unit whose aim is to help governments develop more effective industrial innovation policies. It is the knowledge transfer unit of the Centre for Science, Technology & Innovation Policy (CSTI), University of Cambridge. Our team is equipped with expertise and resources to provide professional advice, education services and policy solutions based on:

- ▶ World-class research in the fields of science, technology and innovation (STI) policy
- ▶ Specialist understanding of established and emerging technologies and industries
- ▶ Extensive knowledge and practical understanding of international policy approaches and best practice.

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