



**KOMISI
PEMILIHAN
UMUM**



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2014 Indonesian Elections, Case Study : Uploading millions of C1 result forms and achieving a crowdsourced outcome

Presidential candidate Prabowo Subianto congratulates elected presidential candidate Joko Widodo after a hotly contested elections.

The credibility and success of an electoral process can hinge on how well an election management body (EMB) tabulates and releases the election results. Results face intense scrutiny from an impatient public eager to learn the outcome of a lengthy election process. Political agents lobby to influence the compilation of results in order to capitalize on every advantage and increase their hold on power. Collecting results from thousands of locations from every corner of the nation is a complicated logistical task demanding the careful coordination of thousands of election staff. This volatile combination of visibility, risk, and complexity creates a situation where any error or misstep in the release of results can derail a peaceful democratic transition of power.

In 2014, Indonesia's election commission, the *Komisi Pemilihan Umum* (KPU), faced a renewed challenge to deliver credible and fast election results. In the 2009 presidential election, the KPU was able to provide an

acceptable election result thanks, in part, to a fortunate combination of factors: the race featured a clear front-runner, media coverage agreed on the results, and a set of unanimous and accurate quick counts were published ahead of the official results. The 2014 presidential election featured two candidates representing very different visions for the future of Indonesia who ran a close election with sophisticated campaign strategies aimed to win at all costs. This case study looks at the challenges the KPU faced in delivering the 2014 presidential election result, and how it was able to increase transparency of the result tabulation to inject credibility into the process that was crucial for the success of the 2014 election.

Situation

The election law obliges the KPU to conduct a manual tabulation of the results at every level of administration: polling station, village/ward, sub-district, district/

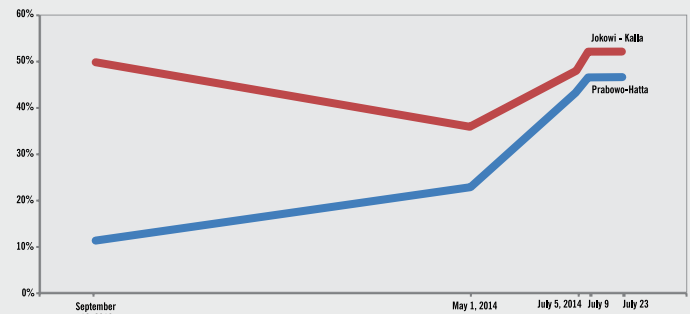
municipality, province, and finally nationwide. Votes are counted at the polling station soon after polls close on Election Day at 1 p.m., generally in daylight and plain sight of the community. Once counted, a copy of the result sheet (C1 form) is posted at the polling station and another copy is carried forward to the village level, where the first step of manual tabulation takes place. Manual tabulation continues through four more administrative levels. This process takes about 30 days to complete legislative elections and somewhat less for the simpler presidential ballot. The complexity of the tabulation process poses risks for interference with data at each level of tabulation, especially in conflict-prone areas or areas where there is a lack of observers and media attention.

In preparation for the 2009 presidential election, the KPU made efforts to produce a quick (and therefore electronic) election result. Due to the short timeline, the KPU accepted support from the Agency for the Assessment and Application of Technology (BPPT) to create a nationwide electronic result system that would scan the paper result forms, read the data off the paper, and tabulate a nationwide election result. In theory, the system was supposed to deliver preliminary results within days. Unfortunately, the system never delivered an election result as the project was besieged by a number of problems, including inadequate testing of the system, minimal staff training, lack of public awareness, procurement problems, and technical equipment malfunctions.

However, in 2009 external circumstances were conducive to ensuring that the result was ultimately accepted by the public. Specifically, three conditions helped establish the credibility of the election result. First, the 2009 election featured a strong incumbent president running for re-election and unanimously favored to win the race by a wide margin in all major opinion polls. Second, on Election Day, media outlets unanimously reported exit polls that reinforced the predictions of the pre-election surveys. Third, quick counts came in throughout the evening that confirmed the results of the exit polls - with 10 agencies predicting the actual result within 1 percent of accuracy. By the end of election night, there was no confusion over who had emerged the winner even without the official results from the KPU. Thirty days later, the KPU released the final result, which confirmed what the nation already understood. The losing ticket challenged the results, but the Constitutional Court swiftly dismissed all charges as there was no doubt about the election outcome.

