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A multidimensional analysis

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Indonesian Living Standards over 50 Years: A Multidimensional Analysis

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Abstract:

There is a continuing debate on the measurement of living standards, especially in developing countries. The proliferation of social indicators in recent decades, motivated by both philosophical and pragmatic empirical considerations, has been illuminating. But it has also led to some confusion: which indicator or set of indicators should be employed? The most widely used indicator continues to be headcount poverty, or some refined variant of it. But what of the many other indicators and, importantly, do they portray a similar picture? We illustrate these issues with reference to the Indonesian experience over several decades. Indonesia has experienced moderately fast economic growth since the late 1960s, and as a consequence headcount poverty has fallen rapidly. Most other social indicators have also improved. But the rate of progress has varied, from similarly rapid improvement to stagnation and in one instance – environmental amenities – to regress.

Key words: living standards, Indonesia, health, education, wages, gender, nutrition, environment, regional development.

JEL codes: I00, I31, O53.

Indonesian Living Standards over 50 Years: A Multidimensional Analysis*

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1. Introduction

Social scientists and policy makers have struggled with the definition and measurement of living standards. It has long been recognized that GDP per capita is a useful first proxy of a country's average living standards. But levels of economic activity provide an incomplete picture of human welfare: of the extent of poverty, inequality between individuals, gender and regions, economic security, socio-economic mobility across generations, and a wide range of non-economic indicators, such as education, health, and nutrition. To this list could also be added environmental amenities and political freedoms. The diversity of these various dimensions of living standards in turn highlights the challenge that, unlike the level of economic activity which, for all its limitations, is widely proxied by a single indicator (that is, gross domestic product), there is no comparable, universally accepted single indicator of living standards.

Several alternative concepts and approaches have therefore been proposed. Most governments have at some stage established commissions of enquiry to develop a workable definition of what is deemed to be a minimum 'decent' living standard, or a wage level which is considered necessary for basic human survival. Arguably the most influential social scientist in the field, A.K. Sen, has proposed a 'capability approach' (see for example Sen, 2009). The United Nations has deliberated on the issue and proposed various measures. These include the Human Development Index (HDI, 1990), the Millennium Development Goals (MDG, 2000), and the Sustainable Development Goals (SDG, 2015). The World Bank has developed international poverty lines, now approximated as \$1.90 and \$3.20 per person per day (in PPP, 2011 prices) for low- and middle-income countries respectively. There is also the 'Multidimensional Poverty Index' (MPI), developed by researchers at the United Nations and the University of Oxford.

In spite of these innovations, the dilemma remains. In his seminal volume on the subject, Deaton (2013, p.23) characterizes the development challenge as the 'greatest escape in human history is the escape from poverty and death.' But he too is not prescriptive as to the

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choice of a single indicator. The question then is, what indicators should be used as yardsticks of social progress? While various poverty measures are the most widely used approximation of living standards, a more complete picture requires an assessment of a wide range of social indicators. Moreover, because these indicators measure different dimensions of living standards, and because they often trend in different directions, a simple composite indicator may obscure as much as illuminate the complexity of human welfare, particularly where there are significant welfare gaps among specific groups of the population. Researchers and policy makers therefore have no alternative other than to consider a wide variety of indicators.

The purpose of this paper is to illustrate these issues with reference to an Indonesian case study. Indonesia is well suited to such a study. In the mid 1960s it was one of the world's poorest countries. However, over the past 50 years it has experienced moderately rapid economic growth, with the result that it was classified as a 'miracle economy' by the World Bank (1993) and other similar studies of comparative long-term growth. Since the mid 1960s it has also experienced two different political regimes, the high-growth, centralized, authoritarian Soeharto era, 1966-98, and the slower growth, decentralized and democratic era since 1999. It is therefore possible to make some general inferences about these two eras. Indonesia is also the world's largest archipelagic nation state, and hence its governments have had to grapple with the challenge of subnational development and diversity. In addition its socio-economic data base is reasonably comprehensive, enabling longitudinal comparisons over this period.

While our primary focus is on the period coinciding with the onset of modern economic growth in Indonesia, but the historical context also needs to be recognized, especially but not only during the colonial era. The centuries of colonialism resulted in economic stagnation, dualistic economic development, social, ethnic and spatial stratification, and for the vast majority of indigenous Indonesians very limited opportunities for economic empowerment and social advancement.¹ Several of these factors continue to reverberate contemporary Indonesia, as will be illustrated in the paper. During the first two decades of independence there was also limited economic progress, such that by 1965 per capita income was similar to what it was 50 years earlier.

Indonesia's poverty record has been extensively documented,² and is widely regarded as one of the most success records among major developing countries. This achievement is not

¹ Assessing a range of data Van Zanden and Marks (2012, p.119) analysed historical living standards in Indonesia based on studies of real wages, heights, inequality and numeracy, concluding that 'There is little evidence that colonial rule in the long run brought about a real improvement in the standard of living of the Indonesian population'. Van der Eng (2000) examined trends in food supplies during the colonial era, concluding that for much of the period per capita calorie consumption, approximating basic subsistence levels. The fragmentary data on social indicators confirmed these very low living standards, including shockingly high infant mortality and very low literacy levels (Booth, 2016).

² Manning and Sudarno (eds, 2011) is the key volume on the first decade after the AFC. Important contributions include Balisacan, Pernia and Asra (2003), Booth (2016, chapter 8; 2019), van Leeuwen and Foldvari (2016), Manning and Miranti (2015),

surprising, as poverty is usually proxied by a monetary measure and therefore moves in tandem with economic growth. A central question in this paper is whether the country's creditable economic growth and poverty reduction has been mirrored in a wider range of social indicators. In order to focus on these indicators, we simply summarize briefly the salient features of the poverty record. The key point to note is that for a consistently defined (and very meagre) poverty line, headcount poverty has fallen dramatically, from about 60% in the late 1960s to just under 10% currently. The decline was particularly rapid during the 1970s and 1980s, driven by high growth (especially in the 1970s) and a labour-intensive growth path (especially in the 1980s after major policy reforms). After spiking during the 1997-99 Asian financial crisis, the decline resumed, but at a slower rate this century, owing to slower economic growth and rising inequality.³ Indonesia's social welfare system is rudimentary, and therefore the main driver of these outcomes has been economic growth, as mediated by the labour market. In spite of these impressive outcomes, many of the non-poor Indonesians remain precariously above the poverty line, and indeed can easily slip below it owing to loss of employment, serious health events, and a sudden increase in food prices. The poverty estimates are also highly sensitive to the (inevitably arbitrary) definition of 'poverty'.⁴

We select social indicators that are widely regarded as robust indicators of human well being, and for which empirical proxies stretching over several decades are readily available. Comparative data for middle-income Asian economies are provided where relevant. Although the analysis predates the COVID-10 crisis, these indicators are also the focus of attention during the current period. Our organization is as follows. In section 2 we examine the state of education and health. Section 3 investigates the labour market, with particular reference to unskilled wages. Next, in section 4, the issues of regional (subnational) development and equality are addressed, of relevance for a vast, sprawling archipelago. Section 5 assesses various aspects of gender equity. In section 6 the environmental record and challenges are examined, while section 7 looks at trends in nutrition. A concluding section sums up, further explores the relationships between the many variables analysed in this paper, and synthesizes some policy inferences.

This list of fields could obviously be extended, to include access to water and sanitation, and extending to more philosophical domains such as political freedoms and subjective indicators such as life satisfaction and 'happiness'.⁵ But a line needs to be drawn somewhere, and this list is already comprehensive.

Priebe (2014, 2016), De Silva and Sudarno (2014), Sumner and Edward (2014) and Suryahadi, Hadiwidjaya and Sudarno (2012). Ravallion (2016) is the major general study of the subject. Warr (2015) provides a comparative picture of Southeast Asia.

³ In passing, the latter point immediately illustrates an example of divergence of outcomes – a positive story of poverty reduction, alongside (and employing a value judgement) the less desirable outcome of rising inequality.

⁴ For example, in 2017 the headcount poverty percentage according to Indonesia's official definition was 10.6. But at the Bank's \$1.90 (PPP, 2011 prices) measure it was 5.7, rising to 27.3 and 58.7 at the \$3.20 and \$5.50 lines.

⁵ Angus Deaton commences his magisterial 2013 volume by presenting comparative Gallup Organization data on 'life evaluation', with a 'ladder of life' question in which respondents in each country are asked to evaluate the quality of their life. He concludes that, as expected, life satisfaction rises rapidly with income for poor countries, but that the increase tapers off

We particularly want to probe how much uniformity there is across the various indicators of living standards. The less unanimity there is in the indicators, the stronger is the case for a disaggregated approach to the measurement of living standards. Frustrating though it may be, the focus on a single measure may give a very incomplete picture. The policy implications are also pertinent. Just as proponents of a 'basic needs' approach to economic development argued that a reliance on GDP per capita and economic growth is inadequate, the presence of diverging social indicators points to the need for a social policy framework that is multidimensional. A country may perform well in some respects, but less well in others.

