

# IMPROVING PUBLIC SECTOR PERFORMANCE

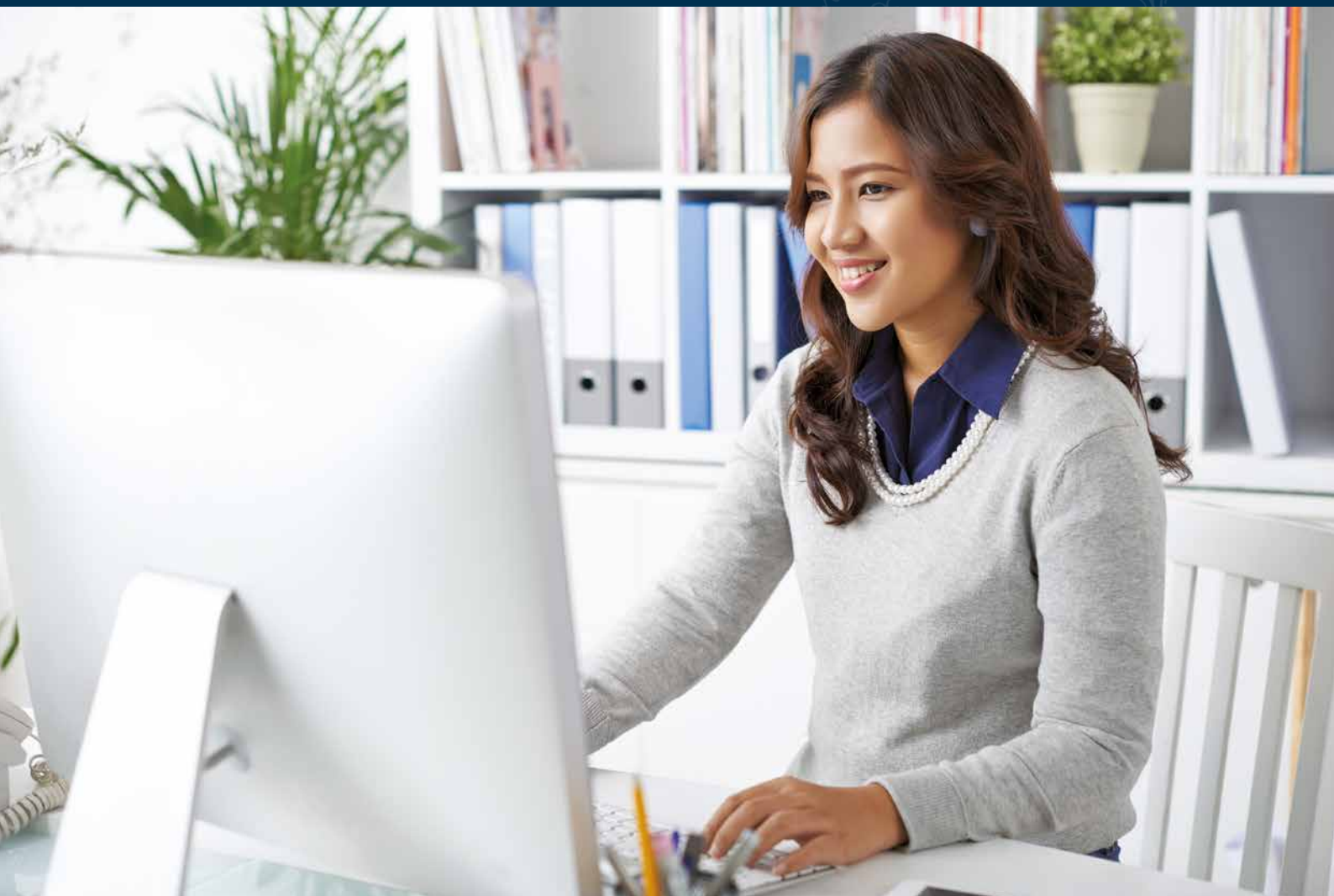
THROUGH INNOVATION AND  
INTER-AGENCY COORDINATION



**WORLD BANK GROUP**  
Global Knowledge & Research Hub  
in Malaysia

**CASE STUDY FROM THE GLOBAL REPORT**

## Reforming Civil Service Recruitment through Computerized Examinations in Indonesia



## CASE STUDY 6

# Reforming Civil Service Recruitment through Computerized Examinations in Indonesia



### Overview

In response to public suspicion about corruption in the recruitment process for government workers, Indonesia's civil service agency in 2013 introduced a new computer-based civil service examination to replace the old paper-based one. Although the agency found it difficult to convince government organizations, especially at the provincial level, to adopt the new exam, strong support from top leaders and the public saw the new system quickly implemented nationwide. Observers said the new system brought more transparency and credibility to the recruitment process and reduced opportunities for collusion and nepotism.



