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Trends in Poverty
and Inequality
in Decentralising Indonesia

**Riyana Miranti,
Yogi Vidyattama,
Erick Hansnata,
Rebecca Cassells,
Alan Duncan**

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ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
APBD	Anggaran Pendapatan Belanja Daerah (<i>Local Government Budget</i>)
APBN	Anggaran Pendapatan Belanja Pusat (<i>Central Government Budget</i>)
Askeskin	Asuransi Kesehatan Keluarga Miskin (<i>Health Insurance for the Poor</i>)
Bappenas	Badan Perencanaan Pembangunan Nasional (<i>National Development Planning Agency</i>)
BLT	Bantuan Langsung Tunai (<i>Unconditional Cash Transfer</i>)
BOS	Bantuan Operasional Sekolah (<i>School Operational Assistance</i>)
BPS	Badan Pusat Statistik (<i>Central Bureau Statistics</i>)
BSM	Beasiswa Siswa Miskin (<i>Scholarship for Poor Student</i>)
BULOG	Badan Pusat Logistik (<i>National Logistic Agency</i>)
CCT	Conditional Cash Transfer
CPI	Consumer Price Index
DAK	Dana Alokasi Khusus (<i>Specific Allocation Fund</i>)
DAU	Dana Alokasi Umum (<i>General Allocation Fund</i>)
EEs	Emerging Economies
GEP	Growth Elasticity of Poverty
GFC	Global Financial Crisis
HDI	Human Development Index
ICW	Indonesian Corruption Watch
IDR	Indonesian Rupiah
IDT	INPRES Desa Tertinggal (<i>Presidential Instruction to the Less Developed Village</i>)
IEP	Inequality Elasticity of Poverty
INPRES	Instruksi Presiden (<i>Presidential Instruction</i>)
Jamkesmas	Jaminan Kesehatan Masyarakat (<i>National Health Insurance</i>)
KDP	Kecamatan Development Program (<i>Sub-District Development Program</i>)
KPPOD	Komite Pemantauan Pelaksanaan Otonomi Daerah (<i>Regional Autonomy Watch</i>)
KUR	Kredit Usaha Rakyat (<i>Microfinance</i>)
LFPR	Labour Force Participation Rate
MDGs	Millennium Development Goals
MP3EI	Masterplan Percepatan dan Perluasan Pembangunan Ekonomi Indonesia (<i>Masterplan for Acceleration and Expansion of Indonesian Economic Development</i>)
OECD	Organisation for Economic Co-operation and Development
Pilkada	Pemilihan Kepala Daerah (<i>Local General Election</i>)
PISA	Programme for International Student Assessment
PKH	Program Keluarga Harapan (<i>Family Hope Program</i>)

ABBREVIATIONS AND ACRONYMS (continued)

PNPM	Program Nasional Pemberdayaan Masyarakat (<i>National Program for Community Development</i>)
PPLS	Pendataan Program Perlindungan Sosial (<i>Data Collection on Social Protection Program</i>)
Propenas	Program Pembangunan Nasional (<i>National Development Program</i>)
Raskin	Beras Miskin (<i>Rice to the Poor</i>)
RPJM	Rencana Pembangunan Jangka Menengah (<i>Medium Term Development Planning</i>)
RTM	Rumah Tangga Miskin (<i>Poor Households</i>)
SA	Social Assistance
SAKERNAS	Survei Tenaga Kerja Nasional (<i>National Labour Force Survey</i>)
SUPAS	Survei Penduduk Antar Sensus (<i>Intercensal Population Survey</i>)
SUSENAS	Survei Sosial Ekonomi Nasional (<i>National Socio Economic Survey</i>)
TIMSS	Trends in International Mathematics and Science Study
TWP	Theil Index Within Province
TBP	Theil Index Between Provinces
TBR	Theil Index Between Regions
TNP2K	Tim Nasional Percepatan Penanggulangan Kemiskinan (<i>The National Team for Accelerating Poverty Reduction</i>)
UDP	Urban Development Program
Warnet	Warung Internet (<i>Internet Shop</i>)

ABSTRACT

As one of the world's largest emerging economies, Indonesia has experienced rapid economic growth and substantial reduction of poverty over the past three decades, particularly prior to the 1997-98 Asian Financial Crisis. After the crisis, Indonesia entered a new development phase that saw the fall of the Suharto government and new governance which moved highly centralised policies and powers towards a decentralised process. This research report analyses economic and social patterns and trends of poverty and inequality in Indonesia with a particular focus on the decentralisation period from 2001 to 2010. The Indonesian political and economic environment has changed significantly during this period and this had implications for individual wellbeing, regional economic prosperity and national economic growth. The report finds that in general, absolute poverty rates have continued to decline during the decentralisation period although the reduction has not been as strong as it was prior to the Asian economic crisis. In contrast, consumption inequality has increased during the same period. New estimates of growth and inequality elasticity of poverty suggest that this rising inequality has been offsetting the positive benefits of consumption growth on poverty.

The report also finds that regional disparities persist including the disparities at the district level (areas where much of the governance has shifted to), with substantial differences in poverty rates. New analyses of living conditions of Indonesians have revealed that there is still a wide gap between the population who are in the top and the bottom two quintiles of consumption per capita with a substantial proportion of poorer households still not having access to clean water or adequate toilet facilities. These findings illustrate that equal access to infrastructure which is typically provided through government intervention is still a major issue. Finally, the report focuses on the provision of direct social assistance, which remains a key policy pillar to alleviate poverty in Indonesia. A key policy challenge is how to improve targeting of social assistance, using an integrated poverty alleviation strategy through a combination of policies at the national, provincial and district level.

RÉSUMÉ

En tant que l'une des plus grandes économies émergentes du monde, l'Indonésie a connu une croissance économique rapide et une réduction substantielle de la pauvreté au cours des trois dernières décennies, en particulier avant la crise financière asiatique de 1997-1998. Après cette crise, l'Indonésie est entrée dans une nouvelle phase de développement qui a vu la chute du gouvernement Suharto, et qui a connu une nouvelle gouvernance délaçant des politiques et des pouvoirs fortement centralisés vers un processus décentralisé. Ce rapport analyse les caractéristiques et tendances économiques et sociales de la pauvreté et de l'inégalité en Indonésie, avec un accent particulier sur la période de décentralisation de 2001 à 2010. L'environnement politique et économique indonésien a considérablement changé au cours de cette période. Cela a eu des répercussions sur le bien-être individuel, la prospérité économique régionale et à la croissance économique nationale. Le rapport constate qu'en général, les taux de pauvreté absolue ont continué à baisser au cours de la période de décentralisation, mais la baisse n'a pas été aussi forte qu'elle l'avait été avant la crise économique asiatique. En revanche, les inégalités (mesurées par la consommation) ont augmenté durant la même période. Des nouvelles estimations de la croissance et de l'élasticité de l'inégalité de la pauvreté suggèrent que cette inégalité croissante a compensé les effets positifs de la croissance de la consommation sur la pauvreté.

Le rapport constate également que les disparités régionales persistent, y compris les disparités au niveau des districts (zones où une grande partie de la gouvernance s'est déplacée), avec des différences importantes dans les taux de pauvreté. De nouvelles analyses des conditions de vie des Indonésiens révèlent qu'il y a encore un large fossé entre la population étant dans les quintiles supérieurs et inférieurs de la consommation par habitant, avec une proportion importante de ménages les plus pauvres n'ayant toujours pas accès à l'eau potable ou à des installations sanitaires (toilettes) adéquates. Ces résultats montrent que l'égalité d'accès à l'infrastructure, qui est généralement fournie par l'intervention du gouvernement, est toujours un problème majeur. Enfin, le rapport se concentre sur la fourniture d'une assistance sociale directe, qui reste un pilier clé de la politique sociale pour réduire la pauvreté en Indonésie. Un défi majeur est de savoir comment améliorer le ciblage de l'aide sociale, à l'aide d'une stratégie intégrée de réduction de la pauvreté grâce à une combinaison de politiques au niveau national, provincial et de district.

TABLE OF CONTENTS

AUTHORS NOTE.....	3
ACKNOWLEDGEMENTS.....	3
ABBREVIATIONS AND ACRONYMS.....	4
ABSTRACT.....	6
RÉSUMÉ.....	7
1. INTRODUCTION.....	12
2. RECENT POVERTY AND INEQUALITY TRENDS: NATIONAL AND SUB-NATIONAL ANALYSIS.....	18
2.1 Macroeconomic and Employment Indicators.....	18
2.2 Patterns and Trends in Poverty.....	20
2.2.1 Patterns and trends in regional poverty.....	22
2.2.2 How are official poverty rates in Indonesia calculated?.....	26
2.3 Patterns and Trends in Alternative Wellbeing Measurements.....	28
2.4 Patterns and Trends in Inequality.....	31
2.4.1 Patterns and trends in regional inequality.....	31
2.4.2 The role of the labour market.....	34
2.4.3 The role of the informal sector.....	36
2.4.4 Regional disparities.....	37
2.4.5 Provincial disparities in education.....	40
2.4.6 Sub-provincial (district) disparities.....	41
2.5 Characteristics of Persons or Households Vulnerable to Poverty.....	50
2.5.1 Demographic characteristics.....	51
2.5.2 Socio-economic.....	54
2.5.3 Labour markets.....	56
2.5.4 Living conditions.....	57
2.5.5 Dwelling quality: “roof, walls, and floor”.....	61
2.5.6 Connectedness.....	63
2.6 Summary.....	65
3. ESTIMATING THE IMPACT OF CONSUMPTION GROWTH AND INEQUALITY ON POVERTY DURING THE DECENTRALISATION PERIOD.....	67
3.1 Background and overview.....	67
3.2 Data.....	68
3.3 Empirical Methodology.....	70
3.4 Empirical Results.....	72
3.5 Quantifying the Consumption Growth and Inequality effects on Poverty.....	75
3.6 Summary.....	76
4. GOVERNMENT STRATEGY OPTIONS.....	78

4.1 Direct Government Strategy for Poverty Alleviation.....	78
4.2 Budget for Poverty Programs	91
4.3 Summary	93
5. CONCLUSIONS AND LESSONS FOR POLICIES	95
5.1 Trends in poverty and wellbeing, and areas of concern	95
5.2 Addressing regional disparities	96
5.3 Poverty alleviation strategies.....	96
5.4 Social assistance.....	97
5.5 Education and industrial development	97
5.6 Labour markets and employment	98
5.7 Resourcing poverty alleviation.....	98
APPENDIX A - SOURCE OF DATA.....	99
APPENDIX B	101
REFERENCES	102

Tables

Table 1: Delegation of authority from Central Government to Local/Regional Government based on Law No 22/1999 and 25/1999	14
Table 2: Economic Growth by Various Growth Episodes, 1990-2010	18
Table 3: Structural Transformation of Employment	20
Table 4: Consumption share held by the population (per cent).....	33
Table 5: Percentage of total population by gender and age group, 2010	52
Table 6: Household Type by Household Consumption Per capita Quintile (per cent), 2008	53
Table 7: Labour market characteristics of adult population by Consumption Quintile (per cent of population), 2008	56
Table 8: Source of light by Consumption Quintile (per cent of households), 2008.....	60
Table 9: Growth elasticity regression results (constant across development periods)	73
Table 10: Growth elasticity regression results (varying across development periods)	74
Table 11: Summary of GEP and IEP, 1984-2002; 2002-2010	75
Table 12: Contribution of Consumption Growth and Inequality to Change in Poverty.....	76
Table 13: Distribution of RASKIN by Consumption Quintile, 2008.....	81
Table 14: Mean household size by consumption quintile	81
Table 15: Health Expenditure (per cent of GDP and Per Capita) in selected economies	82
Table 16: Distribution of JAMKESMAS by Consumption Quintile, 2008	83
Table 17: Government Budget in Selected Districts 2003 (IDR 9000 = 1 USD)	85
Table 18: Teacher Absence Rate in Selected Districts, 2002-2003	87
Table 19: The Allocation for PNPM 2007-2010	89
Table 20: KUR Realisation and Ratio to Total Microcredit (SMEs)	90
Table 21: Distribution of Microcredit Recipients	91
Table 22: Budget for Social Assistance Clusters I and II, 2004-2010	92
Table A1. Data source for Official Poverty Calculation	100

Figures

Figure 1: Poverty Rates and Gini index for selected Emerging Economies and ASEAN countries, 2010	12
Figure 2: Trend in poverty rates, 1976-2010	21
Figure 3: Number of Poor People (million), 1976-2010	22
Figure 4: Provincial poverty rates (per cent), 2010	23
Figure 5: Number of poor persons (000) by province, 2010	24
Figure 6: Persistence of poverty rates, 2001 and 2010	25
Figure 7: Annualised change in poverty rates, 2001-2010 (per cent)	26
Figure 8: Various Poverty Lines and Proportion of Population under the Poverty Line, 2008	27
Figure 9: National and Selected Provinces HDI, 1996-2010	28
Figure 10: Global HDI, Indonesia and Other Groups of Countries, 1995-2010	29
Figure 11: Selected MDG Indicators, Areas of Concerns	30
Figure 12: Gini Coefficient Urban and Rural areas, 1999-2010	31
Figure 13: Provincial Gini Coefficients, 2010	32
Figure 14: Annualised Change in Gini Coefficients (2001-2010) (per cent)	33
Figure 15: Labour Force Participation Rate (LFPR), Employment to Population Ratio and Unemployment Rate, 2000-2011	34
Figure 16: Average monthly real wages (2001-2010)	35
Figure 17: Real GDP and Employment Status in Indonesia 2001-2010	36
Figure 18: Contributions to national GDP by Islands, 2010	38
Figure 19: Index of GRDP per capita to GDRP per capita in Java Bali (Java-Bali = 100)	39
Figure 20: Net enrolment rates 13-15 year old, junior high school, 2010	40
Figure 21: Net enrolment rates 16-18 year old, senior high school, 2010	41
Figure 22: Gross Regional Domestic Product per capita at District level, 2001 and 2007 (million rupiah)	43
Figure 23: Decomposed Theil Index of district level regional disparity of GRDP per capita, 2001-2007	44
Figure 24: Poverty Rate Distribution at District level, 2001 and 2007 (per cent of poor)	45
Figure 25: Decomposed Theil Index of district level regional differences of Poverty Rates, 2001-2007	45
Figure 26: The distribution of GRDP per capita and Poverty Rate at District level, 2001-2007	46
Figure 27: Net Enrolment Rate of Primary School Aged children by regions 2001-2007 (per cent)	47
Figure 28: Decomposed Theil Index of district level regional disparity of Primary School Net Enrolment Rate 2001-2007	47
Figure 29: Net Enrolment Rate of Junior High School children by regions 2001-2007 (per cent)	48
Figure 30: Decomposed Theil Index of district level regional disparity of Junior High School Net Enrolment Rate 2001-2007	49
Figure 31: The Net Enrolment Rate of Senior High School Aged children by regions 2001-2007 (per cent)	49
Figure 32: Decomposed Theil Index of district level regional disparity of Senior High School Net Enrolment Rate 2001-2007 (per cent)	50
Figure 33: Percentage of total population by gender and age group, 2010	52
Figure 34: Educational attainment by Consumption quintile (per cent of population), 2008	54
Figure 35: School participation by Consumption Quintile (per cent of population), 2008	55
Figure 36: Illiteracy by Consumption Quintile (per cent of population), 2008	55
Figure 37: Source of drinking water by Consumption Quintile (per cent of households), 2008	58
Figure 38: Trends in source of drinking water, 2000-2010 (per cent)	58
Figure 39: Type of toilet by Consumption Quintile (per cent of households), 2008	59
Figure 40: Main source of energy for cooking by Consumption Quintile (per cent of households), 2008	59
Figure 41: Main source of energy for cooking (per cent of households), 2000-2010	60

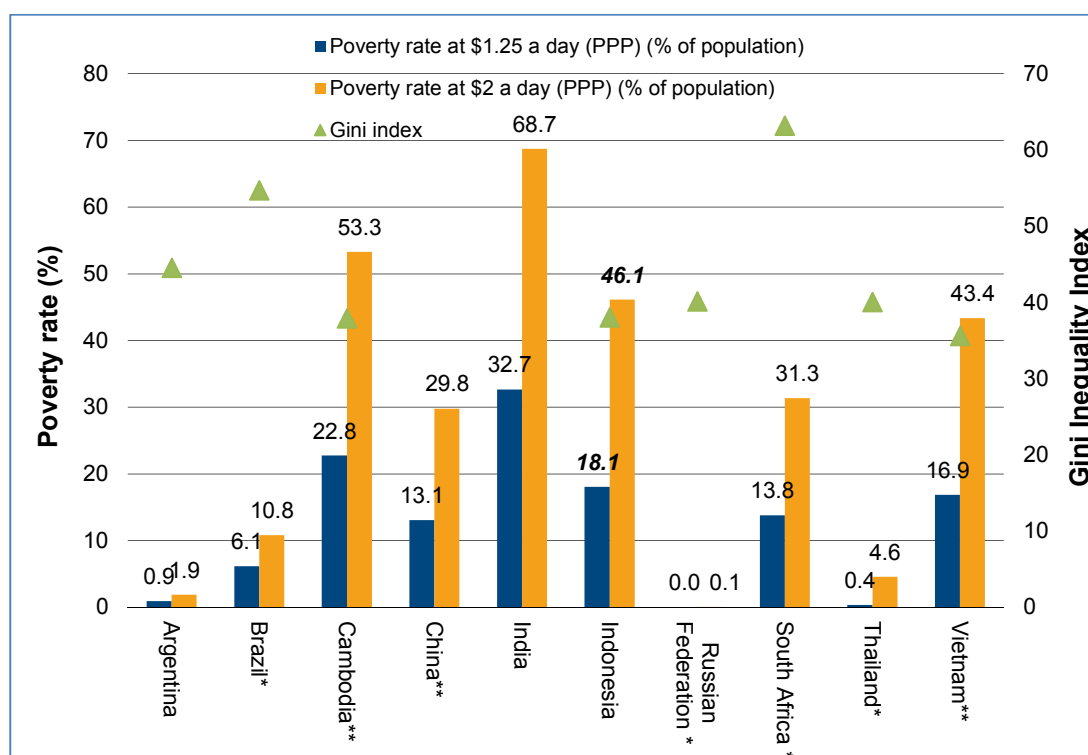
Figure 42: Source of light (per cent of households), 2000-2010.....	61
Figure 43: Material Used for the Largest Section of Roof (per cent of households), 2008	62
Figure 44: Material Used for Largest Section of Wall (per cent of households), 2008	62
Figure 45: Material Used for Largest Section of Floor (per cent of households), 2008.....	63
Figure 46: Internet Use by Consumption Quintile (per cent of households), 2008.....	64
Figure 47: Ownership of personal computer by Consumption Quintile (per cent of households), 2008..	64
Figure 48: Ownership of personal telephone by Consumption Quintile (per cent of households), 2008 .	65
Figure 49: Provincial headcount poverty rates and mean per capita consumption, by development period.....	69
Figure 50: Provincial headcount poverty rates and Gini coefficients of inequality, by development period.....	70
Figure 51: Poverty Reduction Strategy Clusters	79
Figure 52: Proportion of children under 5 years old who are not immunised (per cent) by type of immunisation and Consumption Quintile, 2008.....	84
Figure 53: Regional Ratio Primary School per 1000 Population, 2001-2010.....	86
Figure 54: Regional Ratio of Primary Teacher and Population, 2001-2010	87
Figure B.1. Indonesian Government Structure after Decentralisation	101

1. INTRODUCTION

1. Indonesia is one of the world’s largest emerging economies (EEs) according to the Organisation for Economic Corporation and Development (OECD), where together with Argentina, Brazil, China, India, Indonesia, the Russian Federation and South Africa contributed to one-fifth of global Gross Domestic Production (OECD,2011). Indonesia is also one member of the Association of Southeast Asian Nations (ASEAN) countries which was considered as one of the eight East Asian miracles because Indonesia experienced rapid economic growth at 7 per cent for more during the three decades prior the 1997-1998 crisis (1967-2008).