2. Education and health

Education and health are the ladders of economic opportunity, enabling the poor, who have only their labour to sell, to participate effectively in the labour market and to achieve upward socio-economic mobility. There is a key role for public policy in the provision of these services too, minimally to ensure that markets work efficiently but more generally to ensure that equality of opportunity is available for all citizens. As with poverty, the primary driver of improved education and health is economic growth, so that governments and citizens have the resources to procure these services. But history and culture also matter. There are pronounced inter-generational effects at work, transmitted especially through mothers, and some cultures evidently have very high propensities to invest in education.

Moreover, the relationship between economic growth and these social indicators is typically less direct than is the case for poverty (Pritchett, 2001), where higher monetary incomes generally translate automatically into higher consumption and therefore lower poverty. Reflecting the interplay of historical and policy factors, a consistent theme of the literature on Indonesian social development is that these non-monetary indicators typically lag monetary indicators such as headcount poverty (Manning and Sudarno, eds, 2011).

Independent Indonesia faced a huge challenge to achieve broad-based literacy and improved health. At the time of independence it was estimated that the country had just 2,000 university graduates. Its education and health indicators have improved significantly over the past 50 years. Table 1 provides a broad set of socio-economic indicators for Indonesia and four middle-income Asian countries for around 1960 and 2017, that is, approximately two generations later (Table 1, derived mainly from World Development Indicators). The average Indonesian can now expect to live about two decades longer, from the meagre one year of schooling in 1960 adults have now received six additional years of schooling (resulting in near universal adult literacy), and babies are now ten times less likely to die before their fifth

once countries are in the upper middle-income group. Other factors are also relevant, including obviously security and freedom. For what the data are worth, Indonesia's life satisfaction ranking is similar to that of its per capita GDP.

birthday. In these important respects, Indonesia has overcome the huge social deficits inherited from the colonial era.

Table 1: Comparative Education and Health Indicators

Indonesia's record in general resembles that of its middle-income Asian comparators. In 1960 Indonesia and India had the least education. China was somewhat better off (though its advantages were presumably nullified during the disruption of the cultural revolution). The Philippines had a significant headstart owing to the American colonial regime. Thailand had also progressed more, in part owing to a desire to instil national identity in the face of colonial intrusion in the region. By 2010 the education levels had tended to converge, with the exception of lagging India, and Indonesian years of schooling were similar to China and Thailand.

However, in education Indonesia has prioritized quantity over quality.⁶ Given the historical backlog and the limited resources, choices had to be made, and there is a strong case on both equity and efficiency grounds for going universal at lower quality over higher quality but incomplete coverage of the population. The most serious contemporary shortcoming is educational quality, as revealed by Indonesia's ranking in the comparative test scores conducted by the Programme for International Student Assessment (PISA) and the Trends in International Mathematics and Science Study (TIMSS). The science and maths scores in Table 1 refer to the percentage of students who scored at least 400 (considered a basic skill level) and at least 600 (advanced skill level) in the recent rounds. Along with India and the Philippines, a negligible proportion of Indonesian students had reached the advanced level, a figure far below that recorded for China and the Asian NIEs, which ranged between 20 and 40%, and also Vietnam (11.6%).⁷ Indonesia performed better at the basic skill level, but still ranked poorly in regional terms. (Vietnam's 93% was double that of Indonesia.)

Indonesia also lags at the university level. According to the 2019 Times Higher Education rankings no Indonesian university is grouped within the top 100 Asian universities. Three are in the top 100 according to the QS rankings, albeit in the range 50-100.⁸

The socio-economic correlates of education performance highlight a second major challenge. In 2009, 29% of 16-18 year-olds in the poorest household expenditure quintile were enrolled in senior secondary school compared to 73% in the richest quintile. (Unpublished data for recent years suggest little change in these outcomes.) Moreover, children from the richest

⁶ See Suryadarma and Jones (eds, 2013) for a broad overview, and several papers by Daniel Suryadarma and colleagues on educational quality, most recently Kurniawati, Suryadarma, Bima and Yusrina (2019), and references cited therein

⁷ Note that the surveys in China were conducted only in four more advanced provinces and they are therefore not nationally representative. The coverage in India was also geographically limited.

⁸ These were University of Indonesia (ranked 57), the Bandung Institute of Technology (73) and Gadjah Mada University (74).

quintiles would almost always attend a school of superior quality (Suharti, 2013, p. 215). There are also large regional differences in these percentages, ranging from 48% to 87%. One important policy initiative was the 2002 constitutional amendment that requires central and local governments to spend at least 20% of their budgets on education. Nevertheless, as Table 1 shows, Indonesian public investment in education remains quite modest by regional standards, and as a percentage of GDP it is little higher now than it was in the 1970s.

With the reduced financial resource constraint, the issue now is to translate the funding into better educational outcomes. More than a decade after this financial provision, outcomes appear little changed. The quantitative indicators continue to improve, including also teacher/student ratios. But there is evidently no discernible improvement in quality. Teacher absences remain a serious problem, course content and methods of instruction are in need of major revision, and even grade corruption appears to be a continuing problem. Teachers lack incentives to work in rural and remote regions, resulting in poorer educational outcomes in these regions.

A similar story is evident in the health sector. As shown in Table 1, from a very low base health indicators have improved significantly. However, public policy has not been as effective as in education. Public health facilities have until recently been rudimentary. At 1.4% of GDP, about two-thirds of the developing Asian average, public spending has remained very small, although it is now beginning to rise in response to a constitutional mandate of 5% budget spending. Moreover, the spending has not been directed as efficiently and equitably as in education. The construction of modern hospitals caters mainly to better-off urban residents, while there has been underinvestment in rural and preventative health facilities. Here too the 5% budget requirement should at least remove some of the financial limitations. The government's highly popular Indonesian health card (Kartu Indonesia Sehat) has been introduced, and with it a national health program (Jaminan Kesehatan Nasional) which is designed in principle to provide universal access to public health facilities and rudimentary health insurance. However, supply-side constraints (for example, the training of medical personnel) and the political preferences for 'high-end' medicine will still need to be addressed. Basic sanitation remains a very serious issue.⁹ As with primary and secondary education, much of the delivery is now undertaken by the more than 500 local governments, resulting in spatial outcomes that are highly variable. There are also persistent and serious malnutrition problems, which we examine below.

3. Wages

The labour market is central to socio-economic progress. A dynamic and efficient labour market enables the poor to secure better paid, more stable, safer and less physically arduous

⁹ For example, Cameron and Olivia (2011) found that two of the four most common forms of mortality for children under age five are faecal-borne illnesses directly related to inadequate water supply, hygiene and sanitation. Anecdotal evidence suggests that progress continues to be slow.

work. Labour market structure and conditions reflect various social, economic and demographic changes, as mediated by the policy environment. The rapid structural change that countries like Indonesia have experienced over the past half-century had its counterpart in the labour market, with labour shifting out of low productivity agriculture into industry and services. The labour market transitions have occurred more slowly than those in output, as is usually the case, resulting in widening inter-sectoral labour productivities. The Indonesian labour market has also become more formal, more urban, older, and (slowly) more female. Interregional labour market mobility has also increased as transport and communication facilities have improved. People have moved to Java in search of better education and employment opportunities, and to resource-rich regions off-Java in search of higher wages. Unlike China and to a lesser extent India, there are very few formal restrictions on inter-regional labour mobility.¹⁰

Democracy ushered in a significant change in Indonesia's labour market policy regime. During the Soeharto era the labour market was relatively unregulated and independent trade unions were suppressed. But productivity and wages grew quite strongly, especially during the 1980s when the country embarked on a labour-intensive, export-oriented industrialization strategy. Over this period, the Indonesian experience was similar to that of its high-growth authoritarian neighbours. The resultant labour market flexibility also resulted in poverty falling less than might have otherwise been the case during the AFC: the labour market impacts fell more heavily on price (that is, real wages) than on quantity (that is, employment). But democracy then led to increased labour market populism. Although there was a welcome increase in worker freedoms, regulated minimum wages rose rapidly, and the government introduced among the most onerous severance pay requirements in developing Asia. The result has been much slower formal sector employment growth, increased dualism between the relatively well-off and protected formal sector alongside the vast informal sector characterized by low earnings and insecurity, and increased wage inequality. It has also arguably delayed the transition from Lewis-style surplus labour to the tighter labour market conditions evident in Indonesia's more advanced neighbours. In addition, for the first time Indonesia became a significant labour exporter, with about 5 million people working abroad, mostly in unskilled and semi-skilled occupations in East Asia and the Middle East. Mismatches between the labour market and the education system have further exacerbated the problems of underemployment and wage inequality, with the rapid growth of senior high school and diploma graduates, many of indifferent quality, and with employment expectations that are unlikely to be realized.

What has happened to wages over this period? Ideally one would want long-term real wage series for selected labour market segments and occupations as an additional indicator of trends in living standards. A particular interest is unskilled or semi-skilled occupations, since these are the jobs that the poor and near-poor will occupy. Rising real wages in these cases is presumptive evidence that labour market conditions are tightening – the end of the 'surplus labour' phase of economic development – signalling a broad-based improvement in living standards. This pattern has been widely observed in the case of richer East Asian economies. Unfortunately long-term wage series for consistently defined occupations in Indonesia are practically non-existent. One such series that is available on a regular basis since 1975 is

¹⁰ Overviews of the Indonesian labour market are provided by Ginting, Manning, and Taniguchi (2018), Manning (1998), and Manning (2014). The general discussion in these paragraphs draws on these references.

manufacturing wages. This is based on the annual BPS Statistik Industri data base which attempt to survey all firms with at least 20 employees. It is one of the most comprehensive and rigorous manufacturing surveys in the developing world.