#### INDONESIA

POPULATION (July 2017 est.)<sup>1</sup>  
**260.581 million**

GDP PER CAPITA (current US\$)<sup>2</sup>  
**3,570.30**

INCOME GROUP<sup>3</sup>  
**Lower middle income**

GOVERNMENT EFFECTIVENESS<sup>4</sup>  
**53.4%**

<sup>1</sup>CIA World Factbook, <sup>2</sup>World Bank (2016),  
<sup>3</sup>World Bank (2016), <sup>4</sup>World Bank (2016)

## Introduction

Prior to 2013, applicants to the Indonesian civil service sat their examinations in large stadiums alongside tens of thousands of other aspiring government workers. The exam was paper-based, and every year citizens complained about the exam process. Many believed that officials intervened in the results to provide favors to friends, family members, and political supporters. In addition, there were suspicions that corrupt officials offered jobs in exchange for payment.

After the fall of the Suharto dictatorship in 1998, new political elites had quickly sought to capture the recruitment process for civil servants. There was little transparency in how candidates were selected, and many government jobs were filled with unqualified or incompetent workers. Despite the prestige of government positions, many of Indonesia's top university graduates opted not to apply to the civil service because they perceived the recruitment process as unfair. Without high-performing civil servants, it was difficult for the government to develop good policies and deliver public services efficiently and effectively.

The civil service recruitment process had three main stages. First, candidates went through an administrative selection process, which screened applicants based on their experience and educational qualifications. Next, candidates sat the general civil service exam, a paper-based exam made up of three parts: a general intelligence test, a nationalism test, and a personality test. Then, candidates sat a more specialized exam for the specific ministry or agency they hoped to enter (for example, the Ministry of Foreign Affairs required each candidate to write an essay using a foreign language). Some jobs that required specialized capabilities had obligatory physical or psychological tests.

After Indonesia's Corruption Eradication Commission (Komisi Pemberantasan Korupsi, or KPK) recommended reforming the civil service recruitment process, the Civil Service Agency (Badan Kepegawaian Negara, or BKN), in 2008, began experimenting with how it could make the general civil service exam fairer and more transparent, and reduce opportunities for corruption, collusion, and nepotism. When President Susilo Bambang Yudhono and

Vice-President Boediono began strengthening the public sector with a new wave of reforms in late 2010, the BKN decided to step up its efforts to overhaul the civil service recruitment process. Beginning in 2010, the agency piloted a new computer-based test for its own internal selection process.

The new test was fairer for candidates and conducted in a more pleasant environment. Instead of taking the test in a crowded stadium, candidates sat at computers in an air-conditioned room. Each candidate received a randomized set of questions of equal difficulty, and the computer automatically graded the tests as the candidate progressed. After the examination was over, candidates immediately received their final grade.

Despite the existence of the new computer-based test, the BKN found that other government ministries and agencies had little interest in the system. The government did not mandate that other government agencies require the new test, and most chose to stick with the old system. The BKN did not push agencies to adopt the new test, and besides, it was uncertain if the system was robust enough to be used nationwide. Running an electronic test would require significantly more infrastructure, including computers and servers, and a better-designed test itself.

Introducing the computer-based examination for all candidates would have broad benefits for Indonesia's public sector. In the short term, it could accelerate the recruitment process and reduce the human resources needed to conduct and grade examinations. Longer term, a fairer examination process could increase public trust in the government, and improve public policy implementation through having a better-qualified and more capable civil service.

