

**CARDNO EMERGING MARKETS (AUSTRALIA) PTY LTD
POSITION DESCRIPTION**

Position Title:	Senior Statistician
Reports to:	Chief Policy Advisor, TNP2K
Location:	Jakarta
Duration:	Up to 6 (six) months
Period of Performance:	19 October 2020 – 31 March 2021
Level of Effort:	Up to 96 days of input

<p>1. Organizational Goals</p> <p>The Government of Indonesia is committed to accelerating the pace of poverty reduction and the President of Indonesia has declared that poverty reduction is among the highest development priorities of his administration. This commitment is reflected in Indonesia’s national medium-term development plan Rencana Pembangunan Jangka Menengah Nasional, RPJMN, 2015-2019), with a target to reduce the poverty rate from 11% in 2014 to 7-8% by 2019. Indonesia’s achievements to reduce poverty have been significant: between 1999 and 2014, the poverty rate reduced from 23.4% to 11.0%. However, almost 30 million Indonesians continue to live below the poverty line, and around 99 million are either living in or vulnerable to falling back into poverty. Furthermore, inequality has risen significantly since the late 1990s which can threaten both economic growth and stability. Key policies for tackling poverty and inequality are investment in social protection and widening access to decent work. Indeed, there is strong international evidence that well-designed social protection can enable people to access the labor market and participate in income generating activities, while also helping generate higher economic growth.</p> <p>TNP2K</p> <p>In a bid to intensify poverty reduction efforts, the Government of Indonesia has elevated the overall oversight and coordination of poverty and social protection programs to be under the Vice-President’s Office. Through Presidential Regulation No. 15/2010, the National Team for the Acceleration of Poverty Reduction (Tim Nasional Percepatan Penanggulangan Kemiskinan, TNP2K) was founded and given the mandate to carry out this oversight and coordination role. TNP2K plays a key role in defining policies for poverty reduction and social protection by:</p> <ol style="list-style-type: none"> 1. Improving program targeting using a common method and household list for all social protection programs; 2. Improving the performance of poverty reduction programs through reforms in program design; 3. Undertaking monitoring and impact evaluation of social protection programs; and 4. Support line ministries in maintaining quality implementation. <p>In 2014, the Government of Indonesia re-emphasized the commitment to poverty alleviation by enacting Presidential Regulation No. 166/2014. TNP2K’s role also continues through Presidential Regulation No.96/2015. An overview of key achievements of TNP2K and priority areas for the years ahead is available on the following website: (Bahasa Indonesia) http://www.tnp2k.go.id (English) http://www.tnp2k.go.id/en</p> <p>As Gol achieved a digit poverty rate of 9.22% under the first Joko Widodo Administration (2014-2019). The socio-economic impacts of the COVID-19 pandemic has stalled this progress. TNP2K has focused its efforts on response and recovery to the pandemic. This includes informing Gol response policies and programs, as well as monitoring their implementation. Given the multidimensional nature of these efforts, it is essential to coordinate, as well as inform with evidence, the efforts across sectors and entities within and outside of government that engage in the provision of welfare in Indonesia. Under the leadership of Vice President Amin, TNP2K will continue to play a critical role in these efforts.</p> <p>MAHKOTA</p> <p>MAHKOTA (Towards a Strong and Prosperous Indonesian Society) is an Australian Government-funded program supporting the Government of Indonesia (Gol) to improve its social protection system to reduce poverty and inequality, and ultimately achieve inclusive and sustainable economic growth. MAHKOTA operates as a flexible facility, working primarily with the Secretariat of the National Team for the Acceleration of Poverty Reduction (TNP2K S), a think tank</p>

under the purview of the Vice President, to inform and undertake innovative policy reforms and initiatives. MAHKOTA also provides technical assistance to line ministries and sub-national governments that play key roles in planning and implementing social protection programs.