Since the focus of this paper is general living standards, our primary interest is trends in wages for semi-skilled and unskilled workers. These are the workers who would benefit from a tightening of the labour market, in response to the rapid growth in demand for labour, mainly in the better-paid formal sector. Labour market analysts typically assess these trends with reference to wages in various agricultural sectors, construction, domestic services, cottage industry, and other occupations with low skill requirements and barriers to entry. Unfortunately long-term wage series for these categories are not available. However, within manufacturing several major sectors are widely regarded as having low skill requirements. Two of the most important are footwear and garments.¹¹

Figure 1 presents the results. The following observations are relevant in interpreting the results. First, the data refer to real wages, that is, nominal wages deflated by the national CPI, and expressed in 2010 prices. Second, wages for the total manufacturing sector are included as a reference point. We hypothesize that trends in manufacturing as a whole would be a less reliable indicator of the less-skilled labour market segment since the all-manufacturing figure is likely to be pushed upwards by the rising skill and capital intensity of certain segments. The third point to note is that the data are presented for firms (technically 'establishments') employing 20-50 and 20-100 workers,¹² on the supposition that they will likely hire in the less regulated (and therefore 'market-conforming') segment of the labour market. These firms are almost entirely domestic-owned, and therefore their wage levels are not pulled up by the institutional effects of foreign ownership. Fourth, some obvious outlier results have been discarded. Our approach, common in these sorts of exercises, has been to drop the top and bottom '5% tails'. In fact the results are substantially similar, apart from a small amount of volatility which is almost certainly generating spurious results. We focus on the mean wage data; the median data present broadly similar trends.

Finally, these data have one major limitation: they refer to average annual earnings (that is, wages plus supplements) per worker for the year. Ideally one would want hours worked, to be able to estimate the variable of primary interest, hourly wages. Thus at least some of the variation in wages is due to business cycle effects. In boom times, working hours typically increase while in recessions the opposite occurs, especially during major economic crises such as the AFC. Nevertheless, they are the only long-term wage series available, and over the longer term any outlier years need not obscure the underlying trends.

¹¹ There are many other unskilled labour intensive industries. But footwear and garments are the two largest, and are hence less likely to have aberrant wage trends commonly observed in much smaller industries.

¹² Note that Figure 1 also includes firms employing fewer than 20 workers. Technically the SI data refer to firms with at least 20 workers, but firms in the ongoing sample frame that occasionally fall below this cut-off point are still surveyed.

Figure 1: Real Manufacturing Wages, 1975-2016

The main conclusion from all the wage series is that, consistent with our conclusions about rising living standards, real wages have been rising for most of this 40-year period. The magnitude of the increase varies across series, but on average the increase is about three to fourfold. The only cases of a generalized decline in real wages occurred during the AFC, as would be expected. (Some series register a decline in the last two years, presumably reflecting falling hours worked as the economy slowed.) As expected, the increases for all-manufacturing have been greater, reflecting the general increase in capital intensity, both within and across industries.

In the case of footwear and garments (and focusing on the 'plant average' series), both series began to increase gradually in the 1980s and early 1990s export booms. They then declined during the AFC before rising quite quickly after the turn of the century, with economic recovery and tighter labour regulations. They were stable in the past decade, but began to rise appreciably from around 2012, coinciding with further increases in minimum wages. Firm size evidently has little impact. (The more volatile series for establishments with fewer than 20 workers can be ignored owing to the small numbers in the sample.) The two commodity boom periods appear to have had little impact.

In interpreting these results, it is important to consider not just trends in real wages but also, and interrelated, total employment. Much of the literature on East Asian economic development has emphasized the importance of the link between structural change and rising living standards. That is, workers are drawn out of low-earning sectors such as agriculture and petty trade and into the higher-wage formal sectors of manufacturing and services. In fact, this process was evident in Indonesia during the 1980s policy reforms that triggered very rapid growth in export-oriented, labour-intensive manufacturing (Manning, 1998). However, in the decade following the AFC, this process came to a halt, at least in the formal manufacturing sector, although it appears that growth has returned on a modest scale in recent years.

4. Regional Dimensions

Regional (subnational) development dynamics and disparities matter more to Indonesia than most countries. It is the world's largest archipelagic nation, featuring great economic, ecological, social and cultural diversity. The country's unusual geography is reflected in the fact that the central island of Java has just 6% of the country's land area but about 60% of its population and economic activity (and a near monopoly of national political power). Per capita incomes vary enormously, with the capital, Jakarta, and some resource-rich regions (such as East Kalimantan) much richer, by a factor of about six, than the poorer regions, mainly located in Eastern Indonesia (see Map 1). If these data were presented for the approximately 500 districts (kabupaten), the district below the provinces and to which the major public sector resources flow, the differential is far greater, about 50:1. Regional poverty incidence and, to a lesser extent, other social indicators, are quite highly correlated with per capita income.

Map 1: The Sub-National Socio-Economic Mosaic

Although accurate data are not available for the colonial era, Indonesia was then a classic dual economy, with high-income (and generally foreign owned) mining and plantation economies, and a capital city where most of the expatriate administrative and business communities lived, alongside a vast, very poor peasant agriculture economy. During the independence era territorial integrity has been a major preoccupation of successive governments. During the 1950s several regions attempted to secede from Jakarta's rule. Secessionist pressures have continued to be present in several outlying regions, notably Aceh and Papua. Since 1960 Indonesia's international boundaries have changed on three occasions, with the incorporation of Papua in 1969 and East Timor in 1975, and the latter's exit in 1999. For these reasons levels and trends in regional disparities are key indicators of Indonesian development.

Map 2 provides a detailed picture of headcount poverty at the sub-provincial (kabupaten level) in 2016.¹³ The districts are classified into five poverty groupings, from light to severe. Although there are pockets of high poverty in all major island groups, it is clear that the most severe poverty problems are located mainly in the eastern regions, particularly Papua, Maluku, and East Nusa Tenggara. By contrast, in resource-rich Kalimantan and the major urban areas of Java and Bali poverty incidence is relatively low. Despite the rapid decline in national poverty, Indonesia's uneven socio-economic development is clearly evident.

Map 2. Regional Poverty

Comprehensive regional accounts, which enable estimates of regional inequality, have been produced since the mid 1970s. We measure this inequality at the provincial level, since boundary changes at the sub-provincial level complicate estimates over the longer term. The indicator used is gross regional product (GRP) per capita. The measure employed is the coefficient of variation, following Williamson's pioneering work on the subject. The results, presented in Figure 2, suggest that regional inequality fell rapidly over the period 1975-90. However, this was almost entirely due to the declining relative importance of the petroleum sector, which is located mainly in just two provinces. Non-mining regional inequality was quite stable over this period, as is the series based on GRP since the early 1990s.¹⁴ This stability occurred at a time of rising overall inequality, indicating that at least this dimension of spatial inequality has not been a major contributor. Such a finding is also consistent with the ADB cross-country spatial inequality estimates.¹⁵

¹³ See also the detailed studies by Ilmma and Wai-Poi (2014) and Sudarno, Vothknecht and Wijaya (2014).

¹⁴ For further discussion see Hill and Vidyattama (2016).

¹⁵ It is likely that, if the unity of observation in Figure 2 was the district (kabupaten), the inequality would be higher, and (possibly) increasing in the aftermath of the major 2001 decentralization, when the richer regions were able to retain a higher proportion of

Figure 2. Regional Inequality, 1975-2015

Indonesia's relatively high but stable regional inequality contrasts with the higher or rising inequality in the other developing giants, Brazil, China and India. Given the historical dual economy, the uneven distribution of natural resources, the concentrated nature of (unequalizing) global connection nodes, and other centrifugal economic forces at work, in some respects this outcome may be regarded as a significant achievement. The stability reflects a combination of factors, including central government allocations that have mildly favoured poor regions, migration from poorer to richer regions (which unlike China is unrestricted), and the resulting remittance flows.

5. Gender

Indonesia's gender outcomes are mixed. There are pronounced gender gaps in the labour market, and in legal and societal power structures. A little under 20% of national parliamentarians are women, and on this indicator Indonesia ranks 114th out of the 183 countries for which there are data (Table 2). In this respect Indonesia trails China and the Philippines but is ahead of India and Thailand. Among wealthy Indonesians, women are not prominent: only two are in the 2016 *Forbes* list of the 50 richest Indonesians, ranked at 37 and 44. Women also face legal discrimination, especially in inheritance and property settlement in the event of marital dissolution.