2. Prior to the economic crisis at the late 1990s, the improvement in terms of poverty was also remarkable as the poverty rate declined from more than 55 per cent in the mid-1960s (Booth, 1992), to 40.1 per cent in 1976, to around 17.7 per cent in 1996 (new estimate), according to the official Biro Pusat Statistik (BPS). National inequality measured by the Gini index remained within a range of 0.31-0.38 between 1996 and 2010, although there has been an increasing trend in inequality over the past 10 years.

Figure 1: Poverty Rates and Gini index for selected Emerging Economies and ASEAN countries, 2010



Notes: It is important to note that there are different concepts underlying poverty and inequality data, with some approaches from an income (perceived capability) perspective and others based upon actual consumption. The official Indonesian measure of inequality is calculated using household consumption expenditure. Figures refer to the latest available data. * refers to 2009 data while ** refers to 2008 data.

Source: Authors' calculations from World Bank Data, <http://data.worldbank.org/indicator>.

3. While keeping in mind that there are differences in terms of whether income or consumption data is used for calculating poverty and inequality, compared internationally to other selected Emerging Economies (EEs), inequality in South Africa and Brazil seems to be very high.¹

4. Inequality in Indonesia is relatively lower than in Thailand and Cambodia, the other ASEAN countries presented in Figure 1. However, from poverty indicators, measured by international poverty rates of \$1.25 or \$2 a day PPP, the poverty rate in Indonesia is still higher than other EEs and ASEAN countries, with the exception of Cambodia and India.

5. Indonesia has experienced several distinct development phases since governance under the New Order era ended in 1998). At the end of the 1990s, the financial crisis hit many Asian countries hard, including Indonesia, where it exploded to a socio-economic crisis. MacIntyre and Sjahrir (1993) argue that some observers had already begun to worry about the slowing pace of liberalisation and the capacity of the Indonesian economy to service its foreign debt, especially given restrictions around local funding. This concern was realised in 1997 with the sharp fall in the Indonesian rupiah (IDR) that marked the beginning of Indonesia's currency crises. The exchange rate continued to plummet in 1998. The problem then became a financial crisis with the collapse of the stock market, bankruptcy of local companies, and a serious problem faced by Indonesian banks (Soesastro and Basri, 1998). This led to a social and political crisis marked by the resignation of President Suharto in May 1998, after having led the country for 32 years. Instead of minimising the crises, there were several widespread conflicts after the resignation of Suharto as a result of a weaker central government. This was evidenced by several rallies, demonstrations and riots. It was also a period where many of the mineral-rich provinces such as Aceh, Riau and Papua sought to have independence, especially after the independence vote was passed in East Timor on August 1999. This led Indonesia to enter a new development phase, which saw not only the fall of Suharto and his "New Order" government but also highly centralised policies and powers shifting towards a decentralised process.

6. The Decentralisation process formally commenced in 2001, and was marked with new legislation, that saw greater power granted to municipal/district governments. These laws include the application of regional autonomy through Law No 22/1999 on regional governance and Law No 25/1999 on financial governance between the central and local government, and are considered to be the foundation underpinning a huge and rapid process which is often referred to as the "Big Bang" decentralisation (Hofman and Kaiser, 2002). The process had to face both slow economic recovery and unsettled political conditions. The 1999 general election brought peace only temporarily as the elected President was replaced by his Vice President on July 2001 following a formal impeachment process. Hill (2007) argues that the Indonesian economy had only begun on the track for recovery by the beginning of 2003. The two decentralisation laws were improved upon with Laws No 32/2004 and No 33/2004 that provided more clarity in regards to roles and responsibilities, despite some problems remaining unsolved (Brodjonegoro, 2009). Clearer responsibilities and inter-linkages between Central, Provincial and District governments were set out in Law 32/2004, assisting the decentralisation process further (Holtzappel, 2009).

7. Decentralisation has seen the country embark on a new era where the Central Government delegated substantial authority to Districts. Law 22/1999 provides the entitlement to determine the size of the government, which means local governments have authority in recruiting civil servants based on its need and capabilities. Nevertheless, Law 32/2004 states that the management of civil servants is still coordinated by a national body. According to this law, the Provincial government should advise on high level civil servant appointments as well as re-allocation of civil servants from one District to another within a Province. The decentralisation process also allowed local governments to expand their sources of income from either domestic or international partners, by removing previous restrictions that prevented

¹ Inequality measured by income is generally higher than inequality measured by expenditure.

these business relationships; although such activities if they involved international partners, the local government still need to have consultation with the Central Government. It is expected that by shifting some areas of policy responsibility to the local level, the development process will yield improved outcomes at the local level, and flowing on to positive national outcomes as a whole as local governments are expected to understand the needs and capabilities of their community better than the central ministries.

8. Based on the Decentralisation Laws No 22/1999 and 25/1999, there are substantial amount of areas of delegation of authority from the Central Government to Local/Regional Government (Table 1). This is contrast to the period prior to decentralisation, when the decision making process of the local government was always in line with the policies from both Central and provincial government.

Table 1: Delegation of authority from Central Government to Local/Regional Government based on Law No 22/1999 and 25/1999

Local/Regional Government	Remaining in Central Government
Regional Budget	Foreign Affairs
Local Tax	Defence and Security
Education Support	Justice
Health Support	
Welfare Program	National Fiscal Policy
General Government Programs	Religion
Natural Resources	
Employment	
Local Investment	
International Partnership*	
Environment	
Land Policy	
Infrastructures	
Exploration, Exploitation, and Conservation Permit	

Notes: *by consultation with Central government. Monetary policy is under the authority of the Central Bank of Indonesia, which is independent from the government and all government authorities.
Source: Law No 22/1999 and 25/1999.

9. Currently, the Provincial and District Governments are able to have their own policies in portfolio areas such as regional budget and local taxation. A number of areas still remain under the responsibility of the Central Government and typically cover national interests such as Foreign Affairs and Defence.

10. However, although there have been dramatic shifts in terms of governance discussed above, the Central Government still plays substantial role in its aim to ensure fair and balanced fund allocation between regions with its fiscal decentralisation. Based on Law 25/1999, the Central Government has allocated intergovernmental transfers to local governments which are mainly in the form of a General Allocation Fund (Dana Alokasi Umum or DAU). The data shows the proportion of DAU to total district government revenues remains substantial, accounted for around 58 per cent in 2006-2010. DAU is mainly used to pay civil servant salaries and other administrative costs. This development grant gives full

autonomy to local governments in terms of spending and fund management. With this autonomy, districts and municipalities have gained responsibility for delivering public services which neither the Central or Provincial government provides (for example, the central government still retains responsibility for higher education). Further, there is also the specific allocation fund (Dana Alokasi Khusus or DAK) which covers the central sectoral project allocation which was initially under the central government budget (APBN), but has now been directly transferred and included in local government budgets (APBD). The DAK usually covers sectors including those which relate to infrastructure such as irrigation, road, sanitation and water supply.

11. Apart from the DAU and DAK funding programs, other forms of intergovernmental transfers include natural resource and tax revenue sharing. Natural resource revenue sharing is an important development for a relatively resource rich country such as Indonesia, particularly as natural resources are concentrated in a few regions. Virtually no resource revenue sharing existed before 2001, where almost 100 per cent of the revenue went directly to the central government, although some of this revenue was returned as part of the general system of development grants. Currently 15 per cent of oil revenue goes to the respective oil producing provinces, and 30 per cent of gas revenue and 80 per cent of other general mining activities, as set out in Law No 25, 1999. Similarly, 80 per cent of the forestry sector revenue (forest product royalties and forest concession licences) and 60 per cent of reforestation funds go to the producing provinces, whereas in fisheries, 80 per cent of the revenue is distributed to all districts and municipalities in Indonesia, in recognition of the archipelagic nature of Indonesia and the shared common resources within its surrounding waters.

12. In principal, regional autonomy has seen the delegation of two principal powers - political authority and fiscal authority. Despite the expectation that decentralisation will create useful and positive benefits, the shock-effects of this rapid process have created many distortions, particularly in the early stage of implementation. These distortions have appeared in a number of ways, the first is seen through new fiscal authority, with local governments substantially increasing budget allocations for routine spending which consists of salaries, allowances, and operational costs. Data from the Indonesian Ministry of Finance shows that regional budgets for the period of 2001-2004 allocated on average two-thirds of the budget to routine spending. This increase in local government budget spending is expected, given the new powers and responsibilities of each government, however, by-products of the transferred responsibilities include fee increases and/or partial service provision of services previously provided by the Central government.

13. Secondly, political authority has meant that Indonesian Districts can operate their own political process which means they can conduct general elections for both executive and parliament members (*pilkada*). However, despite the expected positive impact of introducing democratisation to the District communities, elections have been shown to produce collusive behaviours as highlighted in Henderson and Kuncoro (2011). They have argued that political parties together with local officials has a tradition of collusion and corruption in decentralisation period, benefitting those from a particular group and consequently demoting the commitment to increase welfare and reduce poverty.

14. Another impact of decentralisation has been that local people and authorities are inspired to form their own regional area and therefore create several new Provinces and Districts. Within a decade of decentralisation (1999-2010), 205 areas of regional autonomy have been formed, consisting of 7 new provinces and 198 districts (kabupaten/kota). In 2010 there were 33 provinces in Indonesia from a previous 26 and 491 Districts from a previous 293. The addition of these regional areas has certainly affected the allocation of the national development budget. Data from the Indonesian Ministry of Finance reports that the allocation for the development budget has increased significantly - 36 times larger from an initial IDR 1.33 trillion (US\$ 140 million) in 2002 to IDR 47.9 trillion (US\$ 4.7 billion) in 2010.

15. In terms of poverty reduction efforts, decentralisation although not directly targeted as a sole strategy to poverty alleviation, has been expected to improve service delivery and provide better access to the poor by a credible government who knows best about what their local people need. As seen in Table 1, poverty alleviation strategies at the local level can be embedded into a number of areas of responsibilities that are associated with poverty, such as education or health support and welfare programs. Further, Sumarto *et al.* (2004) argues the importance of the role of civil society in decentralisation in that it may have created an opportunity to closely monitor governance and thus, giving the opportunity for the voice of the poor to be heard, which will in turn is likely to aid more effective program targeting.

16. Decentralisation is also expected to promote better economic growth and per capita income and therefore increase the potential to reduce poverty. Thornton (2006) highlights several reasons that support this argument. First, local governments are in a better position to take into account of local conditions in the provision of amenities and infrastructure. Second, competition among local governments promotes incentives for investment such as lowering investment tax rates. Third, under revenue constraints local governments have an incentive to innovate in the production and supply public goods and services for its community. Empirical estimation by Kyriacou and Roca-Sagales (2011) in OECD countries in the period of 1996-2005 and Iimi (2005) with a sample of 51 developed and developing countries between 1997 and 2001 find that there is a positive correlation between per capita growth rates and fiscal decentralisation measured by the share of local expenditure to total government expenditure.

17. However, government decentralisation is not always designed specifically to directly target poverty alleviation and improving inequality, and arguments have been presented, which infer that transferring anti-poverty programs directly to local governments may not necessarily be the best solution for poverty alleviation. Bird and Rodriguez (1999) using cases in developing countries like the Philippines, Argentina, Chile, and including Indonesia; states that the relationship between poverty and decentralisation largely depends on public investment of local governments to reduce poverty, and in the implementation of national poverty policy, either narrowly or broadly defined. Given the heterogeneity of capacities and resources, they suggest that decentralised poverty strategies require a degree of equalization in terms of fiscal transfers. Therefore, to decentralise poverty alleviation strategies, credibility and accountability of local government is strictly required. Galasso and Ravallion (2005) further emphasise that decentralisation is about government accountability and thus Central Governments should obtain complete information before delegating authority over anti-poverty programs, as the Central Government cannot control the outcomes when autonomy has been fully implemented.

18. Further, the expected positive impact of decentralisation is often mitigated by political dynamics such as electoral processes and multi-level government structures. These aspects may worsen accountability and in the end decentralisation can be considered an instrument for elites to take benefit and may have no positive impact on social welfare (Seabright, 1996). For example, a recent report from Indonesian Corruption Watch (ICW) in 2011 found that many local elections processes in Indonesian Districts such as in Banten Province, Jayapura municipality, and Kampar Districts were influenced through unlawful practices related to the economic interests of a minority of constituents. Furthermore, in the next election incumbents tend to corrupt the local budget in order to retain authority.

19. The dramatic changes in the Indonesian political and economic environments over the past decade, and arguments that exist around both positive and negative outcomes of decentralisation processes, have highlighted the importance of examining movements in social and economic patterns – particularly trends in poverty and inequality over this period. While this paper does not directly attempt to quantify the impact of decentralisation on poverty and inequality, it provides a detailed examination and of what happened to poverty and inequality during this period and provides some discussions about the link between these two.

20. The remainder of this paper comprises of three main components. The following section discusses recent poverty and inequality trends focusing on the national and sub-national analysis followed by Section 3 which investigates the impact of consumption growth and inequality on poverty during the decentralisation period. Section 4 discusses government policies to alleviate poverty in Indonesia, and Section 5 concludes and discusses some recommendations.

2. RECENT POVERTY AND INEQUALITY TRENDS: NATIONAL AND SUB-NATIONAL ANALYSIS

2.1 Macroeconomic and Employment Indicators

21. Several development episodes which cover the decentralisation stages to the period prior to the Asian economic crisis (1990-1996) are presented in Table 2. Economic growth declined by 13.1 per cent during the Crisis period and then rebounded at 4 per cent per annum during the recovery period. The recovery period which ended in 2002 overlapped with the Early Stage of decentralisation period. The decentralisation period is divided up into two distinct periods (i) Early Stage (2001-2004) and (ii) Full implementation period (2005-2010). The demarcation of these periods into two distinct groups is based upon knowledge of full implementation commencing after the laws implementing major funding reforms (DAU and DAK) took effect in 2004.

22. While GDP grew on average higher than 7 per cent annum and 5.3 per cent per annum for GDP per capita during 1990-1996, slower average growth rates were experienced for both the early and full implementation stages (3.0 and 4.1 per cent per annum of GDP per capita respectively). It is noted that average annual growth during the full implementation period was higher than the early decentralisation stage.

23. Analysis of growth across industry sectors shows that the labour intensive manufacturing sector experienced a large decline in GDP growth, decreasing from 9.9 per cent in the period prior to the Asian Financial Crisis to 5.7 per cent in the early decentralisation stage, and falling further to average annual growth of 3.9 per cent in the most recent period. The service sector also experienced a large decline during the early years of decentralisation, however has since recovered, averaging growth of 6.3 per cent per annum. Agriculture has remained relatively stable across all periods, with a slight decline in the full implementation period.

Table 2: Economic Growth by Various Growth Episodes, 1990-2010

	Prior to the crisis (1990-1996)	Crisis Period (1997-1998)	Recovery Period (1999-2002)	Early Stage Decentralisation (2001-2004)	Full Implementation (2005-2010)	Entire Decentralisation period (2001-2010)
GDP	7.2	-13.1	4.0	4.8	5.7	5.4
GDP per capita	5.3	-14.3	2.5	3.0	4.1	3.7
Manufacturing GDP	9.9	-11.4	4.2	5.7	3.9	4.6
Agriculture GDP	3.9	-1.3	1.9	3.4	3.7	3.5
Mining GDP	5.2	-2.8	3.1	-1.6	2.4	1.1
Service GDP	8.8	-3.8	2.5	4.5	6.3	5.6

Source: Authors' calculations, Miranti (2010) and CEIC data.

24. The slower pace of industry sector growth rates across the decentralisation stages is reflected in employment statistics. Employment growth per annum in the manufacturing and service sectors was also slower during the decentralisation period than prior to the crisis (Table 3) Average annual employment growth dropped by 4.3 percentage points for manufacturing and 2.6 percentage points for the service sector between 1990-1996 and 2001 - 2010. However, employment in the service sector still grew on average by 3.3 per cent annually and higher when focusing on the full implementation period, where employment growth in this sector reached 4.8 per cent per annum. The share of employment in this sector to total employment was also higher (39 per cent) than prior to the crisis (34.1 per cent). Employment elasticity (the ratio of employment growth in the service sector per annum to the ratio of service sector GDP growth per annum) in this period was relatively high at 0.66 reflecting a growing sector.

25. Timmer (2004) argues that after the crisis, there was a shift in occupation composition, with displaced workers moving from shrinking sectors, the manufacturing to others, especially agriculture or the informal sector - particularly the service sector. As indicated in Table 3, the agriculture sector experienced positive employment growth during the crisis period, in contrast to the manufacturing sector which contracted at 12.9 per cent.

26. Table 3 also shows that agriculture sector employment growth had an average positive growth of 0.5 per cent per annum across the entire decentralisation period. This is likely to reflect the unskilled labour (who were unabsorbed by the growth in agriculture and rural non-farm activities), migrating to urban areas and working in labour intensive manufacturing industries. The share of employment in the agricultural sector was also still around 42.3 per cent during 2001-2010.

27. There has been a structural transformation of employment from the manufacturing sector prior to the crisis to the agricultural and service sectors after the crisis. Table 3 also shows the employment elasticity of the labour intensive manufacturing sector was 0.37 during 2001-2010, lower than it was during 1990-1996, prior to the crisis (0.58 as calculated in Miranti, 2007).