In the lead up to the 2014 presidential election, public opinion surveys made it clear that it would be a very close contest between the two candidates. As presidential

hopefuls polled head to head, every vote would be seen as significant in influencing the outcome of the election. Any mishap in the publication of the election result could be used to cast doubt and bring into question the entire process. In order to ensure the integrity of election result, the KPU soon realized that in addition to processing results through all administrative levels as soon as



Prabowo rapidly closes a 40 point gap in opinion polls.

possible, it needed to ensure the process was transparent and credible.

Solution

Based on its previous success in cooperating with the University of Indonesia's Computer Science department (Pusikom) during the voter registration reform and voter list development, the KPU once again partnered with Pusikom to establish a result publication system that was transparent and proved able to work in a very short timeline.

With less than three months until Election Day, options were limited. Another rushed implementation of a last-minute solution would increase the risks of repeating the failures of 2009. With the advice from experts, the KPU reviewed its options and identified three solutions that had potential to work:

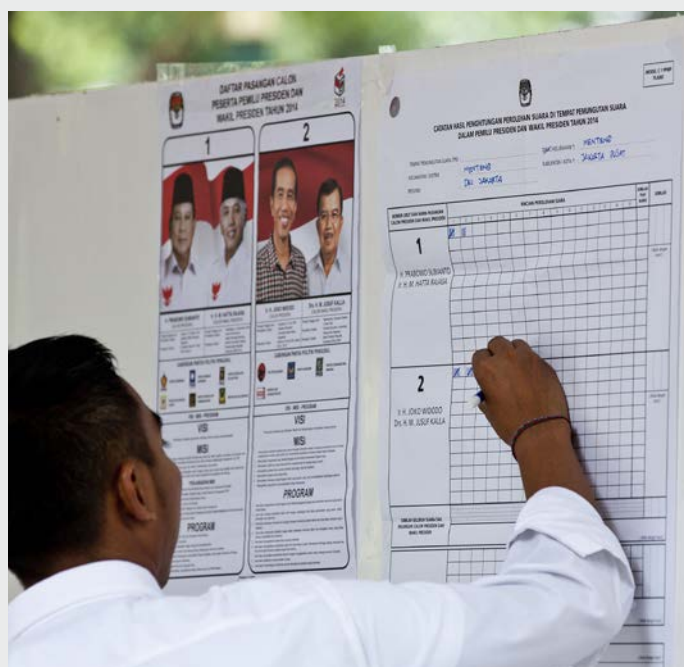
1. For official results: Implement a spreadsheet (Excel) template of the result tabulations at each level of the official and law-bound results process.
2. For transparency and evidence: Scan all result forms from each polling station and publish them online for public verification and evidence in legal challenges.
3. For quick preliminary results: Data entry of the result forms at community offices with preliminary results in 48-72 hours.

With the technical support of the University of Indonesia's IT team, the KPU pursued all three options with varying degrees of success for the legislative election in April, which in a way served as a pilot test for the presidential election. The KPU published the Excel tabulations on its

website from the sub-district, regency, provincial, and national levels as well as the scanned images of the polling station results (C1 form) from about 81 percent of the polling stations. Due to the open list proportional system, the legislative election result was too complex for these technologies to successfully deliver a reliable result and the final, manually tabulated result was delivered by the KPU within the mandated 30 days.

2014 Presidential Election Day

On 9 July 2014, as the nation finished voting in more than 500,000 polling stations, over 135 million ballots were counted in broad daylight, in front of entire voting communities at each of the polling stations. By 5 p.m. that day, based on average samples of 2,000 polling stations, eight quick count companies declared the Jokowi-Kalla ticket as the winner, while three quick count companies called the race for the Prabowo-Hatta ticket. The KPU



In Indonesia, counting in the polling station - in full view of the community - sets the standard for transparency.

realized the election may become too close to call and the pressure mounted for publishing the official result as fast as possible, while ensuring accuracy and transparency at all levels of tabulation.