Table 2. Comparative Gender Indicators

Nevertheless, these gaps are smaller than for most other Moslem-majority countries, and Indonesia does not have the severe gender birth disparities evident in China (and to a lesser extent India). There is no discernible difference in child mortality rates, while female life expectancy exceeds that of males. Moreover, on most education indicators Indonesia performs relatively strongly. There is very little difference in literacy rates, while enrolment rates at all levels of schooling across genders are narrowing. Around 1960 males received more than twice as much of what limited schooling there was (Table 2). By 2010 the difference had been eliminated, at least in aggregate if not among the more lucrative education pathways (Suharti, 2013). At the tertiary level, female enrollments now actually exceed those of males, although in some conservative regions restrictions on the ability of women to access preferred education opportunities (and later employment) remain substantial. A similarly rapid educational expansion and narrowing of gender differentials is evident also among the four comparator countries in Table 2. Female years of schooling actually exceed that of males in the Philippines and Thailand, while it continues to lag in India.

locally-generated tax revenues. However, the frequent boundary changes over the past two decades render this a speculative assertion.

Nevertheless, these greatly improved educational outcomes have not been reflected in the labour market. Female labour force participation (FLFP) has risen since the 1960s, especially during the 1980s manufacturing export boom, when younger women were drawn into factories in large numbers. However, it has stalled in recent years (Cameron et al, 2019; Manning, 2014), with little change since the mid 1990s (Table 3). Indonesia's FLFP rate is almost 30 percentage points lower than that for males. Its FLFP rate is similar to (Moslem-majority) Malaysia's, but about 10 percentage points lower than that of China and Thailand and almost 20 percentage points lower than in Vietnam. Cameron et al (2019) attribute much of the decline to the falling share of agriculture, traditionally a female-dominant sector, in the workforce. Once controlling for this and other characteristics they conclude that the underlying propensity for female workforce participation is rising, especially when accompanied by the process of urbanization.

Table 3. Female Labour Force Participation in Indonesia

In addition to the sluggish female workforce participation, the gender earnings gap remains significant (Sohn, 2015; Taniguchi and Tuwo, 2014). In the formal labour market, the hourly female wage is 70-80% that of males. In the informal sector, reliable hourly earnings data are limited, but the gap is likely to be larger. The usual set of factors appear to be the main explanators: occupational specializations, greater mobility freedom for males, disrupted employment patterns for women owing to child birth and raising, and, as informal extended family arrangements weaken, limited formal child-care support facilities.

6. Environment

Environmental conditions are the one clear case of general regress over these decades. Consistent with the proposition underlying the Environmental Kuznets Curve (EKC), and with the experience of practically all developing countries, most indicators have deteriorated (Resosudarmo, ed, 2005). The forest cover is receding rapidly, often replaced by mono-crop agriculture, accompanied by unsustainable pesticide and fertilizer use. The loss of forest cover is also leading to a loss of flora and fauna species that are unique to Indonesia.¹⁶ There is rampant and largely unchecked over exploitation of the country's vast maritime resources, especially its fisheries. The fragile marine ecology is also being destroyed. The capital city, Jakarta, is experiencing ever more serious flood problems during the rainy season, owing to rising sea levels and excessive pumping of ground water. By some estimates, as much as one-quarter of the current city area will be subject to regular and severe flooding by 2030. Fatal mudslides are occurring frequently, as a result of upland deforestation and unchecked population settlements. Urban air quality is not as poor as that of the major Chinese and Indian cities, but it too is deteriorating, exacerbated by the underinvestment in efficient mass transit systems, resulting in heavy reliance on petrol-driven engines, in buses, cars and

¹⁶ Indonesia's forests rank first in the world in endemic birds and mammals and sixth in endemic amphibians (Alisjahbana and Busch, 2017, p. 122).

motorcycles.¹⁷ Notwithstanding the frequent flood events, paradoxically, increasing areas of Indonesia are experiencing 'water stress' as a result of extended drought periods, poor management of river systems, and rapid, unplanned urbanization.

There are few reliable long-term environmental statistical series. As an illustration, Figure 3 shows trends in three key indicators since the early 1990s, deforestation, CO₂ emissions and sulphur emissions. The forest cover is estimated to have at least halved over the past half century, with no evidence yet of a reversal. Both emission series, the anthropogenic SO₂ and CO₂, are rising steadily, the latter displaying a more volatile trend owing to the effects of periodic droughts and in consequence increased forest fires and haze. These environmental problems have regional and global ramifications. Particularly during years of prolonged dry seasons, Indonesia is actually the world's fourth largest CO₂ emitter. The palm oil boom in recent decades has accelerated this process. In these periods also, air quality becomes so toxic as to be injurious to the health of both its own citizens and those of neighbouring Malaysia and Singapore. Indonesia is therefore a significant player in international climate negotiations (Alisjahbana and Busch, 2017).

Figure 3: Deforestation and Emissions Indicators

One approach to quantifying this environmental deterioration is by attempting to measure some sort of 'Green National Income', that subtracts from GDP an estimate of the depletion of non-renewable mining and energy resources, the degradation of otherwise renewable resources such as forests and fisheries, and the loss of other environmental amenities. An early set of estimates prepared by Repetto et al (1989) found quite a large divergence between GDP growth and an alternative 'green growth'. The estimates were of course highly sensitive to the prices used, the depletion rates, and the discovery of new mineral resources.¹⁸

As in all countries, these outcomes reflect society's implicit preferences for rising material welfare, which do not fully internalize the cost of the externalities created by environmental degradation. Moreover, institutions are not yet strong enough to represent the public interest (including the global public interest) in ameliorating the destruction of the 'commons', including forest and marine resources, and urban air quality. In the final analysis, therefore, improved environmental outcomes will be achieved only when community preferences force policy makers in that direction. There is some slow progress. Mass rail transit in Jakarta and other major cities is belatedly under construction. Indonesia already has an active environmental movement, and the democratic space to mobilize public support. Satellite and other surveillance technologies enable environmental activists to better monitor forest loss and maritime exploitation. The gradual phasing out of fossil fuel subsidies will encourage greater fuel efficiency. At the margin, international assistance and pressure from major trading partners can make a contribution. Sustainable forest practices are gaining more support. Greater environmental awareness in richer neighbours, most importantly China and Japan,

¹⁷ See http://www.who.int/phe/health_topics/outdoorair/databases/cities/en/ for some comparative data.

¹⁸ See Nurkholis, Resosudarmo and Hartono (2007) for a more recent set of tentative estimates.

has potentially powerful demonstration effects. Yet Indonesia still appears to be some way off the hypothesized turning point in the EKC.

7. Nutrition

More than 50 years ago a leading Indonesian nutritional expert made the following observation:

‘The greater parts of Java and Nusa Tenggara, accounting between them for 70 per cent of Indonesia’s total population, must be regarded as malnutrition areas. The regions whose condition is fairly satisfactory are the minority, only 30 per cent.’ (Napitupulu, 1968, p. 69)

It was noted above that hunger and malnutrition were endemic in Indonesia in the colonial era and through to the 1960s. With rising incomes and a major emphasis on the food crop sector in the 1970s and 1980s, Indonesian nutritional intake has since improved significantly. For much of the 1970s Indonesia was the world’s largest importer of rice, yet by the mid 1980s it had attained rice self-sufficiency. Accurate food consumption statistics are approximate and dated, but the general story portrayed in the food balance sheet data in Figure 4 is clear enough: per capita calorie consumption is now about 50% higher than it was in the early 1960s. Nevertheless, serious nutritional issues persist (Timmer, 2015; Wihardja, 2019). As shown in Table 1 above, child wasting and stunting remain high for a middle-income economy, among these five countries second only to India. Progress on both indicators has been slow. Moreover, it is likely that Indonesia will always be a net food importer, and thus a major policy rethink is required, abandoning notions of food self-sufficiency in favour of ensuring adequate food supplies. For example, the restrictive rice import regime has raised the domestic price substantially above international prices, in the process pushing several million low-income consumers below the poverty line. Also, the highly regulated cattle import regime inflates domestic prices, denying consumers access to cheaper protein supplies.

Figure 4. Per Capita Calorie Consumption, 1960-2013

9. Summing up and some Policy Inferences

This paper focuses on the continuing debate concerning the measurement of living standards, especially in developing countries. There have been considerable advances in developing more sophisticated measures and empirics in recent decades, as indicated by the proliferation of social indicators. The progress has been motivated by both philosophical and pragmatic empirical considerations. It has also enabled policy makers to fine tune and better target social policy expenditures. But the proliferation has also led to some confusion: which indicator or set of indicators should be employed? The most widely used indicator continues to be headcount poverty, or some refined variant of it. But what of the many other indicators and,

importantly, do they portray a similar picture? We have illustrated these issues with reference to the Indonesian experience over several decades.

Indonesia has experienced moderately fast economic growth since the late 1960s, and as a consequence headcount poverty has fallen rapidly. But what about other social indicators? One approach would be to compare the income growth and poverty indicators with a composite measure such as the HDI. While useful (and widely used), the HDI also conceals the diversity of outcomes across these social indicators, as well as including poverty and income-related indicators in its basket of indicators. In this paper we therefore examine trends in a variety of social indicators across six different fields, namely education and health, subnational development, wage levels, gender, environment, and nutrition.