## Response

Implementing the new examination, called the computer-assisted test (CAT), required the BKN to design a new and robust test that would be safe from malfeasance and that could be implemented across the country. The agency then had to build support for the new system across the government – in ministries, agencies, and regional governments.

## Designing a new system

The BKN used its existing staff to develop the CAT system in-house, mostly using readily available open source software. They also brought in staff from the Ministry of Communication and Information Technology to identify and fix vulnerabilities in the system. Later, the BKN brought in support from the country's Cyber Security Agency to ensure the system could not be hacked.

The CAT software was designed to give each candidate a unique set of questions from a list of over 20,000 written by a consortium of university professors specifically for the civil service exam. The randomized questions were weighted so that candidates received tests that were equally demanding, though certain candidates were eligible to take less difficult tests. Following the government's policy of affirmative action for civil service recruits from indigenous groups and less-developed parts of the country, candidates that belonged to those groups sat tests weighted to be less difficult than those sat by candidates from areas with stronger education systems, like Java island, where the capital city of Jakarta is located.

In Jakarta, the BKN had a fixed test-taking location equipped with computers, but for tests in regional areas the agency had to adapt to the locally available infrastructure. In most cases, the BKN worked with the military to make use of their facilities to create secure test-taking locations around the country. The BKN also had to procure sufficient computers for its own facility and to send to regional locations. In most parts of the country, internet connectivity was reliable enough for the tests to be taken online. In remote locations where that was not the case, the BKN set up servers that allowed for the test to be taken on a localized network.

To increase the transparency of the new system, BKN designed the software so observers could track candidates' results live while tests were being taken. At each location, the BKN could set up monitors displaying the live results outside of the test taking room. That way, observers (including civil society groups, which the agency invited to witness the tests) could check in real time that results were not being interfered with. After the test was finished, each candidate could instantly see his or her final score.

## Building support

Initially, the BKN found it hard to get government ministries and agencies on board with the new system. Many preferred to stick with the old system, either because it was what they were used to or because it gave officials the opportunity to derive benefits from the recruitment process. Fortunately, the BKN was able to garner support from two large ministries that were open to change and eager to implement a better system: the Ministry of Law and Human Rights, and the Ministry of Foreign Affairs.

With those two large ministries on board, and a host of smaller government organizations that voluntarily chose to recruit through the CAT system, the BKN launched the CAT exam nationwide in 2013. Across the country, 263,288 individuals sat the computerized exam over the course of a few weeks. To utilize space and computers efficiently, each candidate was issued with a time and location to take the exam.

Public reaction to the new system was positive. "Everybody who had taken the old system asked [ministries and agencies still using the paper-based test] why they didn't have the CAT system," said BKN Chairman Bima Haria Wibisana. "The old system was not transparent and accountable, so the public put pressure on the government to open jobs through the CAT system." In addition, the BKN built support among students by visiting universities and explaining the new system. The agency hoped to attract students, who might have been disinterested in the civil service because of the former examination process, to consider applying.

The public pressure from applicants and students reached the highest levels of the Indonesian government, and in 2014, Vice-President Boediono declared that all civil service jobs must recruit using the CAT system.

## Expanding nationwide

With the Vice-President's backing, the CAT system was set to be used for the recruitment of all new civil servants in 2014. Rolling the system out in sub-national governments turned out to be a far more difficult task, however. "Some provincial governments tried to avoid using the system, especially in remote

areas,” said Wibisana. “But then the Minister of Administrative and Bureaucracy Reform and the Minister of Finance agreed that they would not provide resources for recruitment if the provincial government did not use the CAT system.” Even with recruitment resources frozen, some sub-national governments blocked the CAT system from being used in their regions.

The impasse was somewhat avoided for several years, when President Joko Widodo’s administration took over in 2014 and immediately instituted a 5-year moratorium on hiring civil servants. As a result, no civil service examinations were held in 2015 and 2016.

In 2017, the government relaxed the moratorium at the central level, but only one sub-national government – North Kalimantan province – recruited new civil servants. North Kalimantan was a new province that had been created in 2012 on the island of Borneo, and there was less resistance from local politicians there than from other sub-national governments. In addition to that one provincial government, the CAT system was also used to test applicants for 62 ministries and agencies at a national level in 2017.