As thousands of tabulation workers from 497 regional KPUs worked tirelessly to tabulate results at the regency (*kabupaten/kota*) level, they also began scanning C1 forms from each polling station in their regency/municipality. The C1 forms are completed after counting at each polling station and contain information on the number of registered voters, number of people who voted, ballots used, valid votes, and the number of votes gained by

each candidate. Within the first week, 98.53 percent of C1 forms have been scanned and uploaded to the KPU's website (<http://pilpres2014.kpu.go.id/c1.php>).

The availability of scanned C1 forms inspired a popular movement - Kawal Pemilu - to employ best practices in technology and social networking and create a full election result within days after polling. On 13 July 2014, as the KPU conducted plenary meetings to consolidate votes at village level, a group of developers outside of Indonesia launched a website to follow the recapitulation process. Kawal Pemilu, literally "guarding the election", built an efficient web application that allowed users to look at the scanned C1 forms and enter the results into a database that then compiled the totals. The Kawal Pemilu team employed sophisticated techniques to ensure the site was quick, reliable, and secure, which in turn enabled the team to produce a fast, credible result. The site was quite a technical achievement for only a few days' work. Within six days, while the KPU continued to manually consolidated votes at the province level, the website had input 97 percent of the data that had been uploaded by the KPU.

However, Kawal Pemilu was much more than a technical achievement, it was a social phenomenon. Kawal Pemilu organized a strategic crowdsourcing effort to enter the results quickly while also protecting the accuracy of their work. Kawal Pemilu began with a small set of trusted friends compiling results. These volunteers could then invite others to participate and vouch for their reliability. These trusted volunteers would sign in to the system using their Facebook account, which added an additional layer of accountability. In only five days, their worldwide data entry staff grew to 700 members and completed 97 percent of the work.

This trusted network of volunteers, built virtually overnight by leveraging the best of open data principles and social media potential, delivered full election results to the Indonesian public. By 22 July 2014, the KPU released their final results and confirmed the same results of earlier quick counts and the online effort headed by Kawal Pemilu.

Without public support in providing transparency, the KPU would not have achieved a credible election. The election was fierce and Joko Widodo won by a margin of less than 6 percent or 8 million votes over Prabowo. The independently crowdsourced tabulation provided an alternative source of information among divergent quick counts, which minimized the conflict between the loyal supporters of both candidates.



Public following the result of the recapitulation process through kawalpemilu.org

Conclusion

With only months to spare, the KPU was able to put together a results solution that benefited from the lessons learned in 2009 and increased the transparency of the results process just enough to enable a credible election result. The steps the KPU took in 2014 created the most transparent and auditable Indonesian election result to date. The KPU's success was also supported by outstanding contributions of public participation, such as Kawal Pemilu. Without citizen-driven initiatives, the doubt cast over the election could have lingered just long enough for the result process to be hijacked or the winner to be declared by the courts instead of the votes.



Police guarding outside the constitutional court building during the election result dispute trial.

The technological solution to deliver a faster unofficial result worked due to the simplicity of the system. The KPU used scanners and applications compatible with all computers at the regency/municipality level. The system was easily grasped, and one week of training proved sufficient for operators to master the Excel forms that were designed to replicate the paper result forms.

Lessons Learned

- Assistance from national and international experts and academics can create conditions for electoral success. The electoral environment may hamper direct international assistance, but an EMB can still benefit from international experiences and advice. The KPU was able to use expert advice to: establish a feasible results strategy that avoided a repeat of results uncertainty of 2009, establish a technical partnership with the University of Indonesia IT department, and increase the transparency of the results tabulation process just enough for Kawal Pemilu to step in and complete the job on the KPU's behalf.
- No product an EMB produces captures the public's attention more than the final results. An EMB cannot treat results as an afterthought simply because they occur late in the electoral timeline.
- Electoral public discourse is sophisticated – enormous capital is employed in manipulating meaning and perception, and campaigns will use every trick in the book in pursuit of victory. An EMB needs quick, accurate information to maintain a clear, credible voice throughout the process and actively contribute to the electoral conversation. The tabulation of the final election results offers the best, though far from the only, example of an EMB's challenge to remain credible in a turbulent environment.
- Technology must be used in a way that increases transparency in order to increase electoral credibility. Transparency is the most effective anti-fraud measure in tabulating election results.
- Technology must be user-friendly for election commission staff in order to minimize human error during the tabulation process. IT infrastructure conditions, human resources, and the timeline are important considerations in determining appropriate technologies for use in an election.