28. The full implementation period also covers the period of Global Financial Crisis in 2008/2009 where Indonesia fared relatively well from this economic shock. This may infer the impact of large increases in national spending due to the Presidential election campaign during this period, which influenced increases in domestic demand; and the fact that the Indonesian export market is relatively small in the chain of globalisation when compared to neighbouring countries such as Singapore, Thailand and Malaysia (Basri and Rahardja, 2010).

Table 3: Structural Transformation of Employment

Growth episodes	Agriculture, Forestry & Fisheries		Manufacturing		Services	
	Employment Growth (per cent p.a.)	Average Share of Total Employment (per cent p.a.)	Employment Growth (per cent p.a.)	Average Share of Total Employment (per cent p.a.)	Employment Growth (%p.a.)	Average Share of Total Employment (per cent p.a.)
Prior to the crisis (1990-1996)	-1.9	49.6	5.8	11.6	5.9	34.1
Crisis Period (1997-1998)	6.4	41.9	-12.9	11.9	-0.4	39.8
Recovery Period (1999-2002)	1.9	44.1	1.7	13.1	-1.2	37.6
Early Stage Decentralisation (2001-2004)	0.7	44.4	-2.9	12.6	2.3	37.2
Full Implementation (2005-2010)	-0.2	40.9	3.5	12.4	4.8	40.2
Entire Decentralisation period (2001-2010)	0.5	42.3	1.5	12.5	3.3	39.0
Employment elasticity	0.15		0.37		0.66	

Note: Data on employment in mining, quarrying, electricity, gas and water and construction are not presented. Employment elasticity is calculated as the ratio of employment growth in a sector per annum to the ratio of GDP in that particular sector per annum. Source: Authors' calculations, Miranti (2010) and CEIC data.

2.2 Patterns and Trends in Poverty

29. As indicated in most previous studies examining poverty in Indonesia including Scherer and Scherer (2011) and Miranti (2010), prior to the economic crisis in 1997, Indonesia's performance in reducing poverty rates was very impressive, although the government under previous President Soeharto adopted universal policies that aimed to benefit everyone including the poor. This strategy was aimed at maintaining sufficient growth in agricultural production, with diversification and non-farm employment strategies included (Huppy and Ravallion, 1991). During this period, there was one program targeted to alleviate rural poverty, particularly outside Java, with a specific Presidential Instruction/INPRES grant directed at rural poverty alleviation through the Less Developed Village INPRES (IDT) program that operated from 1994 to 1997.

30. As can be seen from Figure 1, there is a substantial decline in terms of the poverty rate defined at the national level between 1976 and 1993. Poverty reduction in the mid-1980s was claimed to be due to labour intensive employment growth fuelled by the implementation of trade liberalisation (Hill, 2000; Temple, 2003).

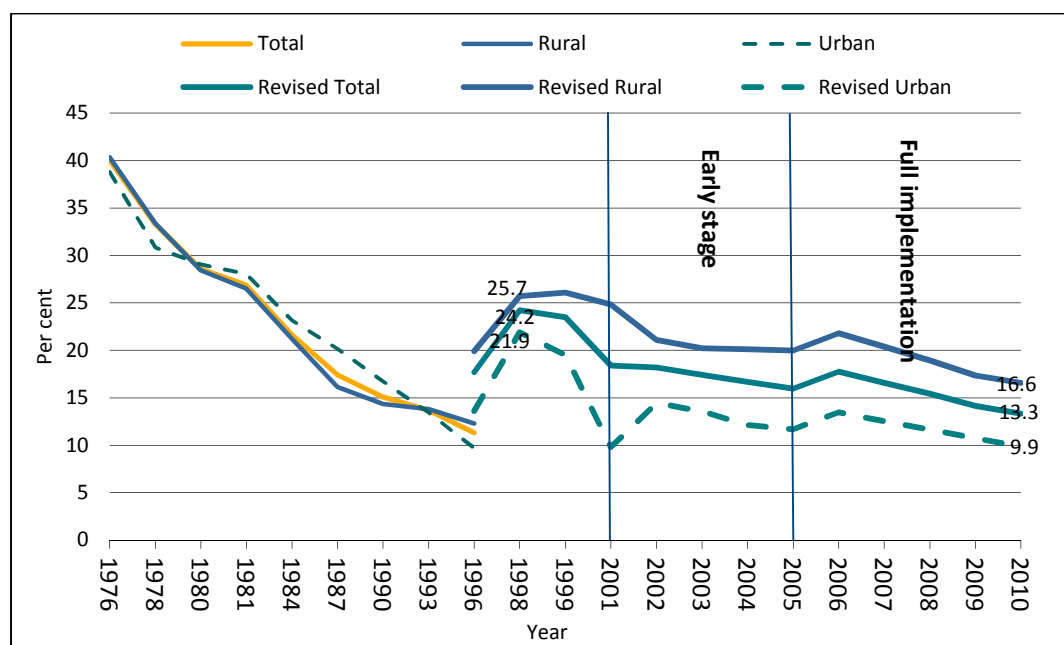
31. Focusing on the period just before the economic crisis, rapid growth of GDP per capita at 5.3 per cent per annum during 1990-1996 has contributed into rapid poverty decline of 4.9 per cent annually. Thus, in 1996, Indonesia reached the lowest level of poverty (according to the official published BPS data), with a rate of 11.3 per cent, down more than a half of the rate in 1976 (40 per cent) (Figure 1).

32. However, after the crisis, the poverty rate increased reaching its highest level since 1984, at 24.2 per cent in 1998 (Figure 1). Poverty remained quite high at 18.4 per cent in 2001 when the decentralisation period commenced. The previous section has discussed that economic growth has been slower during the decentralisation period that it was prior to the crisis. When growth was lower during the decentralisation period than it was during the period prior to the crisis period, was economic growth still good for the poor?

33. A decreasing trend in the poverty rate between 2001 and 2005 is clearly observed in Figure 1. However, the national poverty rate increased in 2006, which may reflect the impact of the reduction in fuel subsidies in 2005 and the increase in the price of rice and other commodities as a result of this. The latest figure in 2010 shows that the poverty rate was at 13.3 per cent, as a result of a slower reduction in average poverty by rate by 3.7 per cent per year, lower than it was during the pre-crisis period (1990-1996), where the poverty rate declined by almost 5 per cent per year.

34. Figure 1 also demonstrates the gap in the poverty rates between urban and rural areas which persists over time. Poverty rates in rural areas have continuously been higher than those in urban areas, with the gap the widest in 2001 at 15 percentage points. The gap in the poverty rate between urban and rural areas has been argued to be due to the accumulating impact of the role of the manufacturing and service sectors prior to the crisis, where the emphasis of industrial development was in larger urban areas, giving greater employment opportunities that could not be afforded to those in rural areas (Suryahadi *et al.*, 2011).

Figure 2: Trend in poverty rates, 1976-2010



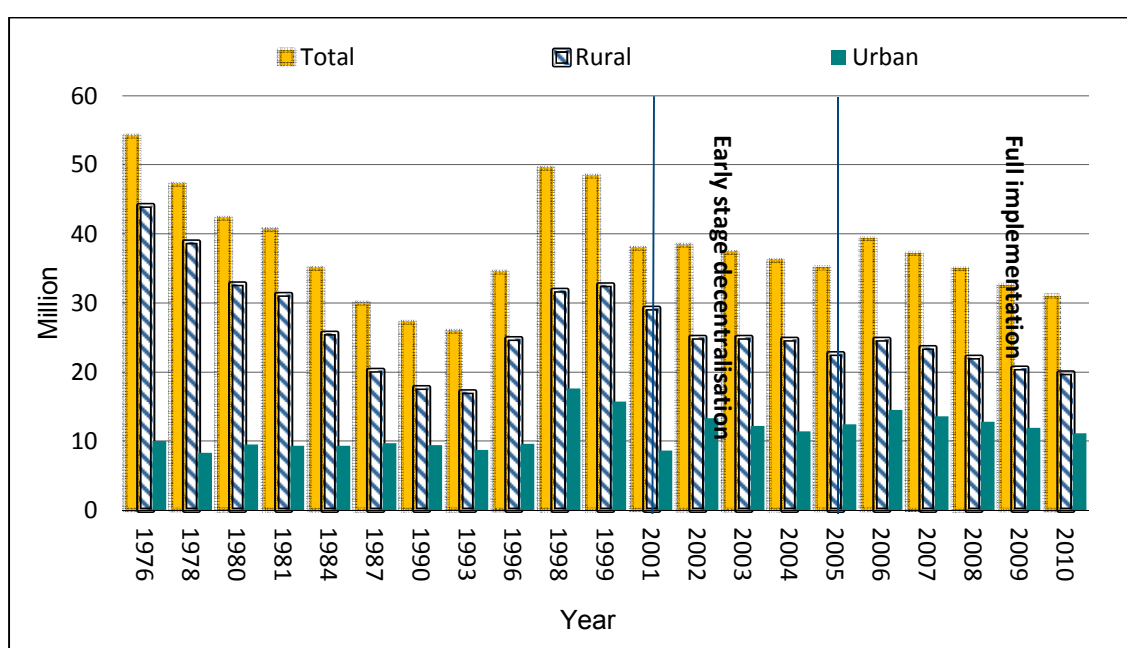
Notes: There is a break in the series from 1996 as the BPS revised its official poverty rates, due to changes in the methodology. The official poverty rates calculate the proportion of the Indonesian population who live under the poverty line, which is defined as whether a person can fulfil the cost of basic needs in terms of explicit food items covering a 2100 calorie intake per day, represented by 52 commodities and basic non-food items covering clothing, housing, education and health, represented by 51 commodities in urban and 47 commodities in rural areas.. Calorie intake is estimated through household consumption patterns. Please refer to section Measurement of Poverty for further discussion.

Source: SUSENAS, various years.

35. Figure 3 shows that most poor people in Indonesia live in rural areas. In 2001, 77 per cent of the poor people resided in rural areas and although this proportion was lower in 2010 (64 per cent), there are still around 20 million poor people living in rural areas. On the other hand, the urban poor population increased during 2001-2010. The urban to rural poor population ratio has doubled (0.3 to 0.6) during this period and urban poverty is also more vulnerable to economic shocks. For example, during the crisis period, the number of urban poor increased by 83 per cent between 1996 and 1998, compared to rural poverty, which increased by 28 per cent. There was also a fluctuating pattern of urban poverty across the period, reaching a high of 14.5 million persons in 2006, which has since decreased to 11.1 million in 2010.

36. A third of the poor population is now living in urban areas. Hugo (2000) argues that this phenomenon may indicate that although rural-urban migration slowed down after the economic crisis in 1998, it has continued to fuel much of the urban population growth seen today (Hugo, 2000).

Figure 3: Number of Poor People (million), 1976-2010



Source: SUSENAS, various years.

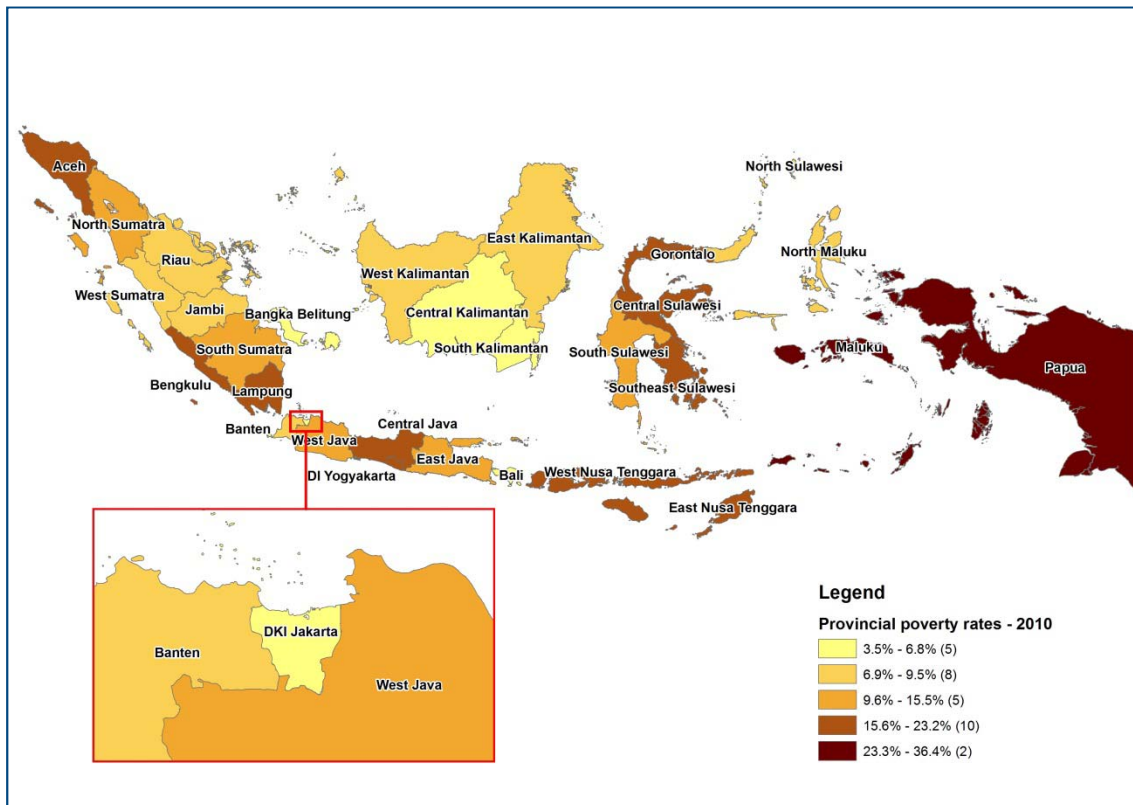
2.2.1 Patterns and trends in regional poverty

37. As an archipelagic country, Indonesia can be divided according to different spatial disaggregation including urban/rural areas, islands, provinces, districts (kabupaten/kota), sub-districts (kecamatan) and village divisions (kelurahan/desa). The last four portray divisions based upon administrative boundaries and as discussed earlier, district divisions became important during the decentralisation period in Indonesia. Since 2005, Indonesia has 33 provinces which cover more than 400 districts, which continue to grow due to continuous fragmentation. Figure B.1. in the Appendix B shows how these different spatial units relate to each other.

38. Figure 4 shows the geographic distribution of provincial poverty rates based on the 2010 official BPS poverty figures. Although there are 33 provinces in 2010, this map uses 30 provinces only. The 30 province categories are based on the 2001 provincial classification to allow a consistent comparison with the total number of provinces in 2001. Thus the new provinces are allocated back to the original provinces in 2001, that is, West Sulawesi is combined with South Sulawesi, Riau Island is combined with Riau and

West Papua is combined with Papua. The legend is classified following the natural break categories, with the darkest colour showing the most disadvantaged category and the lightest colour the most advantaged category.

Figure 4: Provincial poverty rates (per cent), 2010



Note: The national poverty rate for 2010 was 13.3 per cent. The natural breaks approach uses Jenk's method of optimisation which minimises the sum of the variance within each of the categories thus making each group within a distribution as homogenous as possible.

Source: Authors' calculations, SUSENAS, various years.

39. The darkest colour legend shows that Maluku and Papua are the two provinces which have the highest poverty rates (23.3 – 36.4 per cent) in 2010 followed by a third of provinces in the second highest poverty rates - recording poverty rates between 15.6 and 23.2 per cent. These provinces include those that are rich in natural resources but are experiencing social conflict, such as Aceh, East and West Nusa Tenggara and Central Java. In contrast, there are five provinces that are categorised as those with the lowest poverty rates including the capital city of DKI Jakarta.

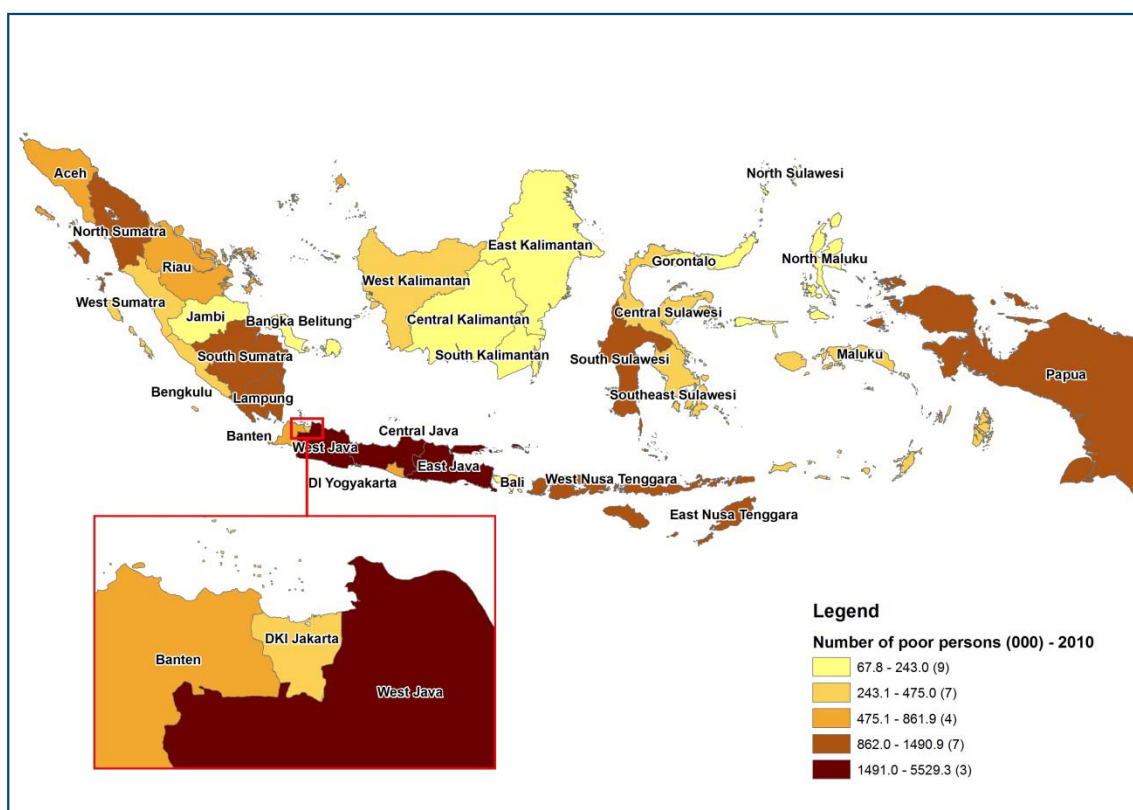
40. The distribution of the number of poor persons who live below the official BPS poverty line by province in 2010 is shown in Figure 5. The darkest colour indicates provinces where the most number of poor persons live, as defined through a natural breaking specification². There are three provinces in this category and they are concentrated in Java: West, Central and East Java. Comparing Figures 4 and 5, although the provincial poverty rates are possibly lower in Java than in other provinces, most poor people

² The natural breaks approach uses Jenk's method of optimisation which minimises the sum of the variance within each of the categories thus making each group within a distribution as homogenous as possible.

are concentrated in this island, highlighting the large population in this region. The capital city of DKI Jakarta, which has the lowest poverty rate, is classified in the second lowest grouping, with between 243 000 and 475 000 persons living in poverty which reflects the high population density of this province. There are 9 provinces which are categorised as having low numbers of poor persons, with the majority of these located in Eastern Indonesia, and three on the island of Kalimantan.