The results underline the diversity of social outcomes, and the need for a disaggregated approach. To sum up, the education and health outcomes have registered impressive progress on quantitative indicators (years of schooling, life expectancy), but educational quality and pockets of health disadvantage remain serious problems. Regional inequality and variations in poverty incidence remain high. But, unlike some other large developing countries, they do not appear to have deteriorated. Using wage levels in SME manufacturing as a proxy for unskilled and semi-skilled workers, there has been a clear improvement for most of the past four decades. There is considerable gender disadvantage, including the sluggish growth in female labour force participation, alongside notable improvements in education and health. All measurable environmental amenities have worsened throughout the period, with no prospect of improvement in sight. Nutritional standards have improved greatly as indicated by aggregate food supplies. But there remain clear distributional challenges, as revealed by the high levels of stunting and wasting.

Given that the Indonesian economy has grown quite rapidly over this period, do these diverse social outcomes confirm a priori expectations? We argued in the introduction that trends in these indicators, especially the non-monetary indicators, would not be expected to follow economic growth as closely as the poverty series. And that is what the results show and, by implication, policies, institutions and societal factors also matter. In the case of education and health, rising incomes provide the opportunity for parents to raise better educated and healthier children. But government policies in these fields also matter. Similarly, in the labour market, as countries become richer and better educated wages can be expected to rise. But the outcomes are also shaped by the government's labour policies, and institutions, notably the power of trade unions. With regard to regional development outcomes, a key determinant of outcomes is the government's fiscal equalization measures, in particular towards lagging regions. In the case of gender equity, too, government policies greatly influence outcomes, through the provision of education, the removal of legal and institutional barriers to female workforce participation, and the encouragement of family-friendly workplaces. The quality of environmental amenities is clearly negatively correlated with economic growth, at least up to a threshold when societies have the resources and political will to reverse the trend. The improved nutritional standards have clearly been driven by rising incomes, but the remaining significant gaps highlight inequalities in food availability, and the need for more active government attention.

These conclusions have clear policy implications. For a start, Indonesia is now a much richer country, and so it has far greater resources to address the remaining challenges. It also has a relatively rich data base, a strong research community, and an open media to inform and guide policy makers. And it has successful, richer neighbours from which it can learn lessons (both positive and negative).

This is not the paper to provide detailed policy prescriptions across these many and varied complex fields. But the following may serve as illustrations, based on first principles and on the current stock of research knowledge as cited above. To establish some broad parameters, first, economic growth really matters. Poverty has generally declined faster during periods of high growth, while rising incomes create the capacity to address other social objectives.

Second, notwithstanding the progress over the past two decades, Indonesia's social policy framework is still rudimentary and the government's capacity to effect change through social transfers is severely limited by its anaemic tax effort, currently less than 12% of GDP. Currently the government operates four main social programs,¹⁹ of which the PKH (literally 'Hopeful Families Program'), of targeted conditional cash transfers, is considered to be most effective and best targeted. In aggregate, the programs are modest in scale: in 2019 they absorbed about 4% of total spending, equivalent to about 0.6% of GDP.²⁰

Third, in spite of some notable progress in targeting these transfers, overall the redistributive impact of government policies is quite small. Not only is tax revenue weak but there is also little progressivity in the system. Capital (including property) income is taxed lightly and there is extensive evasion among high-income earners. Thus, the major redistributive effects are on the expenditure side, which is limited in scale. As Figure 5 shows, the programs in several Latin American countries have a far more significant impact. This is not surprising, as the programs are larger and have been in operation for longer. Moreover, their pre-transfer inequality was generally higher, so the political urgency for such transfers was greater. Nevertheless, during the (frequent) periods of large petroleum and electricity subsidies in Indonesia these redistribution benefits were substantially nullified (Patunru, 2019).²¹

Figure 5: Comparative Gini Ratios, Pre and Post-Transfers

In addition to these general policy measures, there are specific policy challenges related to each of the social policy fields discussed in the paper. The brief and illustrative comments that follow are informed by the literature cited above in each section of the paper.

¹⁹ See Nazara (2019) for a recent summary by the country's Vice Minister of Finance.

²⁰ There is now a large literature evaluating the design and impact of these programs. See for example Alatas et al (2016), McCarthy and Sumarto (2019), Olken (2019), Suryahadi and Al Izzati (2019), and World Bank (2016). Progress in the first decade is comprehensively analyzed by the contributors in Manning and Sudarno (eds, 2011).

²¹ As Patunru (2019) also observes, the import protection for rice has negative distributional effects since in aggregate the poor are net rice consumers.

Fourth, in the case of education and health, the design of spending needs to be improved, to ensure that any increase in resources flowing to education needs to be conditional on improved education outcomes and to have a stronger equity target. Similar comments apply to the health sector.

Fifth, Indonesian workers would benefit from a regulatory regime that is more employment-friendly, from a more open economy that attracts more foreign investment (in the post-COVID era), and from an education system that better equips them for the needs of the Indonesian economy of the 2020s.

Sixth, with regard to regional development and equity, 20 years after the big bang decentralization, Indonesia has yet to undertake a major review of the financial and administrative relations between the central and subnational governments. The division of responsibilities between these different tiers of government needs to be delineated more clearly, the large vertical fiscal imbalances (and the resulting buck passing) need to be addressed, and local governments need to be incentivized to increase their local revenue-raising capacity.

Seventh, a major gender challenge is the sluggish FLFP, which can be addressed by requiring employers, at least in the formal sector, to offer more family-friendly workplaces, including improved parental leave and child care facilities. All forms of legal discrimination against women should also be removed.

Eighth, with regard to environmental amenities, stricter and more transparent policing of forest and maritime resources is required. It may be that an independent agency open to parliamentary scrutiny will be required to achieve this. International resources (invoking the global common goods argument), and on occasion pressure, can be marshalled to assist with these goals. Polluter-pays principles can be enforced more vigorously. The removal of all fossil fuel subsidies and greater investment in mass transit systems in the major cities would also improve the quality of the environment.

Finally, areas of nutritional disadvantage can be addressed through targeted food logistics programs, through the removal of regulatory barriers that inflate food prices (notably the barriers to rice imports), and through improved school nutrition and education programs.

References

ADB (Asian Development Bank), [Asia's Journey to Prosperity. Policy, Market and Technology over 50 Years](#), Manila

Alatas, V., et al (2016), 'Self-Targeting: Evidence from a Field Experiment in Indonesia', Journal of Political Economy, 124 (2), pp. 371-427.

Balisacan, A.M, E.M. Pernia and A. Asra (2003), 'Revisiting Growth and Poverty Reduction in Indonesia: What do the Subnational Data Show?', Bulletin of Indonesian Economic Studies, 39 (3), pp. 329-351.

Baten, J., M. Stegl and P. van der Eng (2013), 'The Biological Standard of Living and Body Height in Colonial and Post-Colonial Indonesia, 1770-2000', Journal of Bioeconomics, 15, pp. 103-122.

Booth, A. (1992), 'Income Distribution and Poverty', in A. Booth (ed), The Oil Boom and After: Indonesian Economic Policy and Performance in the Soeharto Era, Oxford University Press, Singapore, pp. 323-362.

Booth, A. (2016), Economic Change in Modern Indonesia: Colonial and Post-Colonial Comparisons, Cambridge University Press, Cambridge.

Booth (2019), 'Measuring Poverty and Income Distribution in Southeast Asia', Asian-Pacific Economic Literature, pp. 1-18.

Cameron, L. and S. Olivia (2011), 'Sanitation and Health: The Past, The Future and Working out What Works', in Manning and Sudarno (eds), pp. 245-269.

Cameron, L., D. Contreras Suarez and W. Rowell (2019), 'Female Labour Force Participation in Indonesia: Why Has It Stalled?', Bulletin of Indonesian Economic Studies, 55 (2), pp. 157-192.

Coxhead, I. (ed) (2015), Routledge Handbook of Southeast Asian Economies, Routledge, Oxford.

Dartanto, T. and Nurkholis (2013), 'The Determinants of Poverty Dynamics in Indonesia: Evidence from Panel Data', Bulletin of Indonesian Economic Studies, 49 (1), pp. 61-84.

Deaton, A. (2013), The Great Escape: Health, Wealth and the Origins of Inequality, Princeton University Press, Princeton.

Van der Eng, P. (2000), 'Food for growth: Trends in Indonesia's food supply, 1880–1995', Journal of Interdisciplinary History, 30, pp. 591–616.

Ginting, E., C. Manning and K. Taniguchi (eds) (2018), Indonesia: Enhancing Productivity through Quality Jobs, Asian Development Bank, Manila.

Hardjono, J., N. Akhmadi and Sudarno Sumarto (eds) (2010), Poverty and Social Protection in Indonesia, Institute of Southeast Asian Studies, Singapore.

Hill, H. (2018), 'Asia's Third Giant: A Survey of the Indonesian Economy', Economic Record, 94, no. 307, pp. 469-499.

Hill, H. and S.D. Negara (eds) (2019), The Indonesian Economy in Transition: Policy Challenges for the Jokowi Era and Beyond, ISEAS Singapore.

Hill, H. and Y. Vidyattama (2016), 'Regional Development Dynamics in Indonesia before and after the 'Big Bang' Decentralization', Singapore Economic Review, 61 (1), pp. 1-26.

Ilmma, A. and M. Wai-Poi (2014), 'Patterns of Regional Poverty in the New Indonesia', in H. Hill (ed), Regional Dynamics in a Decentralized Indonesia, Institute of Southeast Asian Studies, Singapore, pp. 98-132.