Though some ministries and agencies did not fully embrace the new system, strong support from the President and senior officials forced compliance. “Some of the ministries were still unwilling, but they had no choice,” said Wibisana. “When the President’s daughter took the test and failed, that quashed arguments from the ministries.” President Widodo’s daughter had sat the examination in 2014 and scored below the minimum required to enter the civil service. Media reports at the time noted that the President’s daughter was treated exactly the same as other applicants, “which caused a stir in Indonesia, where corruption and nepotism are chronic problems, and the children of the elite are often given special treatment” (Satriawan 2014).

The real test for the CAT system will come in late 2018, when more provincial governments are set to begin recruitment for new civil servants. “We are already thinking about the recruitment process for this year, and trying to work with provincial governments,” said Wibisana in January 2018. “We tell them we are just trying to help them increase the transparency and accountability of government.”

## Reflections

As of 2018, it is too early to tell if the CAT system will have the desired result of creating a better-qualified and more capable civil service. Even so, initial indications are that the Indonesian public perceives the new system as being far fairer and more transparent than the old paper-based process. “We have less complaints now,” said Wibisana. “Before, applicants complained that the system was corrupt when they failed the test. But now they just say they will try again and do better next time.”

The BKN received international recognition for its work in implementing the CAT system, receiving an award for “Public Sector Organisation of the Year” from the Association of Southeast Asian Nations at the 2014 Asia Pacific “FutureGov Summit” in Malaysia. Domestically, the BKN received an award from the Ministry of Law and Human Rights for its work to improve civil service recruitment and selection in 2017.

The government has not conducted any evaluations of the CAT system, its impact, or public perception, but the BKN pointed to social media feedback as evidence the CAT was having a positive impact. “We gather information on Twitter and Facebook, and many people are saying that the CAT must be continued,” said Wibisana. He also noted that, anecdotally, government officials said they were no longer being contacted to assist certain people in getting civil service jobs, as was common in the past.

In addition, the computerized system saved time and money compared to the old system. Because the computer automatically graded the CAT, there was no need to expend human resources evaluating paper exams. Wibisana estimated that the CAT system used only 30-40% of the budget of the paper-based test.

The CAT system was highly scalable and had been scaled up from just a few ministries to potentially being implemented in all government entities in Indonesia in 2018. Other nations had approached the BKN to learn about the CAT system, and Wibisana noted that his team had worked closely with neighboring Timor-Leste to help that country’s government replicate the CAT.

The BKN has worked to continuously improve the CAT system, and in 2018 was trying to work with individual ministries and agencies to introduce computerized special competency examinations. The next steps for the organization include introducing a

smartphone or online version of the CAT that would increase accessibility and cost less to implement, as it would not require physical space and applicants could use their own devices to take it.

## Success Drivers

**Indonesia's** reform of civil service recruitment reflects **four** of the five key dimensions for successful public sector innovation.

**Political leadership** was a necessary ingredient at various stages, starting with the initial decision by the chairman of the Civil Service Agency (BKN) in 2010 to strengthen its efforts to overhaul the recruitment process. This was sustained by the Vice-President when he declared in 2014 that the new system would be used for all the central government's civil service jobs, and reinforced by the President in 2017 after a two-year freeze on hiring was lifted. Political leadership was essential to overcome the opposition of line ministries and agencies to adopt the new system and accept the results.

**Technology** was the central platform and means through which the reform became possible. Yet, BKN did not have expensive consultants or sophisticated technology to draw upon. Instead, they developed a system in-house, drawing upon open-source software and collaborating with other ministries and agencies that had expertise in technology solutions, including cyber security.

**Transparency** was a central objective of the reform, with technological change merely being the means to achieve this end. In turn, transparency to the public on how exams were to be conducted, including the display of test-results in real time, became the enabler of accountability and a powerful driver for the public to advocate for the reforms. This public support for transparency undoubtedly made political support for reform easier.

**Institutional capacity** building was essential to enable and sustain the reform from pilot stage to national roll-out. BKN carefully considered the readiness of the system, including infrastructure and test design, before it was applied nationwide. In addition to facilities and software, they had to devote resources to develop a robust database of exam questions and weight the randomized questions appropriately to ensure that candidates received tests of equal difficulty.