41. In contrast, high poverty rates in Papua also coincide with a substantial number of poor persons in this province (between 862,000 and 1.4 million people), while in Maluku, there is only a medium number of poor persons in this province, indicating that while the poverty rate is high, there is a smaller population in this province.

Figure 5: Number of poor persons (000) by province, 2010



Note: The natural breaks approach uses Jenk's method of optimisation which minimises the sum of the variance within each of the categories thus making each group within a distribution as homogenous as possible.

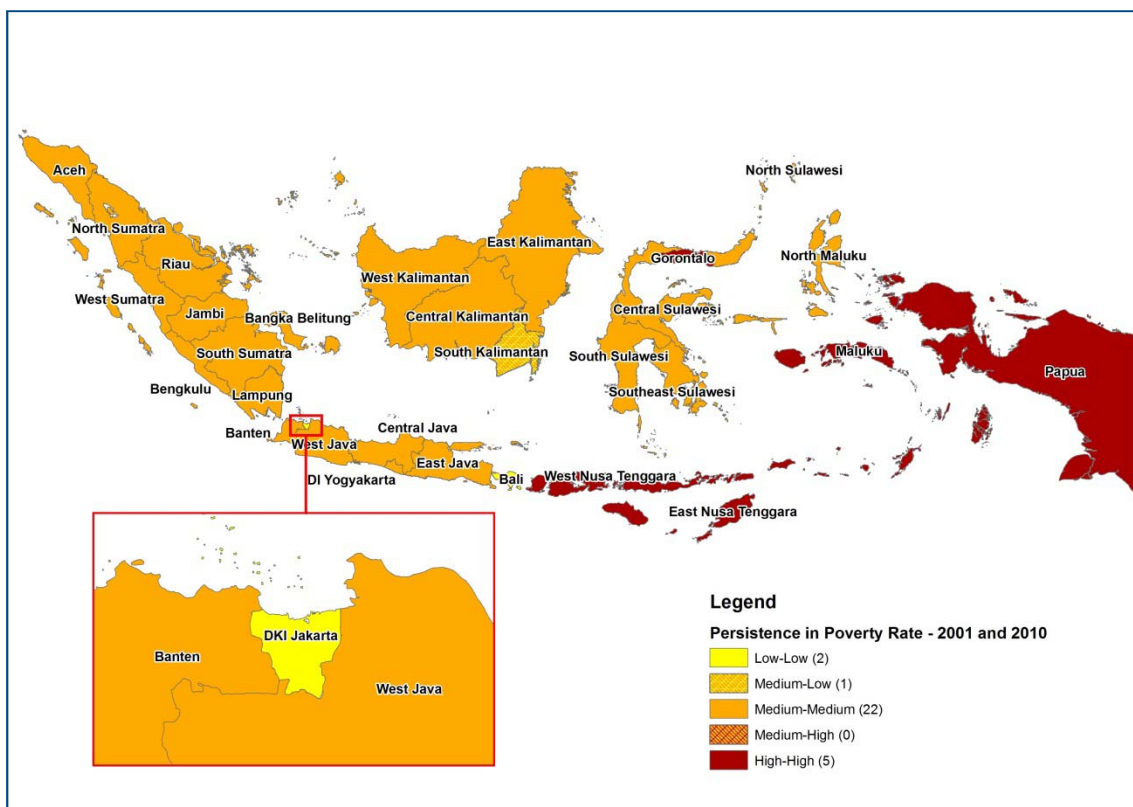
Source: Authors' calculations, SUSENAS, various years.

42. Figure 6 further analyses the persistence in poverty rates by comparing poverty rates for two points in time, in 2001 and 2010, classifying them into whether they display high or low poverty in both (either) years (year). In this map, the classification is not decided through natural breaks but according to the standard deviation from the average, in which the 30 provinces are categorised as either low, medium or high. Poverty rates are classified as low if the poverty rate falls below the average of all provincial poverty rates less than the standard deviation. Poverty rates are classified as in the medium category if the poverty rates fall between the mean of all provincial poverty rates plus the standard deviation and the mean of all provincial poverty rates less the standard deviation. High category is classified if the poverty rates

fall above the mean of all provincial poverty rates plus the standard deviation. Thus, high-high refers to provinces that experience high poverty rates in both 2001 and 2010.

43. This analysis shows that Papua, Maluku, East and West Nusa Tenggara and Gorontalo have had persistently high poverty rates in both years, while in contrast DKI Jakarta and Bali has consistently had low poverty rates when compared with the average. There is only one province - South Kalimantan, which has improved its poverty rate classification from medium in 2001 to low category in 2010. So within 9 years, in terms of relative comparison, there is hardly any movement between low and high poverty among these provinces and vice versa.

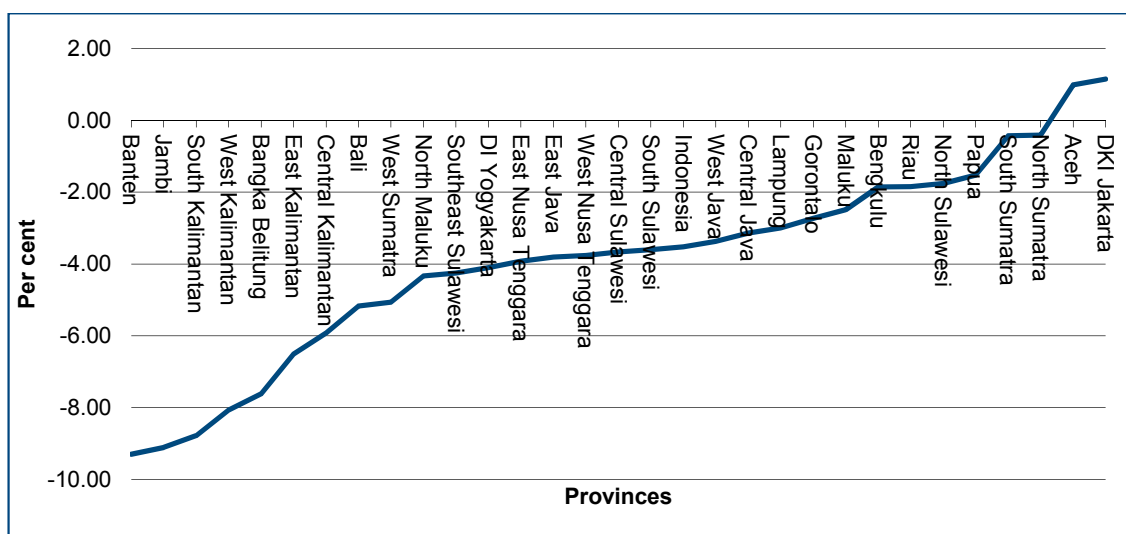
Figure 6: Persistence of poverty rates, 2001 and 2010



Source: Authors' calculations, SUSENAS, various years.

44. Figure 7 shows the annual change in poverty rates between 2001 and 2010. The provinces of Banten in Java and Jambi in Sumatra experienced the most rapid decline in poverty, with annual average decreases of more than 9 per cent during this period.³ This contrasts with both Aceh and DKI Jakarta, which experienced a worsening in poverty during the same period. For DKI Jakarta (where the poverty rate is already very low), the rate of change in terms of poverty reduction has been diminishing over time, with the overall poverty rate actually increasing by 1.2 per cent per year between 2001 and 2010, while for Aceh, the poverty rate may have worsened because of social conflicts that exist within this province and the disastrous earthquake and Tsunami in December 2004, with Aceh being the hardest hit region in the area.

³ Further investigation is required to examine which poverty has contributed most to reducing poverty.

Figure 7: Annualised change in poverty rates, 2001-2010 (per cent)

Source: Authors' calculations, SUSENAS, various years.

2.2.2 How are official poverty rates in Indonesia calculated?

45. In Indonesia, the poverty line is an absolute threshold categorising whether or not someone is poor and is based on the monetary value of consumption per capita necessary to fulfil the basic needs of food and non-food items. The benchmark for defining poverty is if a person can fulfil the cost of basic needs of food items with an intake of 2100 calories per day and also non-food items. The food items are represented by selected 52 commodities, while the non-food items cover basic items such clothing, housing, education and health commodities and represented by 51 urban commodities and 47 rural commodities.

46. The poverty line and poverty figures that will be used in this project (where the analysis uses the absolute concept of poverty) are the official BPS poverty line and official poverty figures. These measures are used as they ensure a longer time series and align with official published data.⁴

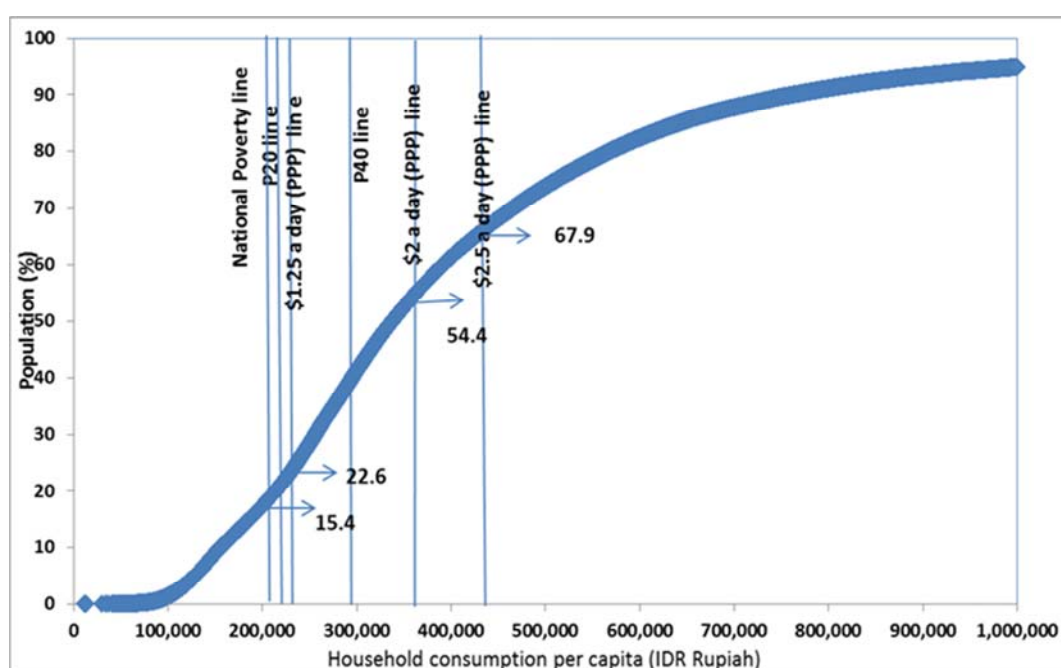
47. Nevertheless, measuring poverty in Indonesia is complicated. These complications are compounded by the primary data source (SUSENAS) underlying the official poverty estimates, which has varying population subsets and collection methodologies.⁵ The main data set is the SUSENAS consumption module which is published every three years, with a sample size of around 65,000 households. This data source is usually used to measure poverty at the national down to provincial level, as these data are representative at these geographical levels. The poverty line used to derive these poverty estimates is the provincial rural/urban poverty line. The second data set is SUSENAS core, which covers basic characteristics such as gender, age, marital status, living conditions and educational attainment of all household members. SUSENAS core with a sample size of more than 200,000 households is representative at national, provincial and district/municipality level, and thus can be used to measure the official poverty

⁴ The NATSEM project team is aware that several criticisms have been made of the official BPS poverty line as has been discussed in Bidani and Ravallion (1993), Ravallion and Bidani (1994), Alatas (1998), Pradhan *et al.* (2001) and Nashihin (2007) including the limitation that the BPS poverty line does not take into account regional price differences.

⁵ See Table A1 (Appendix A) for further information about the source of data for official poverty calculation published by the BPS.

level at district/municipality level. The third data set is the SUSENAS consumption module (panel), which has been enumerated each year since 2003, (originally 10,000 households), and has been used to measure the official poverty rate at the national and provincial level from 2007-2012, when the sample size increased to 68,000 households.⁶ The national poverty line in 2008 was Indonesian Rupiah (IDR) 204,896 per month with 15.4 per cent of the population living under this cut off (see Figure 8). Figure 8 also shows alternative poverty lines, including the World Bank standard poverty line, which allows comparison of poverty rates across different countries (i) at \$1.25 a day (PPP), (ii) \$2 a day (PPP) and (iii) \$2.5 a day (PPP) and relative poverty where the poverty line is set up as a benchmark to locate (iv) the bottom 20 per cent or (v) 40 per cent of the population. Figure 8 shows the relative position of various alternative of poverty lines based on household consumption per capita in 2008.

Figure 8: Various Poverty Lines and Proportion of Population under the Poverty Line, 2008



Note: P20 line refers to the poverty line where the bottom 20 per cent of population living under this line. Similar interpretation applies for P40 line.

Source: Authors' calculations based on SUSENAS and <http://data.worldbank.org/indicator/SI.POV.DDAY/countries>.

48. According to the national poverty line in 2008 there are 15.4 per cent of the population who are considered to be in poverty. This figure is lower than the 22.6 per cent of headcount poverty based on the international standard of PPP at \$1.25 per day which is equivalent to IDR 224,636 per month. Using the headcount poverty rate based on the internationally PPP at \$2 per day (IDR 359,417 per month) over half of the Indonesian population is considered to be living in poverty - 54.4 per cent.

49. Compared internationally to other EEs countries, Indonesia's annual poverty reduction per annum based on international PPP at \$2 per day was 3.13 per cent on average during the period 2002-2008. This average annual poverty reduction was lower than the other EE countries where the data is available.

⁶ The varying survey data and sampling techniques from the SUSENAS surveys must be taken into consideration when analysing poverty and inequality over time.

For example, the Russian Federation recorded an average annual poverty reduction within the same period of 16.3 per cent, Argentina - 14 per cent, Brazil - 7.3 per cent and China - 7 per cent.

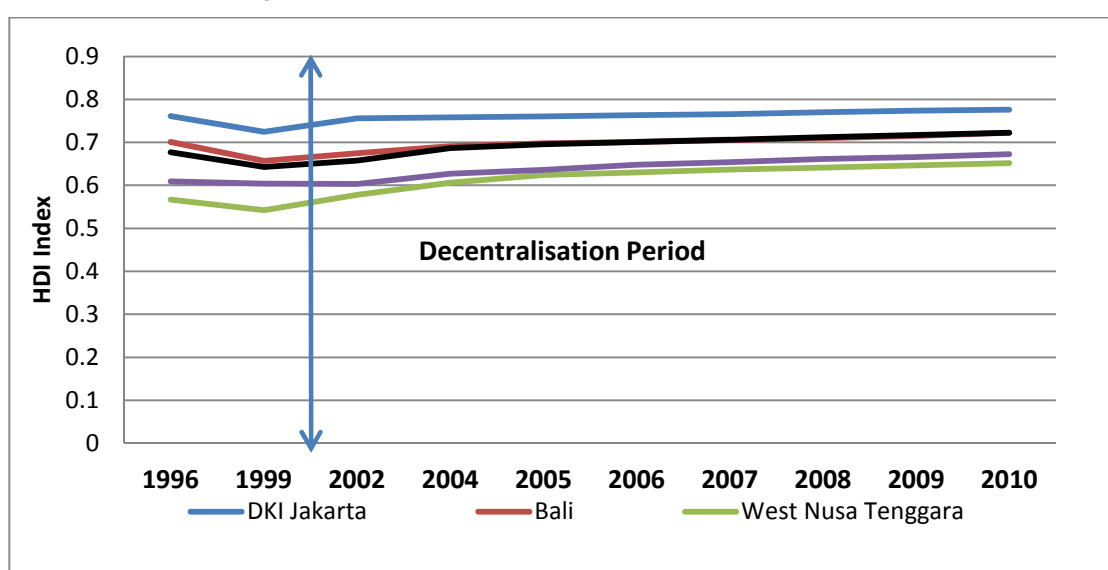
2.3 Patterns and Trends in Alternative Wellbeing Measurements

50. While the discussion above focuses on development using monetary measures, this section provides a discussion of non-monetary measures, often used to gauge the wellbeing or standing of a nation. The Human Development Index (HDI) is such a measure and has been widely used to gauge the progress of developing nations at a national and sub-national level. The national HDI, which is a summary measure of three indicators of well-being - (i) longevity (life expectancy at birth); (ii) adult literacy ratio and mean years of schooling; and (iii) adjusted real per capita expenditure. This national HDI data are also available at provincial and district level.

51. The calculation of the national HDI is slightly different from the global HDI which is calculated at a country level by the United Nations Development Program (UNDP). The current global HDI is calculated using three indicators of life expectancy at birth, an education index (which covers mean years of schooling of adults aged 25 years and expected years of schooling for children of school entering age) and Gross National Income (GNI) per capita (PPP US\$). Due to the differences in the indicators for example the use of expected years of schooling and income in Global HDI rather than consumption in the national HDI measure to gauge socio-economic status and the benchmark used within each indicator (across countries vs across regions), the magnitude of the HDI calculated nationally is different from the magnitude of Indonesian HDI which is calculated internationally.

52. Figure 9 shows the trend in the national HDI in Indonesia and four selected provinces (the capital city of Jakarta and Bali which are considered as more developed provinces versus West and East Nusatenggara which are considered as less developed provinces), from 1996 to 2010. As expected, during the crisis, the HDI decreased from 67.7 in 1996 to 64.3 in 1999. However it picked up again during the recovery period between 1999 and 2002 and has shown an increasing trend since 2002. Jakarta's HDI is always above the national HDI while Bali's HDI follows a similar path to the national HDI. In contrast, both provinces in Nusa Tenggara's HDI are below the national HDI; however, these two provinces have shown great improvement in HDI outcome measures since decentralisation.