MAHKOTA's goals are for a comprehensive and equitable social protection system for the whole of Indonesia by 2025 and to reduce poverty and inequality. To achieve these goals, MAHKOTA has three contributing outcomes:

1. Effective coverage of Inclusive Social Protection and Productive Inclusion
2. Improved Access to inclusive Social Protection
3. Contributions to macro-economic policy related to inequality and social protection

Objectives and Scope of Work

Throughout 2020 and 2021, the Government of Indonesia (GOI) will be updating and expanding its national poverty database (DTKS), which currently contains the names, addresses and socioeconomic data of the bottom 40% households in Indonesia. The goal is to expand the coverage of DTKS to include at least 60% of households in Indonesia, update current household information in order to improve the targeting and implementation of social protection programs in Indonesia.

Household and individual information is expected to be collected through a large-scale survey sweep in 2021. A proxy-means test (PMT) methodology will be utilized to analyze this data and determine future program eligibility. PMT scores are constructed based on socioeconomic indicators that are relatively easy to collect and less prone to misreporting than expenditures or income. These indicators are combined into a single measure of welfare using weights typically derived from consumption regressions estimated from an auxiliary survey. Although PMT in Indonesia has mostly relied on regression analysis, GOI is exploring other methods such as Machine Learning and Big Data Analysis to be included as an additional layer of analysis to improve the accuracy of PMT estimates.

The data updating and expansion process will include stages of pre-listing, data collection, and PMT modelling and analysis. To support the national goal of expanding DTKS, TNP2K is seeking a Senior Statistician to design and oversee the PMT statistical modeling. The Senior Statistician will liaise closely with and routinely report to the National Planning Agency (Bappenas), which is playing a key role in the DTKS expansion. Similarly, the Senior Statistician will coordinate closely with Statistics Indonesia (BPS), as well as other government counterparts and related stakeholders to accommodate inputs and ensure effective communication across different agencies.

2. Position Outline

To design and oversee the PMT statistical modelling as part of the updating and expansion of DTKS. The position will be responsible for coordinating closely with relevant ministries/agencies regarding the development of statistical models.

Principal Accountabilities

Specific Tasks & Responsibilities:

1. Designing a PMT framework that optimizes the accuracy of consumption estimates of households in DTKS
2. Developing different scenarios and multi layers of analysis to improve PMT performance
3. Reviewing and testing different statistical methods that include but not limited to regression, Principal Component Analysis, Machine Learning and other methods before selecting final PMT models
4. Designing an evaluation framework to assess the performance of PMT models to be used as the basis for final model selection
5. Preparing and delivering high-quality technical advice and provide evidence-based recommendations to inform and support stakeholder decisions and agreement on the PMT model to be utilized
6. Leading coordination and technical discussions with GOI counterparts during the PMT process (Statistics Indonesia-BPS, Bappenas, and government ministries for health/education/social affairs/etc)
7. Developing reports and carrying out quality assurance for dissemination, including strategies and communication of PMT results
8. Any other tasks relevant to the core responsibilities and duties of this position, as assigned by the supervisor, noting that inputs will be periodically reviewed by the Chief Policy Advisor for quality, compliance, and soundness of opinions.
9. Maintain stringent standards of personal behaviour in interactions with children and take steps to report concerns about child abuse or risks to children.

Deliverables:

1. PMT design and scenarios
2. Evaluation framework to access different PMT scenarios
3. Results from different PMT scenarios
4. Technical brief that explains the selection of PMT methodology
5. Draft and final reports

4. Key Selection Criteria

1. Master Degree or PhD in Economics, Mathematics, Statistics, Computer Science or related subjects;
2. Minimum of 10 years (Master Degree) or 5 years (PhD) of relevant work experience in statistical modelling;
3. Strong capabilities to apply of mathematical and statistical techniques to economics in the study of problems, the analysis of data, and the development and testing of theories and models;
4. Familiarity with data analysis and statistical analysis software packages, especially STATA, or SAS/SPSS. Able to interpret and present economic/statistical information in user-friendly formats such as MS PowerPoint and MS Excel charts;
5. Familiarity with Machine Learning and Big Data Analysis;
6. Familiarity with Indonesian data such as Census, Podes, Susenas, Sakernas;
7. Excellent communication and writing skills in Bahasa Indonesia and English.