Kurniawati, S., D. Suryadarma, L. Bima and A. Yusrina (2019), 'Education in Indonesia: A White Elephant?' in Hill and Negara (eds), pp.266-288.

Van Leeuwen, B. and P. Foldvari (2016), 'The Development of Inequality and Poverty in Indonesia, 1932-2008', Bulletin of Indonesian Economic Studies, 52 (3), pp. 379-402.

McCarthy, J. and M. Sumarto (2019), 'Distributional Politics and Social Protection in Indonesia: Dilemma of Layering, Nesting and Social Fit in Jokowi's Poverty Policy', in Hill and Negara (eds), pp. 362-385.

Manning, C. (1998), Indonesian Labour in Transition: An East Asian Success Story? Cambridge University Press, Cambridge.

Manning, C. (2014), 'Labour Market Regulation and Employment during the Yudhoyono Years in Indonesia', in P.C. Athukorala, A.A. Patunru and B.P. Resosudarmo (eds), Trade, Development and Political Economy in East Asia, Institute of Southeast Asian Studies, Singapore, pp. 153-172.

Manning, C. and Sudarno Sumarto (eds) (2011), Employment, Living Standards and Poverty in Contemporary Indonesia, Institute of Southeast Asian Studies, Singapore.

Manning, C. and R. Miranti (2015), 'The Yudhoyono Legacy on Jobs, Poverty and Income Distribution: A Mixed Record', in E. Aspinall (ed), The Yudhoyono Presidency: Indonesia's Decade of Stability and Stagnation, ISEAS Singapore, pp. 303-324.

Napitupulu, B. (1968), 'Hunger in Indonesia', Bulletin of Indonesian Economic Studies, No. 9, pp. 60-70.

Nazara, S. (2019), 'The Effectiveness of Social Assistance Spending for the Poor in Indonesia', seminar presentation, Ministry of Finance, Jakarta, April 29.

Olken, B. (2019), 'Designing Anti-Poverty Programs in Emerging Economies in the 21st Century: Lessons from Indonesia for the World', Bulletin of Indonesian Economic Studies, 55 (3), pp. 319-339.

Patunru, A. (2019), 'Rising Economic Nationalism in Indonesia', in Hill and Negara (eds), pp. 149-179.

Priebe, J. (2014), 'Official Poverty Measurement in Indonesia since 1984: A Methodological Review', Bulletin of Indonesian Economic Studies, 50 (2), pp. 185-205.

Priebe, J. (2016), 'How Robust is Indonesia's Poverty Profile? Adjusting for Differences in Needs', Bulletin of Indonesian Economic Studies, 52 (2), pp. 229-248.

Pritchett, L. (2001), 'Where has all the Education Gone?', World Bank Economic Review, 15 (3), pp. 367-391.

Ravallion, M. (2016), The Economics of Poverty: History, Measurement and Policy, Oxford University Press, Oxford.

Sen, A. (2009), The Idea of Justice, Penguin, London.

De Silva, I. and Sudarno Sumarto (2014), 'Does Economic Growth Really Benefit the Poor? Income Distribution Dynamics and Pro-Poor Growth in Indonesia', Bulletin of Indonesian Economic Studies, 50 (2), pp. 227-242.

Sohn, K. (2015), 'Gender Discrimination in Earnings in Indonesia: A Fuller Picture', Bulletin of Indonesian Economic Studies, 51 (1), pp. 95-121.

Sudarno Sumarto, M. Vothknecht and L. Wijaya (2014), 'Explaining Regional Heterogeneity of Poverty: Evidence from a Decentralized Indonesia', in H. Hill (ed), Regional Dynamics in a Decentralized Indonesia, Institute of Southeast Asian Studies, Singapore, pp. 285-314.

Suharti (2013), 'Trends in Education in Indonesia', in Suryadarma and Jones (eds), pp. 15-52.

Sumner, A. and P. Edward (2014), 'Assessing Poverty Trends in Indonesia by International Poverty Lines', Bulletin of Indonesian Economic Studies, 50 (2), pp. 207-225.

Suryadarma, D. and G.W. Jones (eds) (2013), Education in Indonesia, Institute of Southeast Asian Studies, Singapore.

Suryahadi, A., G. Hadiwidjaya and Sudarno Sumarto (2012), 'Economic Growth and Poverty Reduction in Indonesia Before and After the Asian Financial Crisis', Bulletin of Indonesian Economic Studies, 48 (2), pp. 209-227.

Suryahadi, A. and Sudarno Sumarto (2010), 'The Impact of the Economic Crisis on Consumption Expenditures and Poverty Incidence', in J. Hardjono et al (eds), Poverty and Social Protection in Indonesia, ISEAS Singapore, pp. 17-35.

Suryahadi, A., R. Al Izzati (2019), 'Cards for the Poor and Funds for Villages: Jokowi's Initiatives to Reduce Poverty and Inequality', in Hill and Negara (eds), pp. 318-361.

Suryahadi, A. et al (2011), 'Accelerating Poverty and Vulnerability Reduction: Trends, Opportunities and Constraints', in C. Manning and S. Sumarto (eds), Employment, Living Standards and Poverty in Contemporary Indonesia, Institute of Southeast Asian Studies, Singapore, pp. 68-89.

Taniguchi, K. and A. Tuwo (2014), 'New Evidence on the Gender Wage Gap in Indonesia', Asian Development Bank Economics Working Papers no. 408, Manila.

Timmer, C.P. (2015), 'The Dynamics of Agricultural Development and Food Security in Southeast Asia: Historical Continuity and Rapid Change', in Coxhead (ed), pp. 89-113.

Warr, P. (2015), 'The Drivers of Poverty Reduction', in Coxhead (ed), pp. 303-326.

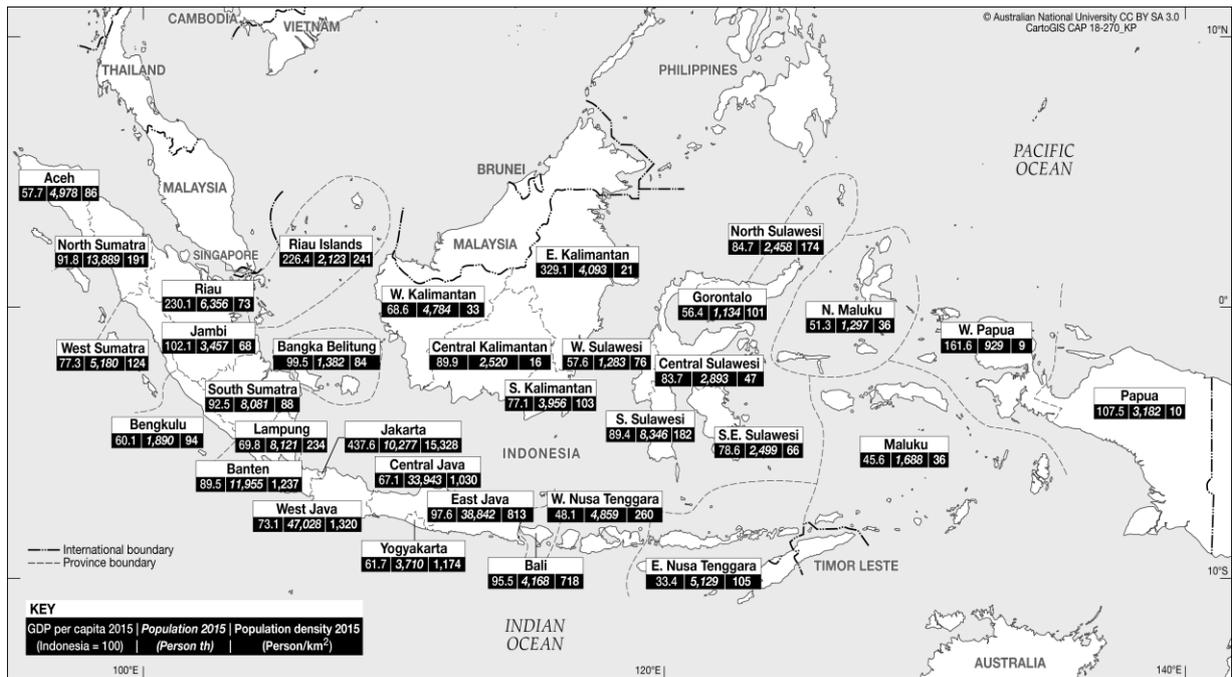
Wihardja, M.M. (2019), 'Has Indonesian Food Policy Failed?', in Hill and Negara (eds), pp. 385-413.

World Bank (1993), The East Asian Miracle: Economic Growth and Public Policy, Washington DC.

World Bank (2016), Indonesia's Rising Divide: Why Inequality is Rising, Why it Matters, and What Can be Done, Washington DC.

Yusuf, A.A., A. Sumner, and I.A. Rum (2014), 'Twenty Years of Expenditure Inequality in Indonesia, 1993-2013', Bulletin of Indonesian Economic Studies, 50 (2), pp. 243-254.

van Zanden, J.L. and D. Marks (2012), An Economic History of Indonesia, 1800-2010, Routledge, London.