Figure 9: National and Selected Provinces HDI, 1996-2010

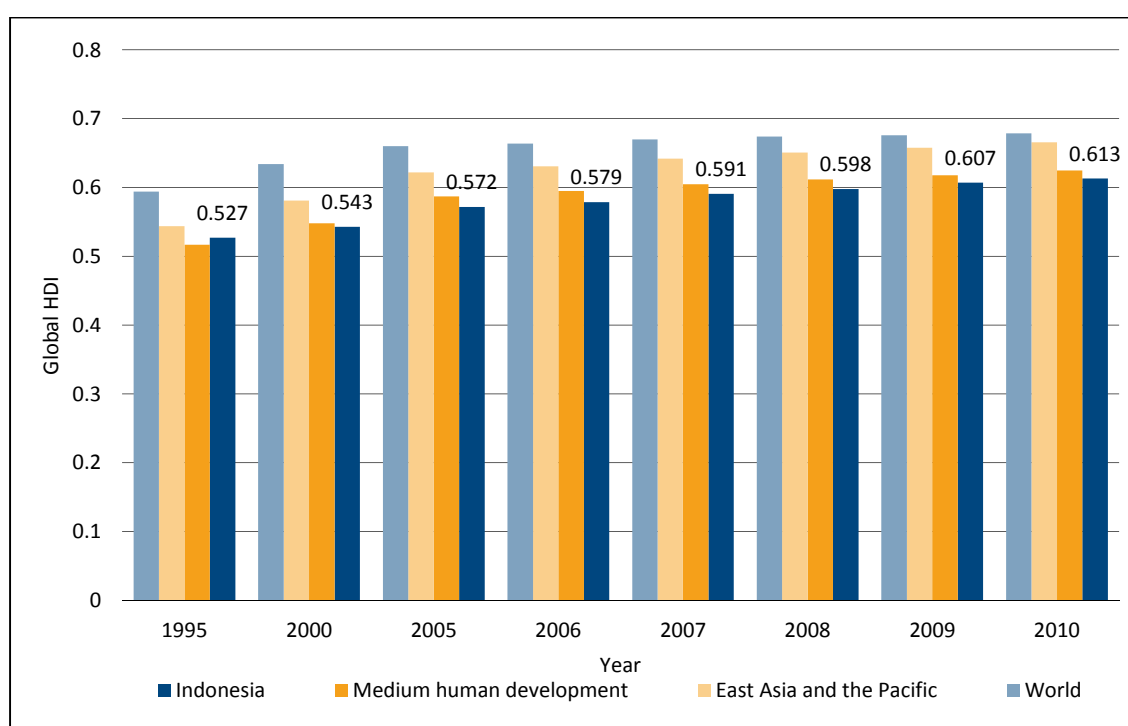


Source: Statistics Indonesia, various years.

53. Nevertheless in terms of global HDI, comparing Indonesia with other countries which are categorised under a similar level of economic development, Indonesia is still lagging behind. Figure 10 shows the comparison between Indonesia and other groups of countries and the world. In 2010, the HDI in Indonesia was 0.613, lower than the average HDI for all countries categorised under medium human development of 0.625 and lower than the average HDI for East Asia and the Pacific countries (0.666) and the world (0.679). In 2010, Indonesian HDI ranked 125 among 187 countries.

54. Only in 1995 did Indonesia perform slightly better than countries in the medium human development category. However, the global HDI increased by 1.22 per annum for Indonesia in the last decade, higher than the average of all countries (0.69 per annum) although the increment per year is still less than the average increment of HDI for all countries under medium human development, 1.32 per year and the average increase of HDI for all countries in East Asia and Pacific (1.37).

Figure 10: Global HDI, Indonesia and Other Groups of Countries, 1995-2010



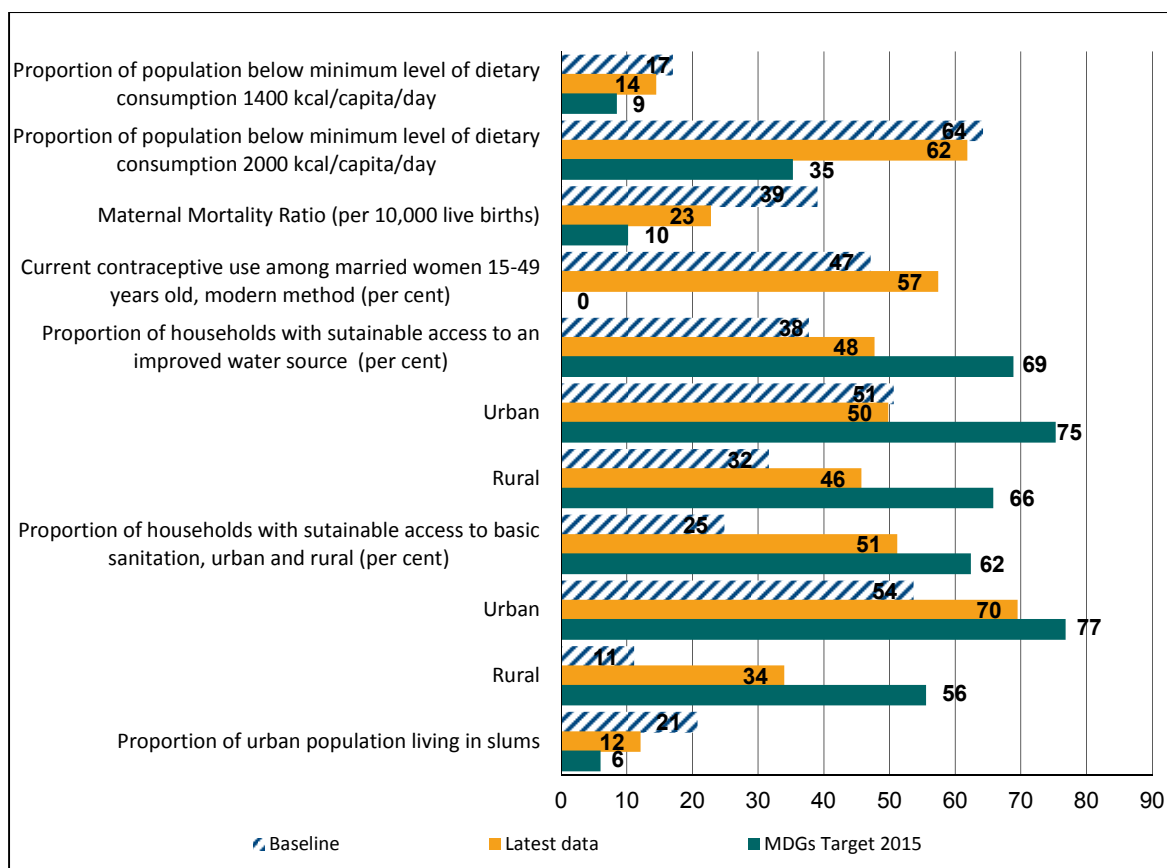
Source: UNDP, 2010 Accessed: 10/31/2011, 1:28 PM from: <http://hdr.undp.org>

55. Along with other countries around the world, Indonesia has committed to fulfil the Millennium Development Goals (MDGs) that were signed in September 2000 by the Heads of State from 189 countries. The MDG set a number of targets for development and poverty alleviation. This commitment has been pledged and is included in Indonesia's Long-Term Development Plan for 2005-2025 and the National Medium-Term Development Plans (RPJMN) for 2004-2009 and 2010-2014. There are eight goals whereby progress needs to be monitored and resources targeted. The goals span a number of important aspects of wellbeing, including - eradicating extreme poverty and hunger; achieving universal primary education; promoting gender equality and empowering women; reducing child mortality rates; improving maternal health; combating HIV/AIDS, malaria and other diseases; ensuring environmental sustainability and developing a global partnership for development. The MDGs targets have been set to be achieved by 2015.

56. Indonesia’s progress to meet the MDGs targets is mixed. There are some targets that Indonesia has already achieved, a number that are on track and some still requiring special attention. The goals that have achieved their target include attaining less than 10.3 per cent of the proportion of the population living on below USD \$1 (PPP) per day, achieving 100 per cent gender equality in basic education, with the ratio of girls and boys in primary and junior high schools being equal, and the literacy ratio of women to men in the 15-24 year age group has reached parity. From the health areas, Indonesia has been also successful in reducing prevalence rates and death rates from tuberculosis.

57. Comparing baseline data from the 1990s, the latest data included in the MDG report, and the 2015 MDG, there are a number of areas that require special attention (Figure 11). These include - improving mothers’ maternal health and living conditions in urban and rural areas are of particular concern. The maternal mortality ratio is still far from the target of 10.2 per 10,000 live births; however this has improved substantially –reducing by over 40 per cent.

Figure 11: Selected MDG Indicators, Areas of Concerns

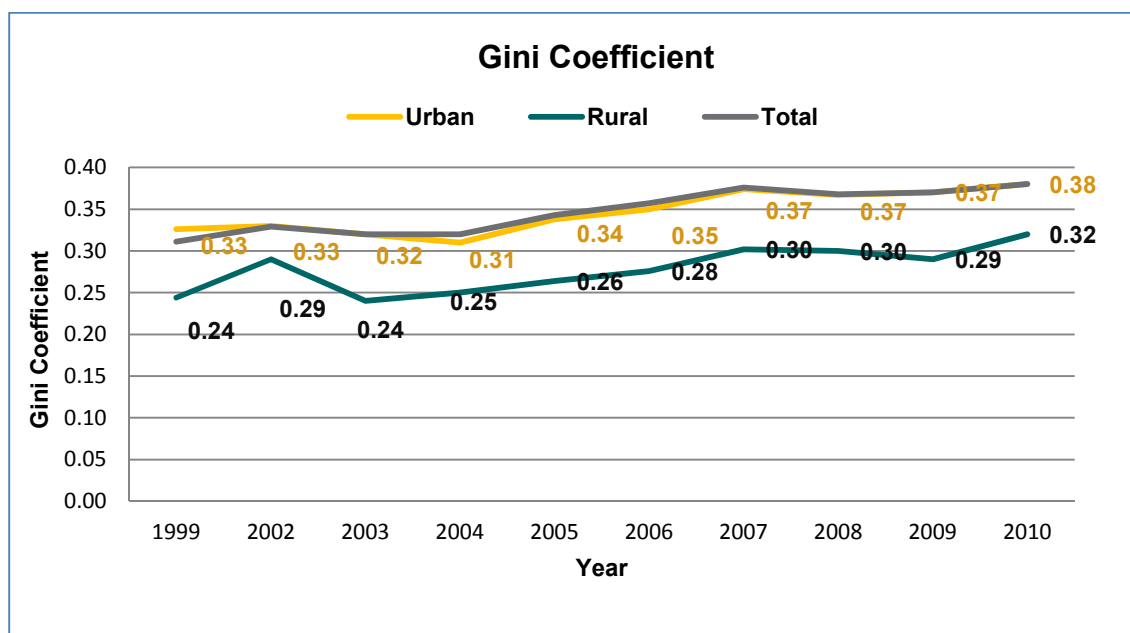


Source: National Planning Agency (BAPPENAS), 2010.

2.4 Patterns and Trends in Inequality

58. While overall poverty rates have been decreasing during the first decade of decentralisation, a general pattern of rising consumption inequality has been observed over the same period. Figure 12 shows trends in inequality across urban and rural areas in Indonesia from 1999 to 2010, as measured by the Gini coefficient and using household consumption data as the basis for calculation.⁷ Overall inequality increased by 5 points from 0.33 in 2002 to 0.38 in 2010.

Figure 12: Gini Coefficient Urban and Rural areas, 1999-2010



Source: SUSENAS, *Statistics Indonesia*, various years.

59. Two further observations are apparent from Figure 12. Firstly, inequality is greater in urban areas with patterns closely aligned to total trends. Second, rural inequality is consistently lower than urban inequality by around 7 points across the period. Both observations are likely to reflect the large increases in urban populations in recent years (Mishra 2009). To get some sense of these movements, 53 per cent of Indonesia's population were estimated to reside in urban areas in 2010 - this is expected to reach 65 per cent by 2025 (Bappenas 2011).

2.4.1 Patterns and trends in regional inequality

60. To provide more detailed patterns of consumption inequality across Indonesia, Figure 13 shows a map of the distribution of provincial Gini coefficients based on official BPS data for 2010.⁸ The darker colours show provinces recording higher levels of inequality, with categories defined using the natural break classification method. Two of the three provinces in the highest category of inequality are Gorontalo and Banten. These are new provinces originating from North Sulawesi and West Java respectively, and were established in 2000 just prior to decentralisation being introduced formally in Indonesia.

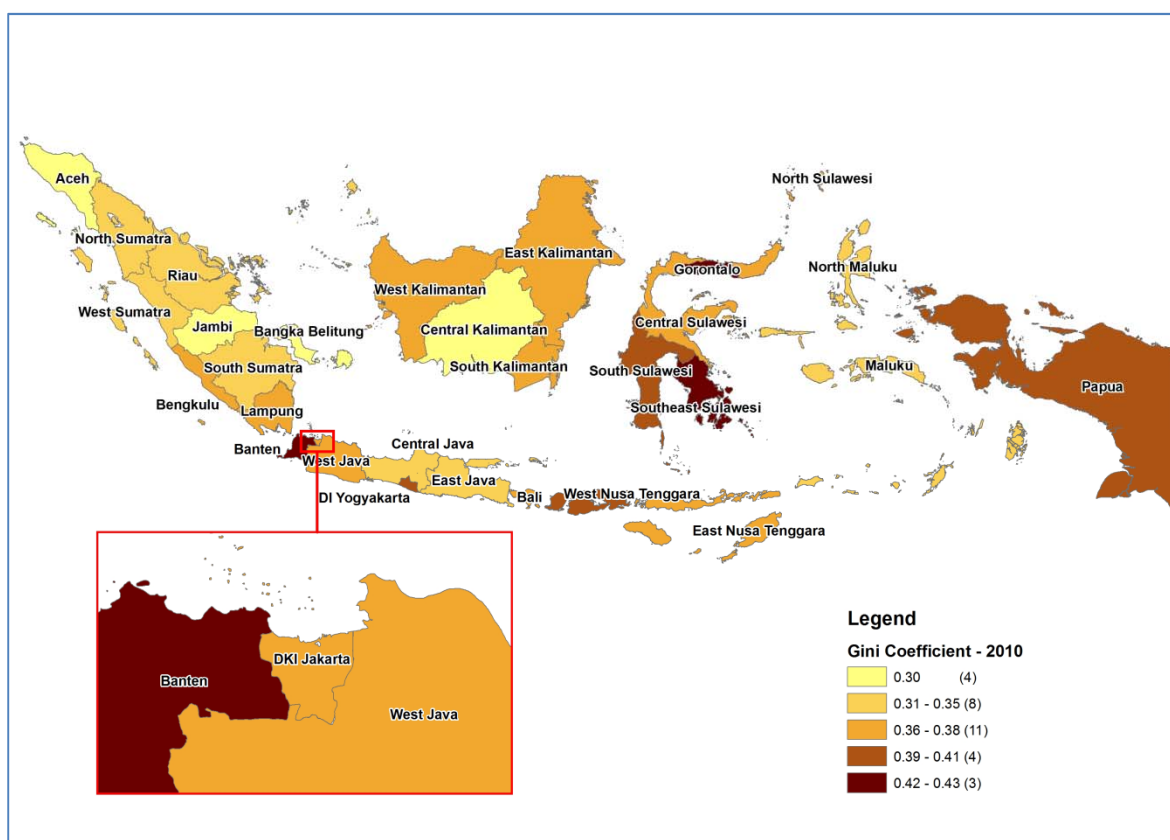
⁷ Please see Scherer and Scherer (2011) in regards to some caveats of Gini coefficient as inequality measure. They have argued that Gini coefficients are considered low since SUSENAS data do not capture the expenditure of the rich very well.

⁸ As noted in Section 2.2.1, this map uses 30 provinces only (out of the current 33 provinces) to facilitate a consistent comparison with the number of provinces in 2001.

61. The province of Papua is characterised by high inequality and a very high poverty rate. In contrast, the resource rich province of Aceh has low recorded consumption inequality but also exhibits high rates of poverty. These results suggest that high poverty rates many not necessarily correspond to high inequality. However, West Nusa Tenggara and Gorontalo (provinces characterised by persistently high poverty rates between 2001 and 2010) are also in the second highest group of provinces in terms of consumption inequality.

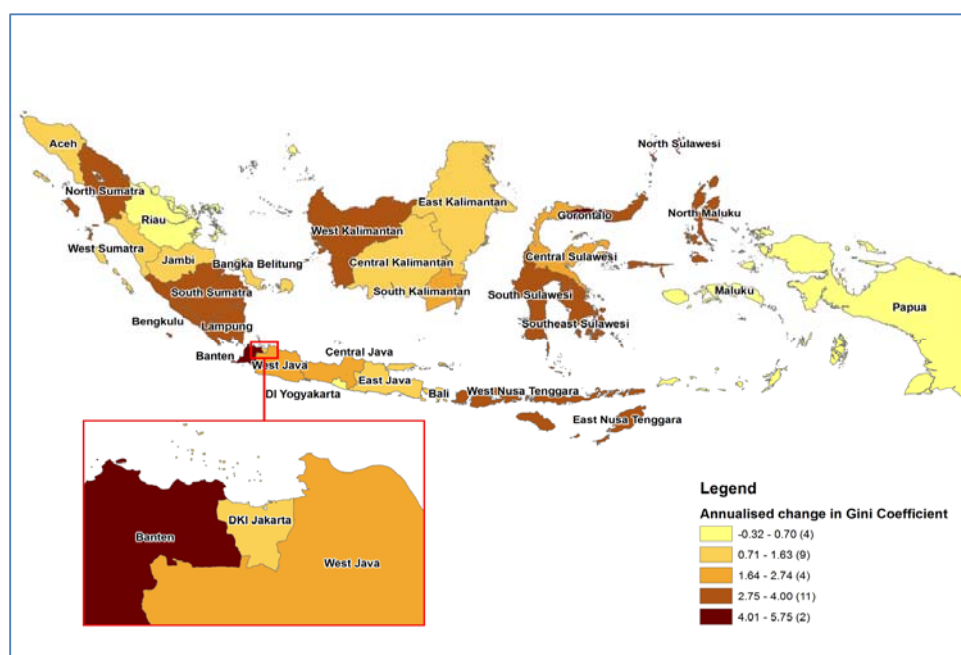
62. Within Java Island, the capital city DKI Jakarta and West Java have moderate levels of consumption inequality, higher than Central and East Java. Interestingly, the student city of DI Yogyakarta falls into the second highest group of inequality.

Figure 13: Provincial Gini Coefficients, 2010



Source: Authors' calculations, SUSENAS, The Trends of Selected Socio-Economic Indicators of Indonesia, various years.

63. Figure 14 further examines the annualised change in inequality for the 10 year period between 2001 and 2010, again using the Gini coefficient as an indicator. The aim is to identify those provinces that either have entrenched and persistent levels of inequality, or have seen consumption inequality increase at the provincial level over the 10 year period. The lighter the colour of the legend, the less the increment of the Gini coefficients over the decade. Although Papua and DI Yogyakarta are classified as having relatively high inequality in 2010, the comparison in Figure 14 shows that the degree of inequality in these two provinces persisted at this same high level between 2001 and 2010. In contrast, the two new provinces of Banten and Gorontalo show a rapid annual increase in inequality over the decade.

Figure 14: Annualised Change in Gini Coefficients (2001-2010) (per cent)

Source: Authors' calculation, SUSENAS, The Trends of Selected Socio-Economic Indicators of Indonesia, various years.

64. As an alternative indicator of inequality, one can examine the *share* of consumption undertaken by households in different deciles of the population consumption distribution. The data in Table 4 show that if one were to rank all Indonesian households in 2009 terms of their consumption, the highest 10 per cent of that population were responsible for 30.1 per cent of total population consumption. The profile of consumption over time in Table 4 shows a consistent pattern to the earlier trends in inequality, with the highest 10 per cent of the population responsible for progressively larger consumption shares (up from 25.6 per cent in 2002 to 30.1 per cent in 2009). A similar profile is shown for the top 20 per cent of households in consumption terms, with their consumption share rising from 39.6 per cent in 2002 to 45.5 per cent in 2009.

Table 4: Consumption share held by the population (per cent)

Indicators	Prior to decentralisation		Early Stage of Decentralisation	Full implementation of Decentralisation	
	1996	1999	2002	2005	2009
Consumption share held by highest 10%	26.6	25.1	25.6	28.5	30.1
Consumption share held by highest 20%	40.7	38.9	39.6	42.8	45.5
Consumption share held by lowest 10%	4	4.3	4.3	3.67	3.2
Consumption share held by lowest 20%	9	9.6	9.5	8.34	7.4

Note: Based on nominal per capital consumption.

Source: Source: <http://iresearch.worldbank.org/PovcalNet/index.htm>

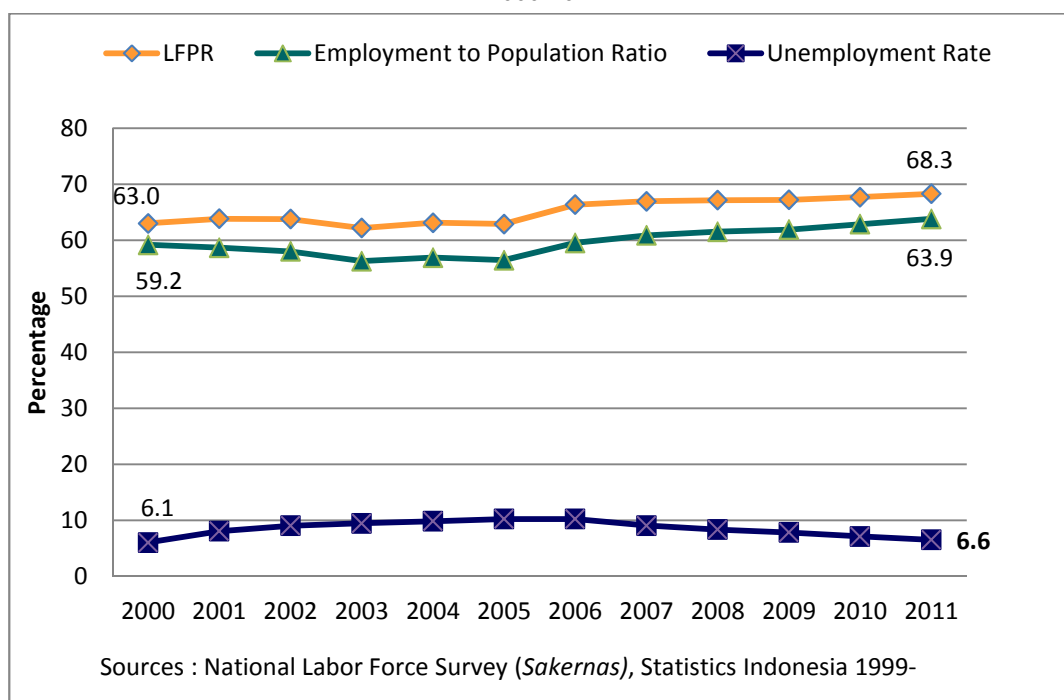
65. Comparing the consumption share between the periods prior to decentralisation and the decentralisation period, Table 4 also shows that consumption shares held by the top 10 and 20 per cent of the consumption distribution followed a U shape between period 1996-2002, while the consumption share of the lowest 10 and 20 per cent increased in 1999 was relatively stagnant in 1999-2002, before declining during the full implementation period of Decentralisation.

66. Potential economic drivers of inequality for emerging economies (EEs) are discussed in OECD (2011), and cover the role of labour markets, informal employment sector, wage disparities to regional disparities. The following discussion will follow the OECD framework by examining the potential contributions that each domain makes to patterns of inequality in Indonesia.

2.4.2 The role of the labour market

67. The Labour Force Participation Ratio (LFPR) for Indonesia in 2011 was around 69 per cent, with 63.9 per cent of the population in some form of employment (Figure 15). Later in section 2.5, Table 7, it is discussed that the labour force participation rate for women is substantially lower than the rate for men, pulling down the average LFPR. In Figure 15, both ratios of LFPR and employment to population ratio declined between 2000 and 2005 before picking up again in 2006, and overall, LFPR increased by 5.3 percentage points between 2000 and 2011. The Employment to Population ratio increased by 4.7 percentage points over the same period.

Figure 15: Labour Force Participation Rate (LFPR), Employment to Population Ratio and Unemployment Rate, 2000-2011



Source: National Labour Survey (SAKERNAS), *Statistics Indonesia*, various years.

68. Figure 15 shows the rate of unemployment in Indonesia to have increased between 2000 and 2005, reaching its peak at 10.3 per cent in 2006 (coinciding with the double increase in fuel prices in 2005). Unemployment has been in gradual decline from this point, dropping to 6.6 per cent in 2011.

69. Low absorption into the labour market is a contributing factor in the relatively stable rates of unemployment in Indonesia, potentially reflecting skills mismatch. Data from the Indonesian Ministry of Manpower and Transmigration suggest that job seekers are never fully absorbed into the labour market,

given the number of vacancies available to those seeking employment. The average ratio of registered job applicants to the number of vacancies between 2002 and 2010 is around 74 per cent (also calculated from Ministry of Manpower and Transmigration data). However, the average proportion of registered job applicants to be absorbed into the formal sector was only 38.1 per cent over the same period, indicating that those applicants fared relatively poorly in securing formal employment.

70. The distribution of wages, and the level of (and compliance with) provincial minimum wages, both have a direct influence on inequalities that exist through income from employment. Recent analysis showed the ratio of the average earnings of workers in the 90th percentile to those in the 10th percentile of wages to be around 10.4 in 2009, improving slightly to 9.9 per cent in 2010.

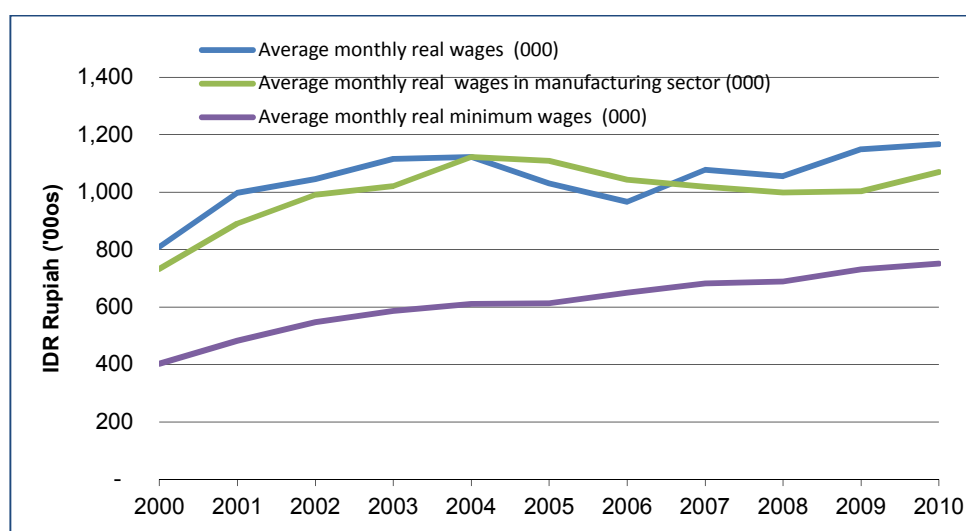
71. Figure 16 compares the average monthly wage, manufacturing wage, and minimum wage in real terms (at 2007 prices) after adjusting for CPI during the period 2000-2010. The Figure shows average real wages to have increased by around 3.7 per year during the period. Real average wages in manufacturing are often used as a labour market indicator to reflect the general conditions of workers, and Figure 16 shows manufacturing wages to have exhibited a declining trend since 2005. This coincided with decreasing fuel subsidies in that year.

72. Average manufacturing wages declined consistently in value from around 2005 until 2009, whereas overall average monthly wages have followed a more volatile pattern over the same period.

73. An active minimum wage policy has been in place in Indonesia since the 1990s, just before Decentralisation was implemented in 2000. Rather than a national minimum wage, the legislation allowed provincial level governments to propose their own locally determined minimum wage. Minimum wage rates have almost doubled in a decade, from around 400,000 Rupiah in 2000 to 750,000 in 2010. This represents an average annual increase of around 6.5 per cent per annum in the monthly minimum wage during the period between 2000 and 2010.

74. Minimum wage rates have increased progressively in value against overall wages and manufacturing wages. For example, in 2000 the average provincial minimum wages represented around 40 per cent of the overall average wage and 45 per cent of the manufacturing wage. By 2010, minimum wages had risen to 64 per cent of the overall average wage and 70 per cent of the manufacturing wage.

Figure 16: Average monthly real wages (2001-2010)



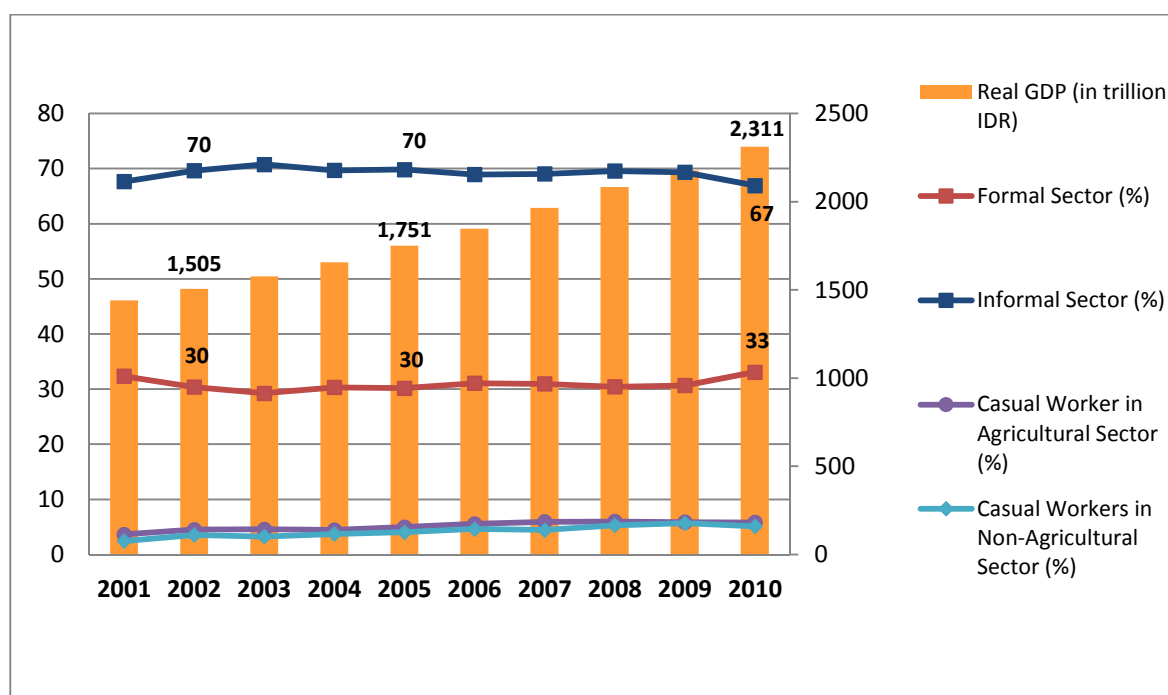
Source: Statistics Indonesia and CEIC data.

75. Despite this, the steadily increasing minimum wage has apparently delivered only limited benefits to workers, particularly those at the lowest tail of the wage distribution. Although minimum wages increased by around 6.5 per cent per annum between 2000 and 2010, this could not compensate for increases in consumer prices of around 8 per cent per annum over the same period. Indeed, Bird and Manning (2008) argue that the minimum wage policy has actually been ineffective as an instrument for improving the consumption of workers because increases in the minimum wage have generated increase in commodity prices.

2.4.3 The role of the informal sector

76. Although Indonesia has been experiencing economic growth of more than 5 per cent during 2001-2010, the structure of the labour market has been fairly constant over the same period. Figure 17 shows that the proportion of the population who work in the formal (informal) sector has been relatively stable at around 30 per cent (70 per cent), despite the increasing growth in real GDP.

Figure 17: Real GDP and Employment Status in Indonesia 2001-2010



Note: Employment covers working activity in the previous week. Formal sector employees cover regular employees and employers with permanent workers. Informal sector employees cover all employees with status of non-permanent, unpaid, casual and family workers.

Sources: National Labour Survey (SAKERNAS), Statistics Indonesia 1999-2011.

77. On national standard definitions, the share of formal sector employment remained at around 30 per cent over the last decade before increasing to 33 per cent in 2010. The informal sector in Indonesia is characterised mainly by women working in home-based businesses, street vendors and housemaids. The informal sector also includes casual workers in both agricultural and non-agricultural sectors. Most face relatively low earnings. As has been discussed in OECD (2011), a major disadvantage with informal sector employment is the lack of labour market regulation and employment protections afforded to workers. Prolonged informality tends to be associated with increasing inequality, on the basis that persistent engagement in the informal sector leads to low earnings and decreased tax revenues over time.

2.4.4 Regional disparities

78. Although economic growth has been impressive in Indonesia, particularly during the period prior to the economic crisis in 1998, regional disparities in economic terms continue to exist across the country's provinces.

79. As Indonesia is characterised by many remote and isolated areas due to the archipelagic nature of the country, geographic location, along with the relative openness of trade and market operations, can restrict growth and the development process, allowing some areas to develop faster than others (Vidyattama, 2010). Gaps in human capital (such as education and health) and infrastructure endowments, which are often themselves a product of differing development experiences, can also hinder current and future development adding to regional disparities (Vidyattama, 2010; Miranti, 2011). The socio-economic history of a region can also play a role in the disparities seen among Indonesia's regions, through the presence (or lack thereof) of political and governing institutions to facilitate development (Hill *et al.* 2008). The presence of natural resources plays a significant role in regional disparities, with regions that are heavily endowed with abundant natural resources such as oil and gas more likely to have higher GRDP per capita than those without. Social and political conflicts also add to disparities, through hindering the development process and the accumulation of human capital and infrastructure (Vothknecht and Sumarto, 2011).

80. This section provides a discussion of patterns and trends in inequality with a particular focus on regional disparities as highlighted in Scherer and Scherer (2011). This focus reflects the importance of geographic inequality as one of the most important inequality stories in Indonesia, a point emphasised by Milanovic (2005). An understanding of regional disparities is also highly relevant to policy planning and implementation, particularly given that the Masterplan for Acceleration and Expansion of Indonesian Economic Development (MP3EI) was launched in 2011 to promote sustainable economic growth in Indonesia. The MP3EI has identified six Economic Corridors for each island: Sumatra, Java, Kalimantan, Sulawesi, Bali and Nusa Tenggara and Papua.

81. To provide a coherent picture of the discussion of regional disparity across various geographic disaggregation, inequality indicators used in this section are based on regional accounts (such as regional GDP per capita), household consumption data of poverty rates and another development indicator that stems from a human capital perspective - education.

82. Both macro –output per capita and micro-household consumption data are used in order to elaborate one key development question that, while analysing the association between what the regions produce and wellbeing of the population may be beyond the scope of this article, it will be interesting to examine whether patterns of regional disparity in terms of local output may reflect disparity in terms of local wellbeing. Two indicators are used to represent people's wellbeing - poverty and human capital. Human capital is strongly associated with both present and future poverty outcomes.

83. The simplest conventional regional classification of provinces in Indonesia is to divide Indonesia by groups of islands, particularly between Java-Bali and the Outer Islands (outside Java-Bali) which covers the other six islands: Sumatra, Nusa Tenggara, Kalimantan, Sulawesi, Maluku and Papua.⁹

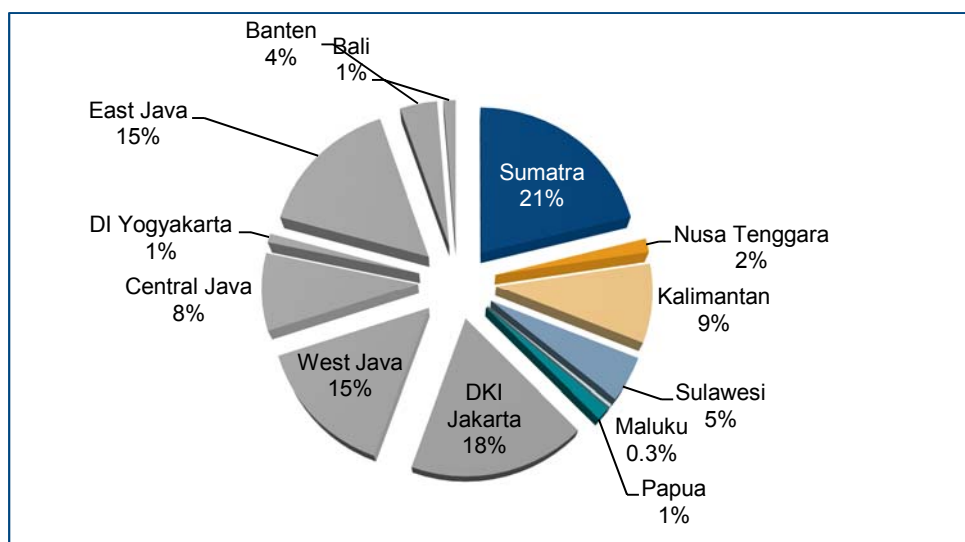
⁹ Another conventional regional classification is to divide Indonesia into Western and Eastern Indonesia in which Western Indonesia covers Java-Bali and Sumatra, while Eastern Indonesia covers Nusa Tenggara, Maluku, Sulawesi and Papua. Western Indonesia has been considered to be more developed than Eastern Indonesia in terms of standard development indicators.