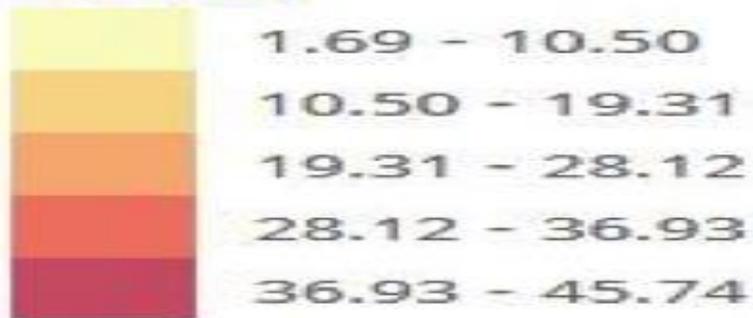
Map 1: The Sub-National Socio-Economic Mosaic



Map 2. Regional Poverty

Map 2, legend)

**Poverty Headcount
(NPL) %ⁱ**



**Poverty Headcount
(US\$3.1 PPP) %ⁱ**

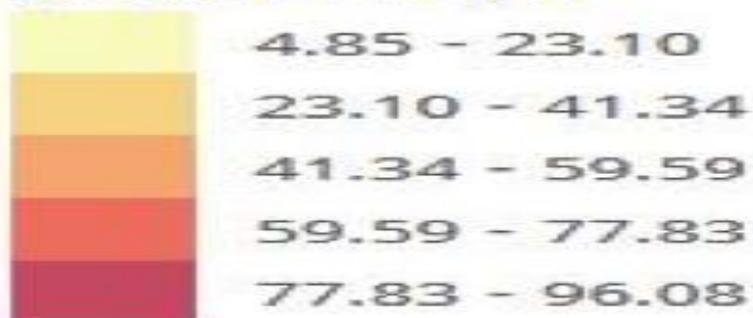


Table 1. Education and Health Indicators

Indicator	China	India	Indonesia	Philippines	Thailand
Life Expectancy 1960	44.6	42.7	50.2	58.6	56
Life Expectancy 2017	76.5	68.9	69.4	69.3	75.6
Under 5 Mortality 1960	210	236.1	214.4	108.1	132.7
Under 5 Mortality 2017	11.7	44.5	25.9	25.6	10.9
Years of Schooling 1960	1.6	0.9	1.1	3	2.1
Years of Schooling 2010	7.5	5.4	7.3	8.2	7.3
GER, Secondary, 2015	95	75.2	86	88.3	120.6
Science-Maths, % 400+	87.3	16.2	44.6	39.5	57.5
Science-Maths, %600+	24.6	0.1	0.4	0.3	1.4
Edu exp, % GDP, 2018	3.6	4.6	2.7	4.1	3.1
Health exp, %GDP 2018	2.9	0.9	1.4	1.4	2.9
Wasting 1990	4.2	20	14.9	6.9	7.3
Wasting 2016	1.9	21	13.5	7.1	5.4
Stunting 1990	32.3	61.9	48.1	43.3	21.1
Stunting 2016	8.1	38.4	36.4	33.4	10.5
HDI Score, 2018	0.76	0.64	0.71	0.71	0.76
Ranking: GNP/cap - HDI	-13	-5	-14	-1	-6

Table 2. Comparative Gender Indicators

Indicator	China	India	Indonesia	Philippines	Thailand
YOS, M, 1960	4.2	1.8	2.2	3.4	3.5
YOS, F, 1960	2.6	0.5	0.8	2.7	2.8
YOS, M-F, 1960	1.7	1.2	1.3	0.7	0.7
YOS, M, 2010	8.8	8.8	9.3	9	10.1
YOS, F, 2010	8.6	6.7	9.2	9.8	10.9
YOS, M-F, 2010	0.1	2.1	0.2	-0.8	-0.9
Parliament, %F, 2019	24.9	12.6	18.2	29.5	5.4
Rank/193	72	148	114	51	181

Notes:

YOS indicates mean years of schooling for males and females aged 20-29 years.

Percentage of female members of the lower (or single) house of the national parliament. Higher ranking in

Sources:

ADB (2020, Table 12.1) for education.

Table 3. Indonesian Female Labour Force Participation

Year	%
1990	45.8
1995	50.6
2000	52.6
2005	51.9
2010	53.8
2015	52.9
2017	52.9

Note: % of females aged 15-64 years.

Source: International Labour Organization

Figure 1a. Real Manufacturing Wages, 1975-2016 (footwear)

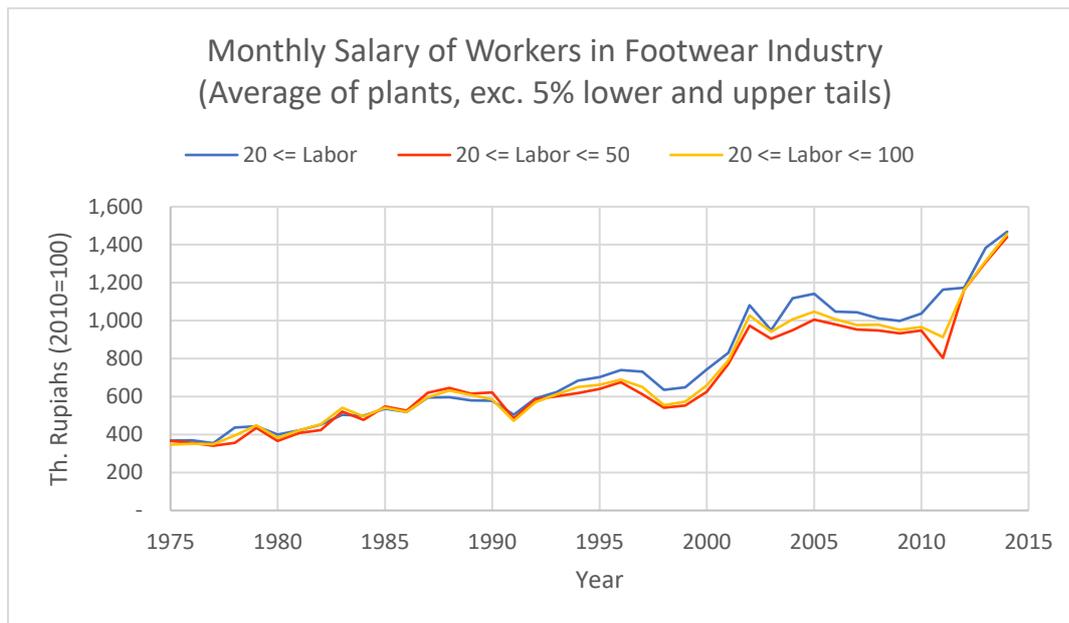


Figure 1b. Real Manufacturing Wages, 1975-2016 (wearing apparel)

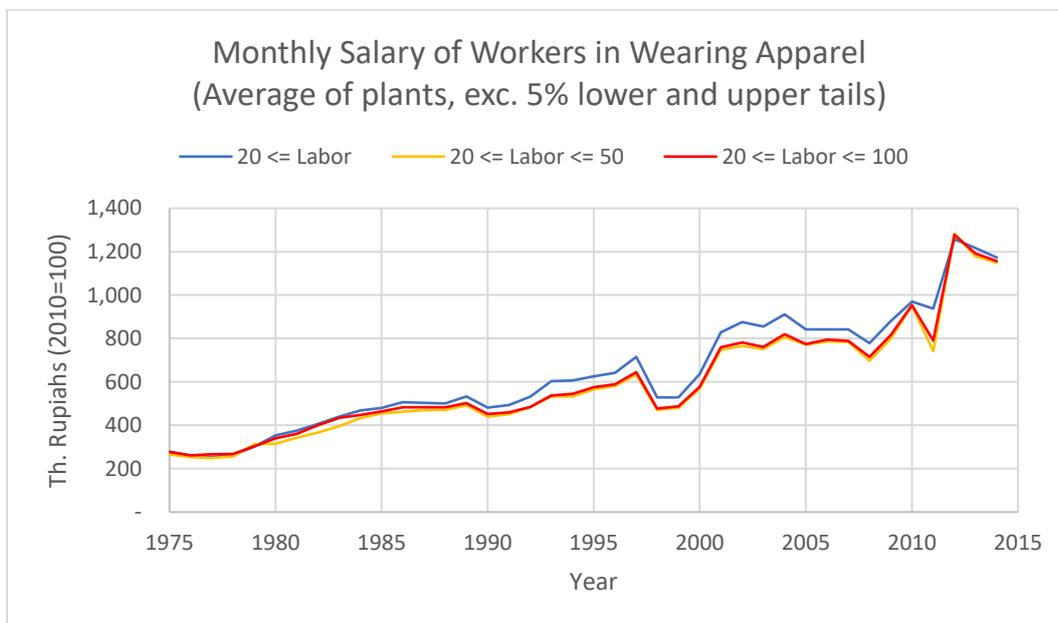


Figure 1c. Real Manufacturing Wages, 1975-2016 (all sectors)