84. The importance of natural resource endowments influencing positive economic growth has been substantial in Indonesia. Sumatra, Kalimantan and Papua are particularly rich in natural resources. This includes oil and natural gas in provinces such as Aceh and Riau (Sumatra), East Kalimantan (Kalimantan) and West Papua (Papua) where the proportion of oil and gas production to Gross Regional Domestic Product (GRDP) from 2001-2010 was on average 34 per cent, 57 per cent, 52 per cent and 25 per cent respectively.

85. Most economic activity and development are centred in the Java-Bali area (Miranti, 2007). This is where 59 per cent of the population live, and is where the capital city of Indonesia, DKI Jakarta, is located. Thus, it is not surprising that development indicators in this region have been very high, with greater human capital, and greater access and availability of infrastructure.

86. Java-Bali is also the main contributor to national GDP (62 per cent), followed by Sumatra at 21 per cent in 2010 (see Figure 18). If Java-Bali (grey in this figure) were to be disaggregated further into its provinces, the capital city of DKI Jakarta alone contributes 18 per cent of national GDP.

Figure 18: Contributions to national GDP by Islands, 2010



Note: Java and Bali are represented by provinces.

Source: Authors' calculation, CIEC data.

87. In contrast, Nusa Tenggara and Maluku contribute only two per cent and 0.3 per cent respectively to national GDP. The provinces of East and West Nusa Tenggara and Maluku are remote and isolated, located far from the central business area of Jakarta. The main industry in these islands is agricultural. However, tourism is increasingly popular in Nusa Tenggara given its close proximity to Bali, and has become a popular local and international tourist destination.

88. The MP3EI has identified Bali and Nusa Tenggara as the “Gateway for Tourism and National Food Support”. The other five economic corridors have been categorised by MP3EI based upon its potential or what each corridor is currently producing, each of which can be utilised for accelerating economic development. (MP3EI, 2011, pp. 46) These economic corridors are as follows:

- Sumatra as a “Centre for Production and Processing Natural Resources and As Nation’s Energy Reserves”

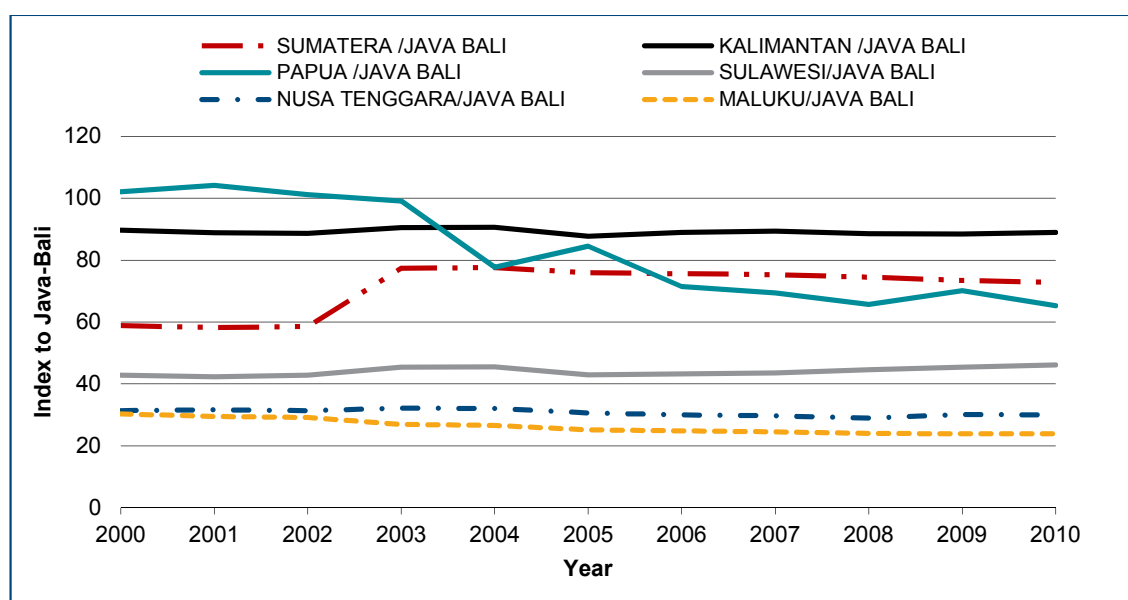
- Java as a “Driver for National Industry and Service Provision”
- Kalimantan as a “Centre for Production and Processing of National Mining and Energy Research”
- Sulawesi as a “Centre for Production and Processing of National Agricultural, Plantation, Fishery, Oil & Gas and Mining”
- Papua and Maluku as a “Centre for Development of Food, Fisheries, Energy, and National Mining”.

89. These economic corridors have also been established in order to reduce the dominance of Java as the main economic centre for Indonesia.

90. Exploring the economic potential of each island is an important route to overcome the disparities that currently exist in industrial and production activities. Figure 19 charts GRDP per capita by island classification over the period between 2000 and 2010, relative to Java-Bali (which is indexed to 100). These figures exclude oil and gas to allow more fair comparison across islands.

91. GRDP per capita for Sumatera has been close to 80 per cent of Java-Bali GRDP since 2003, and around 88-90 per cent in Kalimantan. A lower pattern of GDRP is also observed in Sulawesi at just over 40 per cent across the decade. As expected Maluku and Nusa Tenggara are the islands that lag behind, producing only 30 per cent or less of Java-Bali’s per capita output. GRDP per capita in Papua was above Java-Bali in 2000-2001, but has shown a decreasing trend since 2004.

Figure 19: Index of GRDP per capita to GDRP per capita in Java Bali (Java-Bali = 100)



Source: Authors' calculation, CIEC data.

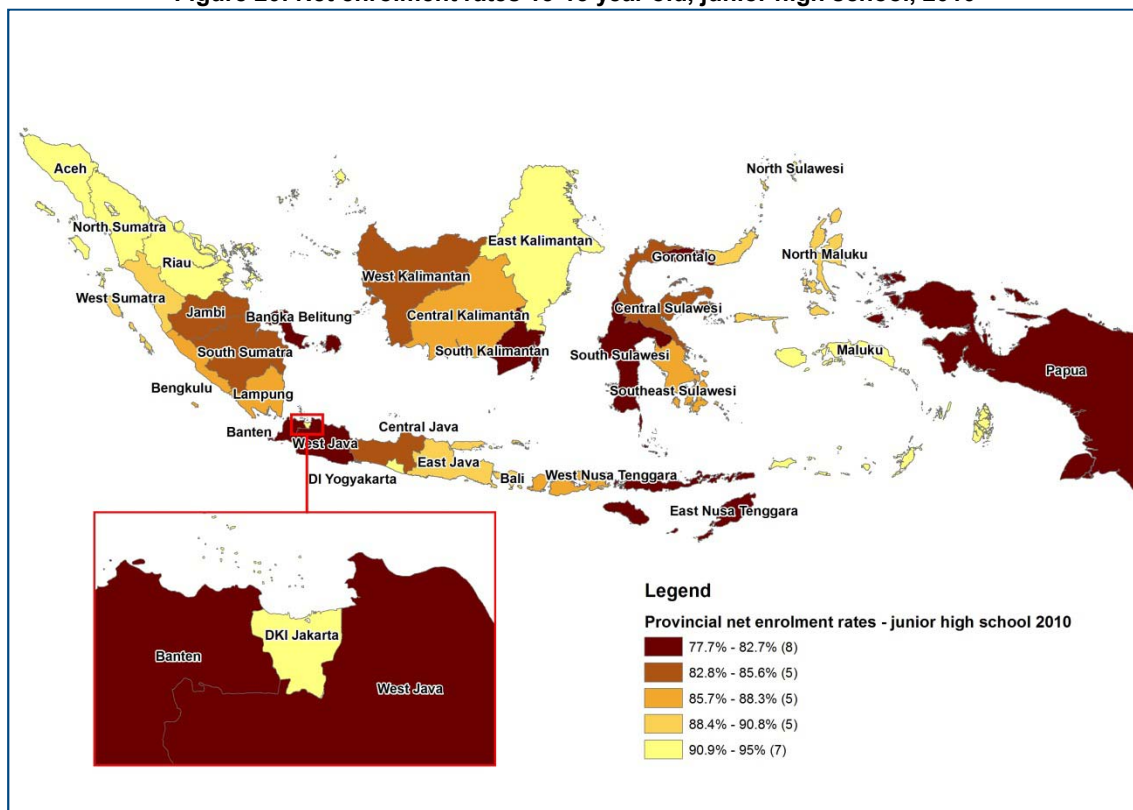
2.4.5 Provincial disparities in education

92. Regional disparities in poverty and inequality were discussed earlier in this Report, as were the disparities that exist in the main drivers of poverty. One of the main long-term drivers of economic growth and poverty alleviation is human capital acquisition, delivered through access to high quality education. Equality in access to education is still an issue in Indonesia (Suryadarma *et al.* 2006). Although national data show a net school enrolment ratio of 98 per cent for primary schools in 2010, it is still only 86.2 per cent for junior high schools and 56 per cent for senior high schools. As discussed in Jones (2003), difficulties in access to education can exist for a number of reasons. These include transportation cost issues, whereby children from low socioeconomic backgrounds cannot afford transport to and from school. This is often worse for children who live in remote and isolated areas where there is no school available close to home. Further, cultural factors may also play a role in access to education. It remains the case in some regions that young girls are expected to marry after finishing primary school, and that boys are afforded a higher priority to continue their education than girls.

93. Figure 20 shows net enrolment rates for junior high school students aged from 13 to 15 years across Indonesian provinces. As expected, Papua, West and East Nusa Tenggara are classified in the lowest band of junior high school enrolment. These same provinces show persistently high poverty rates in 2001 and 2010. Surprisingly, although the province of Maluku also has persistently high poverty rates in 2001 and 2010, it is also in the highest enrolment rate grouping with more than 90.9 per cent of 13-15 year olds attending school.

94. Banten and West Java also performed poorly on this benchmark, in contrast to DKI Jakarta and Yogyakarta where access to education is substantially better. While both provinces are considered to be centres of education in Indonesia, Yogyakarta is also known as a Student’s city.

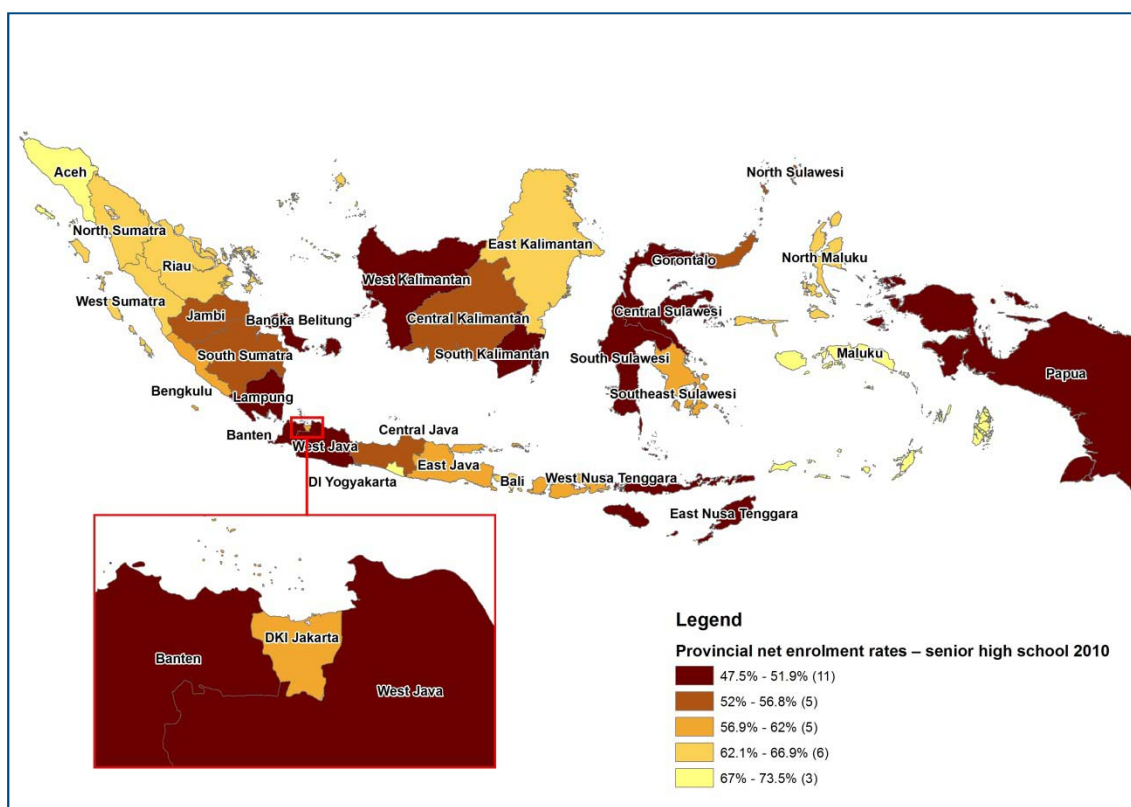
Figure 20: Net enrolment rates 13-15 year old, junior high school, 2010



Source: Statistics Indonesia, various years.

95. Figure 21 reveals net enrolment rates of 16-18 year olds, senior high school, 2010. As expected, there are more dark areas in this map rather than the comparative map for junior high school, with lower participation rates in schooling for older children. There are only a tenth of provinces which are in the top classification, having net enrolment rates between 67-73.5 per cent, and these provinces are Aceh, Yogyakarta and Maluku. DKI Jakarta, the capital city also falls in the medium classification, having net enrolment for senior high school at 62 per cent.

Figure 21: Net enrolment rates 16-18 year old, senior high school, 2010



Source: Statistics Indonesia, various years.

2.4.6 Sub-provincial (district) disparities

96. The above discussion has highlighted that disparities across islands and provinces still persist within a relatively short period from the initial decentralisation stage. The next section will discuss the regional disparity in further detail at a district level, which is the focus of decentralisation. Output indicator such as GRDP per capita is included as this can also be an input into future poverty. Due to data availability, the analysis can only be provided until 2007.

97. As discussed in the Introduction, in the decentralisation process that was formalised by Indonesian Law No 22/1999 and Law No. 25/1999 and officially launched in 2001, the government of Indonesia has delegated much greater authority in education, agriculture, industry, trade, investment and infrastructure to district authorities, aiming for better public service delivery and greater development in less developed regions (Alm *et al.*, 2001; World Bank, 2003). Therefore, the analysis of regional disparity at a district level has become increasingly important.

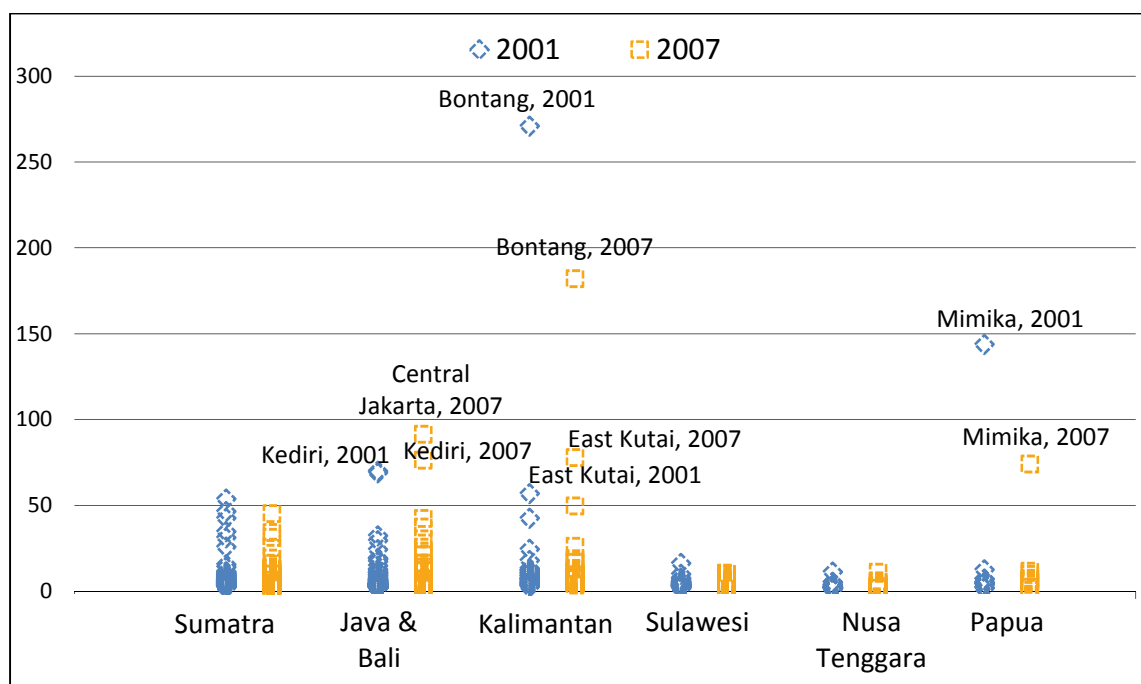
98. Looking at district level using time series data from the Regional Autonomy Watch 2001-2007 or Komite Pemantauan Pelaksanaan Otonomi Daerah (KPPOD) project described in McCulloch and Malesky (2011), there are several districts that have a very high level of Gross Regional Domestic Product (GRDP) per capita. Mining is one of the reasons why some districts have relatively high value added. Nevertheless, by sectoral contribution, the production of mining districts and provinces in the Indonesian economy has been the main story in Indonesian regional economic development since the 1980s (Hill *et al.*, 2008). Nationally, the contribution of this sector was decreasing from around 14.4 per cent in 2001 to be around 11.3 per cent of GDP in 2007. With many mining areas such as in Riau and Aceh reducing value added in the past three decades, only a few mining areas such as Bontang in Kalimantan and Mimika in Papua have a much higher level of GRDP per capita compared to the rest of the country. Instead, it is the Indonesian Capital Region in Jakarta that showed much higher growth than most districts and as also discussed earlier, dominating the picture of GRDP per capita distribution in Indonesia (Mahi and Nazara, 2012).

99. Although most emerging economies have experienced impressive economic growth, their performance in terms of spatial disparity differs from one to another. Often the geographic condition, the endowment, the institutional weaknesses as well as ethnic and racial disadvantages play important roles in affecting how the national achievement in economic growth can be translated to different regions within a country.

100. As a big archipelagic nation with various ethnic groups, Indonesia endures all the problems above. The issue of ethnicity may not be as important as in South Africa but in no doubt this has played an important role in regional development and political issue that brought Indonesia to the decentralised era. In the New Order period between 1966 and 1996, Indonesia has relied on the rural agriculture development and improving education especially primary schooling as the tool to achieve some level of development equality.