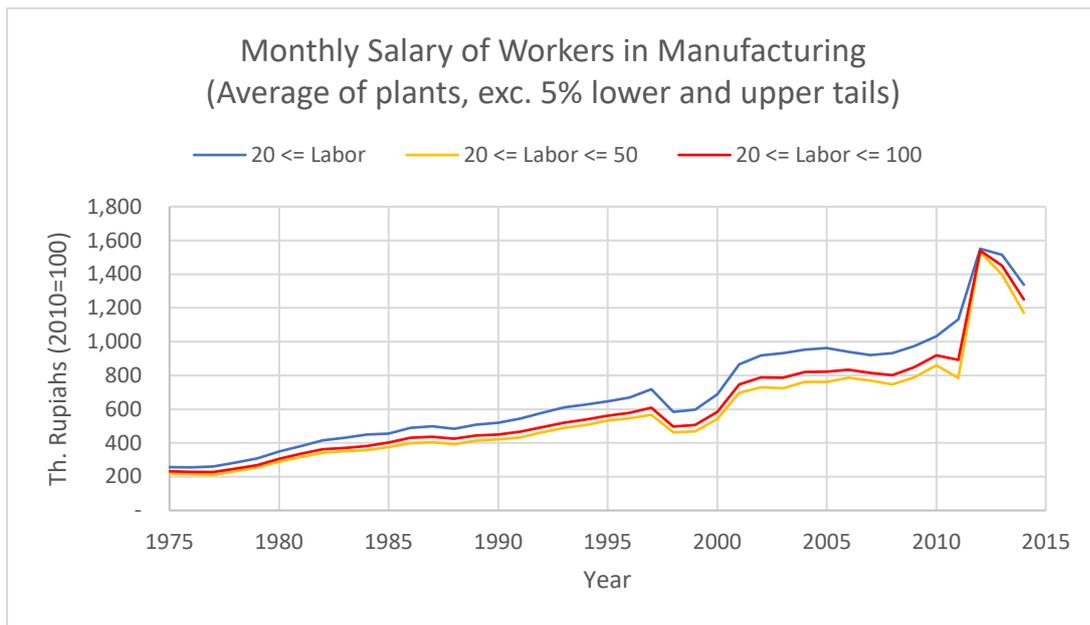


Figure 2. Regional Inequality, 1975-2015

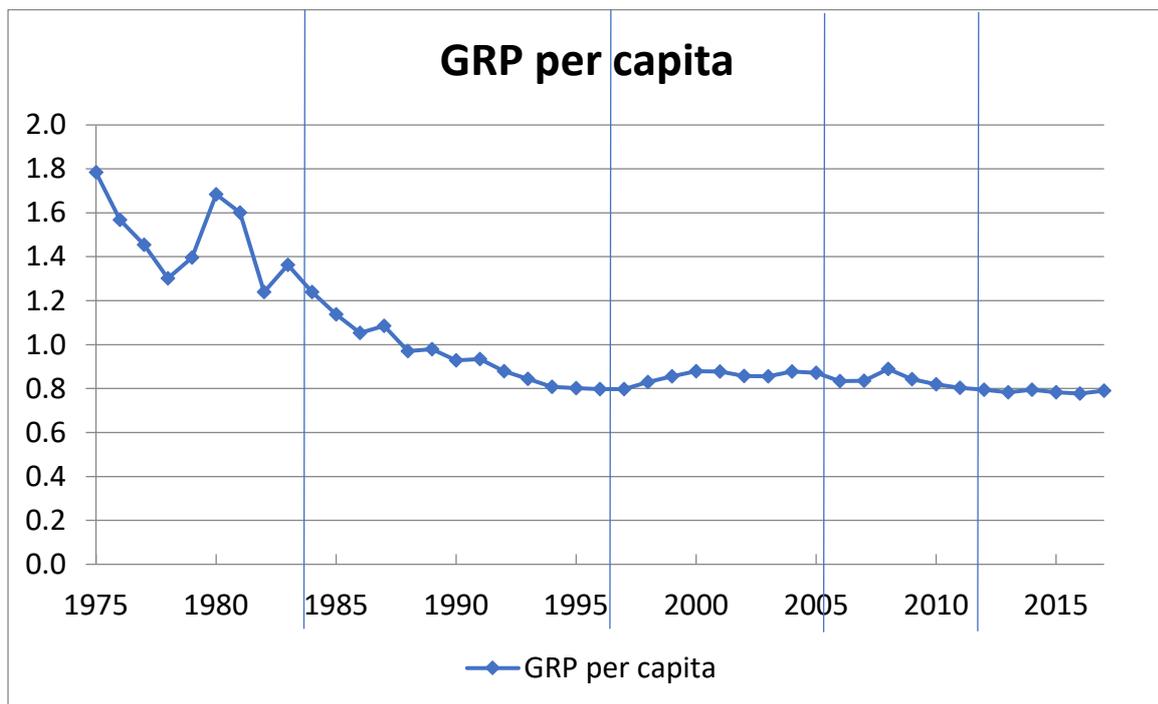


Figure 3: Deforestation and Emissions Indicators

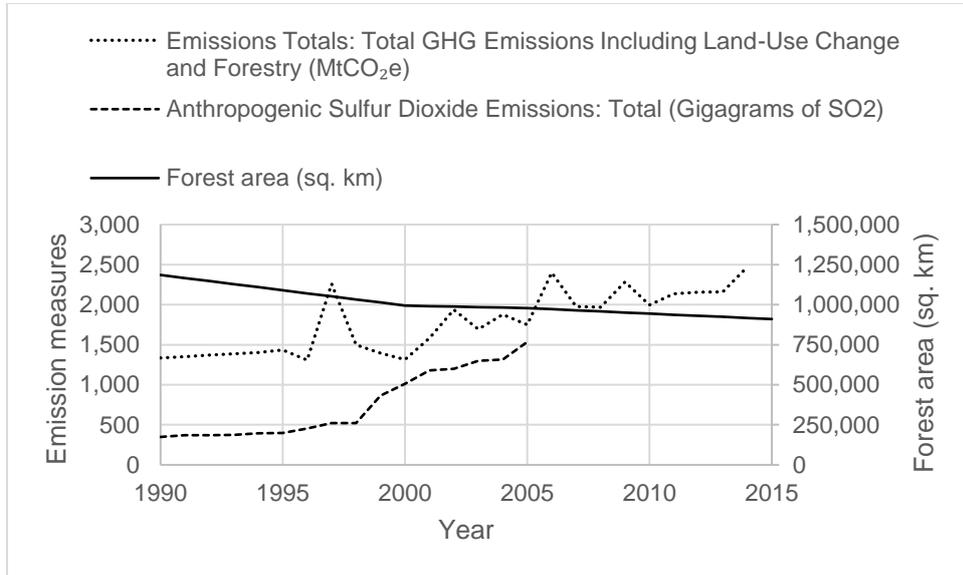


Figure 4. Per Capita Calorie Consumption

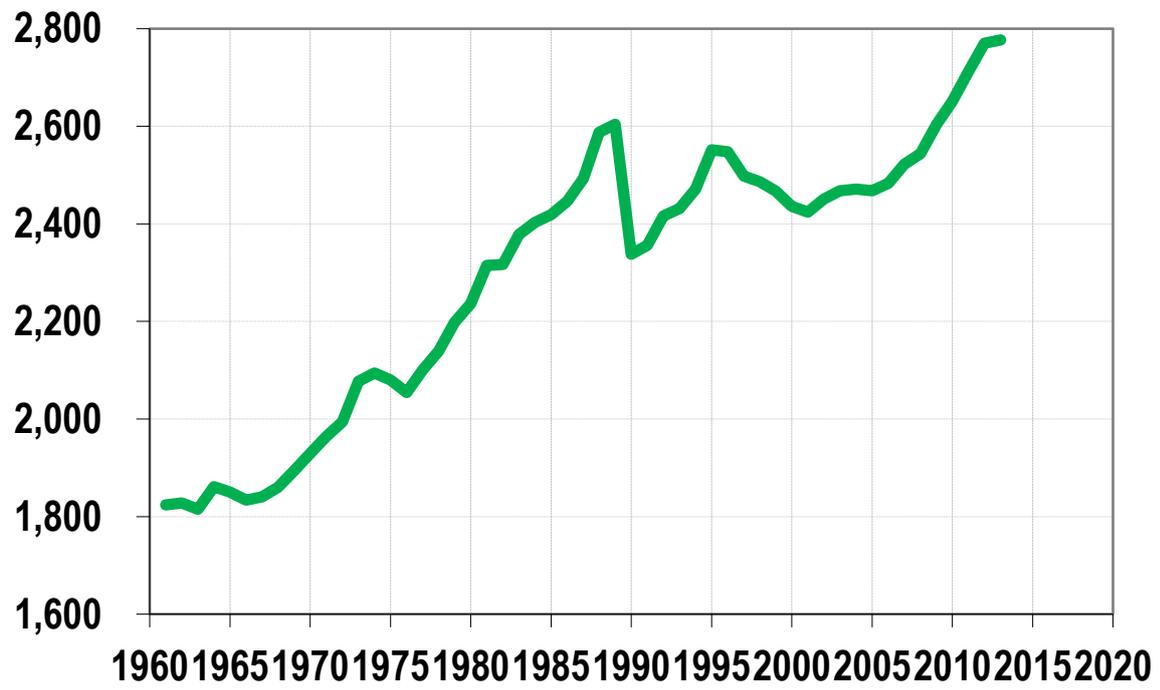


Figure 5. Comparative Gini Ratios, Pre and Post Transfers, 2012