101. However, the more export oriented economy since 1983 has some impacts in increasing the disparity of regional economies (Hill *et al.*, 2008) as only the more developed regions had more capacity to be actively involved in this export oriented activities. This is also observed by Rodríguez-Pose (2012) who argues that the more developed regions often are more ready to take the advantage of the interaction with external economy. China, especially in early 90s, and India are other examples how the mobility of trade and foreign investment could widen the regional disparity (Barua and Chakraborty, 2010; Fan and Sun, 2008; Fleisher *et al.*, 2010). China, however, has managed to stable the widening gap among region by spreading the investment toward the other regions as well as spreading the education and infrastructure (Fan and Sun 2008, Qian and Smyth, 2012). Similarly in Brazil, although several social programs has played an important role in reducing the regional disparity, it is the spread of manufacturing and services labour market that has reduced the regional disparity in recent years (Silveira-Neto and Azzoni, 2011)

102. Figure 22 shows the distribution of domestic product per capita among districts in six different regions based on the islands and archipelagos within Indonesia – Sumatra, Java and Bali, Kalimantan, Sulawesi, Nusa Tenggara and Maluku and Papua – in 2001 and 2007. As Nusa Tenggara and Maluku share some similar characteristics, particularly because they are located far from the centre of development of Jakarta and for simplicity reason, in the analysis both islands are combined and presented into one group. As can be seen, there are two districts – Bontang and Mimika – that have much higher GRDP per capita than other districts. This is both because of high mining output as well as low population numbers in the area. Both of these districts are facing a steep downward trend despite the strong growth trend in the overall Indonesian economy. However, there are two other districts in Kalimantan that have a relatively high GRDP per capita because of mining although lower than Bontang. The mining activities in these two districts are based primarily on coal mining, while in Bontang it is mainly liquid gas mining.

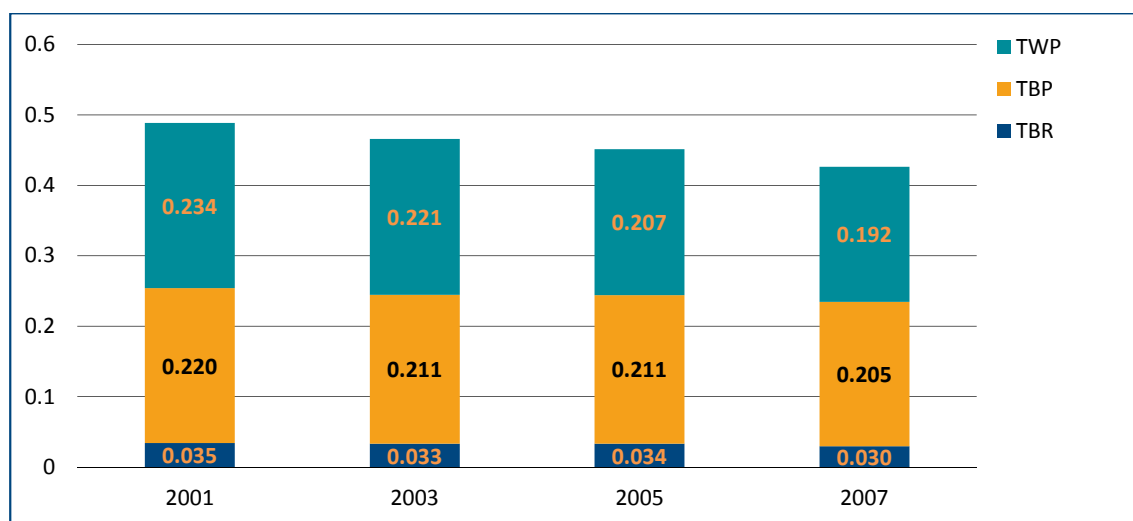
Figure 22: Gross Regional Domestic Product per capita at District level, 2001 and 2007 (million rupiah)

Source: Komite Pemantauan Pelaksanaan Otonomi Daerah (KPPOD/ Regional Autonomy Watch).

103. By comparing data in the 2001 and 2007, Figure 22 also indicates that there is an increasing disparity of GRDP/capita in Java and Bali. The increasing inequality may also occur in Kalimantan but the decreasing Bontang economy to the level of other districts in Kalimantan would fuel the reduction of inter-district differences in GRDP/capita levels. On the other hand, the figure indicates narrowing disparity in Sumatra, Sulawesi, Nusa Tenggara and Maluku and Papua. In Java and Bali, the continuing growth of the five districts of Jakarta is the main reason for the increasing disparity. Outside Jakarta, the growth of a high income district Kediri, one of the cigarette production centres in East Java, is another reason for this increasing disparity.

104. There is a decreasing trend of inter-district disparity of GRDP/capita in Sumatera (Figure 22). The trend may be dominated by the continuing decline in the contribution of the mining district with the high GRDP per capita such as in Bengkalis and Siak in Riau and North Aceh in Aceh as well as the industrial island of Batam. However, the growth of the districts with relatively low GRDP per capita has actually increased the overall GRDP per capita of Sumatera.

105. Given the differential disparity trends observed across regions, the Theil index is applied to measure overall disparity of GRDP per capita in Indonesia. The Theil index is an inequality index that measures the variation in the distribution based on entropy, with a higher number of the index indicating higher inequality (Theil and Chen, 1996). More analysis is carried out by decomposing the Theil Index as suggested by Akita and Alisjahbana (2002). Based on their work, the Theil index of district level inequality is decomposed into three components – Theil Index (of districts) within Province (TWP), Theil Index between province (TBP) and Theil Index between region (TBR), which refers to the decomposition between island groups of Sumatra, Java and Bali, Kalimantan, Sulawesi, Nusa Tenggara and Maluku and Papua (see Figure 23).

Figure 23: Decomposed Theil Index of district level regional disparity of GRDP per capita, 2001-2007

Note: TWP: Theil Index within Province, TBP: Theil Index between province and TBR: Theil Index between regions.

Source: Authors' calculation, Komite Pemantauan Pelaksanaan Otonomi Daerah (KPPOD/ Regional Autonomy Watch).

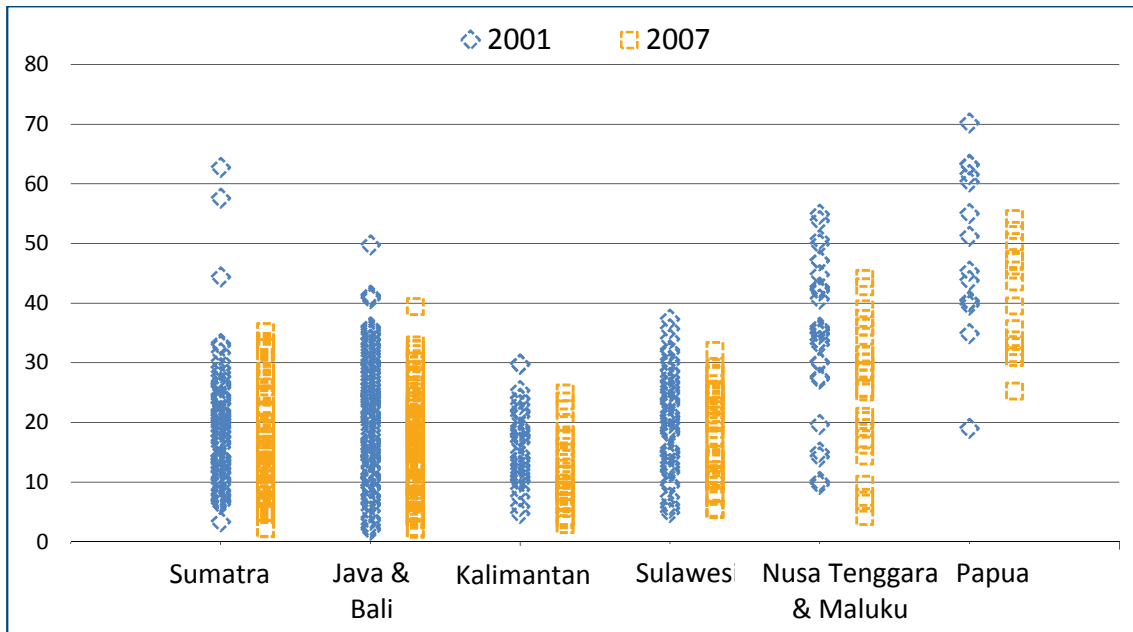
106. Figure 23 shows that the regional disparity of GRDP per capita at district level is slowly decreasing as indicated by the Theil index. The Index was close to 0.5 in 2001 and just over 0.4 in 2007. The decomposition further shows that the decreasing inequality is mainly due to a decreasing inequality among districts within the same province (TWP) while the disparity between provinces (TBP) and between regions (TBR) is only down slightly and relatively stagnant over time.

107. Although GRDP per capita has been commonly used to measure regional development, there is a concern that the wealth created from high GRDP may not be distributed to local people and districts with relatively high GRDP per capita could also have a relatively high proportion of poor individuals (Tadjoeddin *et al.*, 2001, Brodjonegoro and Martinez-Vazquez, 2002). Nationally, the rate of poverty has been decreasing in Indonesia along with high growth of GDP per capita.

108. Figure 24 shows the distribution of poverty rates at district level in 2001 and 2007. It indicates that the poverty rate has declined at a much higher speed in poorer districts for most of the regions except in Nusa Tenggara and Maluku. This means districts with extreme levels of poverty on average have become much closer to other districts in Indonesia, possibly indicating the catch-up process for the poorer districts. In contrast, Jayapura the capital city of Papua that had much lower poverty levels among Papua districts in 2001, unexpectedly experienced a rise in poverty rates closer to other poor Papua districts in 2007.

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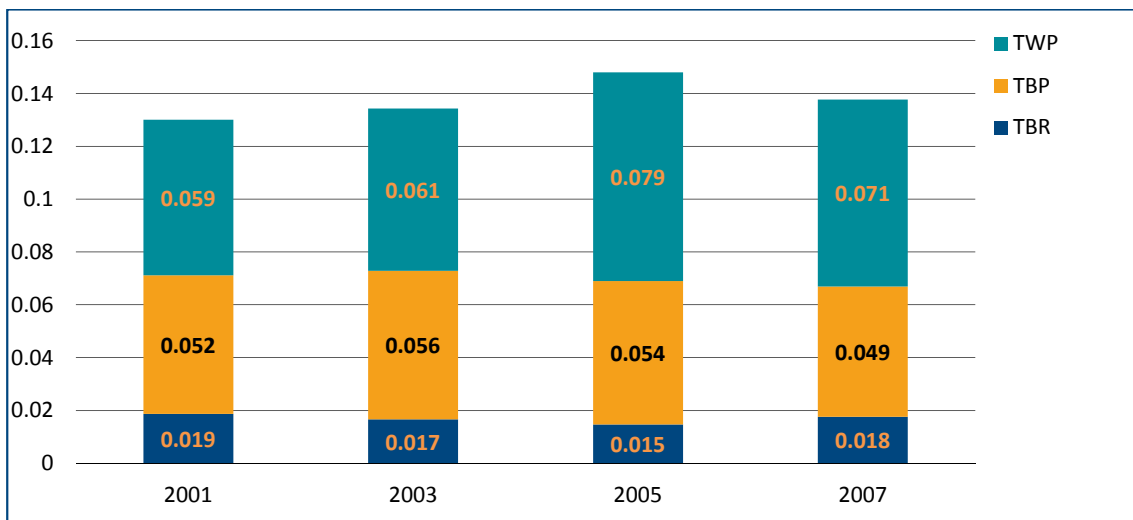
Figure 24: Poverty Rate Distribution at District level, 2001 and 2007 (per cent of poor)



Source: Komite Pemantauan Pelaksanaan Otonomi Daerah (KPPOD/ Regional Autonomy Watch).

110. Despite the considerable decrease of poverty levels of poorer districts, Figure 25 shows that using Theil Index, regional disparity in poverty has slightly increased over 2001-2007. The increase is mainly due to the increased disparity of poverty rates among districts in the same province (TWP), while the disparity indexes between provinces and region are relatively stagnant.

Figure 25: Decomposed Theil Index of district level regional differences of Poverty Rates, 2001-2007



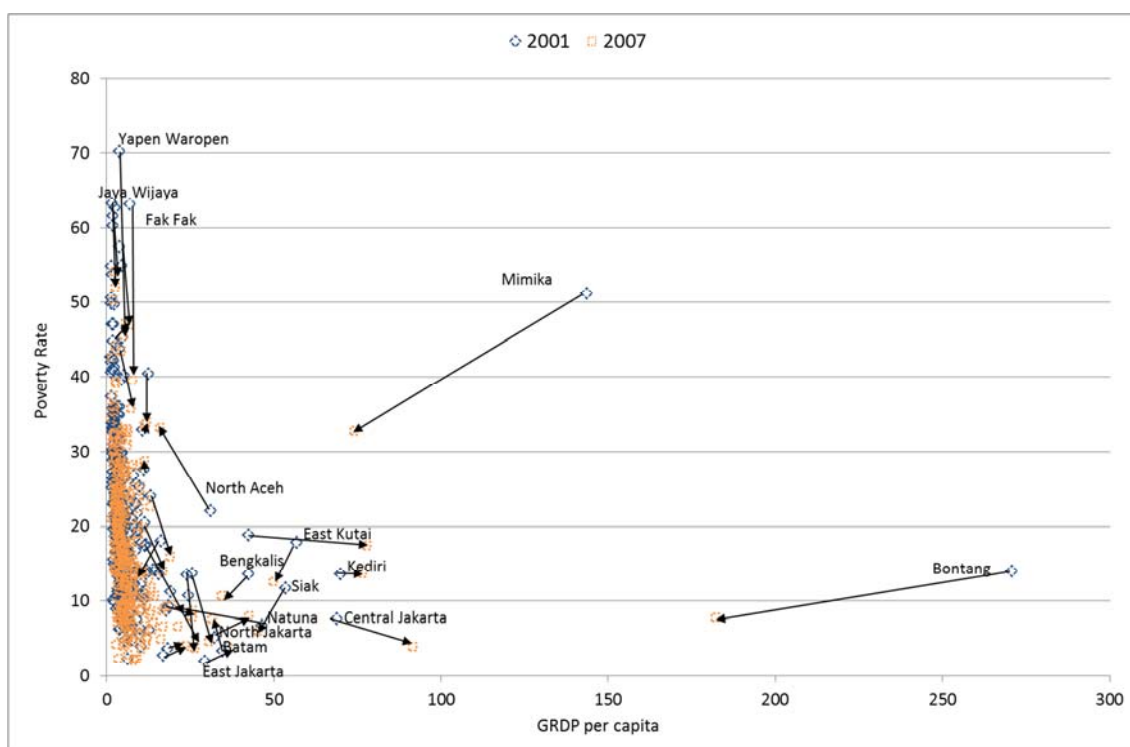
Note: TWP: Theil Index within Province, TBP: Theil Index between province and TBR: Theil Index between regions.

Source: Authors' calculation, Komite Pemantauan Pelaksanaan Otonomi Daerah (KPPOD/ Regional Autonomy Watch).

111. However, in terms of magnitude, the total Theil Index as the measure of the degree of disparity for the poverty rate is lower than those used as the GRDP per capita inequality measure. Previous literature has argued that there is a weak relationship between the change in the poverty rate and the change in

GRDP per capita (Deaton 2001). This relationship between the change in poverty and the change in GRDP is captured in Figure 26. This analysis not only confirms the pattern of districts with extreme poverty rates experiencing the largest reduction in the poverty rate, but also shows that the reduction of the poverty rate is not correlated with the growth of the district in terms of GRDP per capita as the districts with large reduction in poverty rate (Yapen Waropen, Jaya Wijaya, Fak Fak) do not show much improvement in their GRDP per capita. There are other trends that also weaken the correlation between growth and poverty reduction such as in North and East Jakarta where GRDP per capita growth is followed by an increase in the poverty rate and in many mining areas such as Bontang, Mimika, Bengkalis and Siak where poverty rates declined yet there was negative GRDP per capita growth.

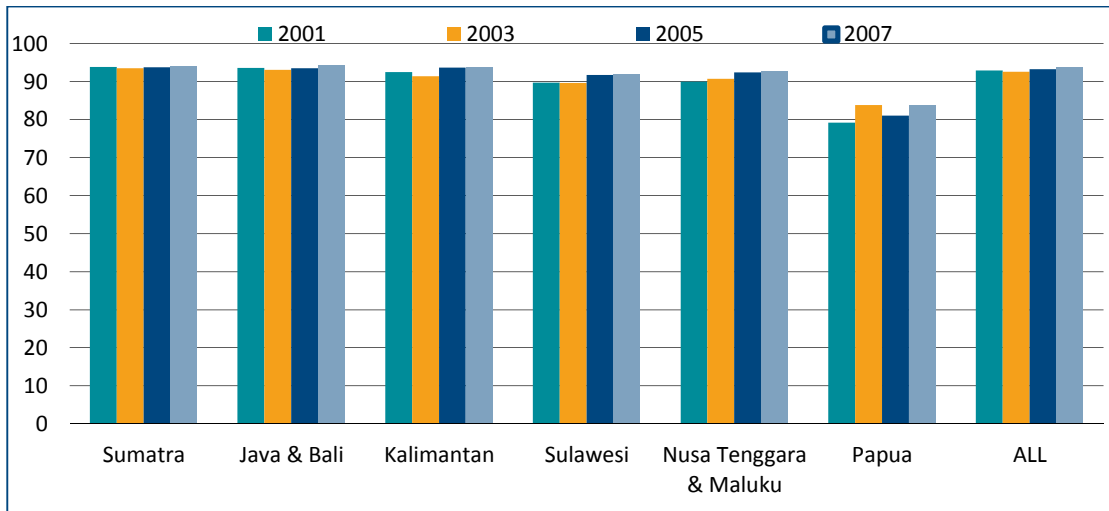
Figure 26: The distribution of GRDP per capita and Poverty Rate at District level, 2001-2007



Source: Komite Pemantauan Pelaksanaan Otonomi Daerah (KPPOD/ Regional Autonomy Watch).

112. As discussed earlier, education is one of the building blocks of wellbeing and the Indonesian government has long recognised this by implementing compulsory schooling, with a particular focus on primary schooling, stemming from the New Order era since 1984. Therefore, it is not surprising that the school participation rate that is measured by the net enrolment rate (the proportion of children in relevant schooling age who do go to school) is very high around the country. The analysis by six regions in Figure 27 shows that Sumatra, Java and Bali, and Kalimantan all have had net primary school enrolment above 90 per cent since the beginning of the analysis period in 2001. Sulawesi and Nusa Tenggara and Maluku have followed this trend since 2005. Only Papua has a relatively lower net enrolment rate of primary school at around 80 per cent.

Figure 27: Net Enrolment Rate of Primary School Aged children by regions 2001-2007 (per cent)

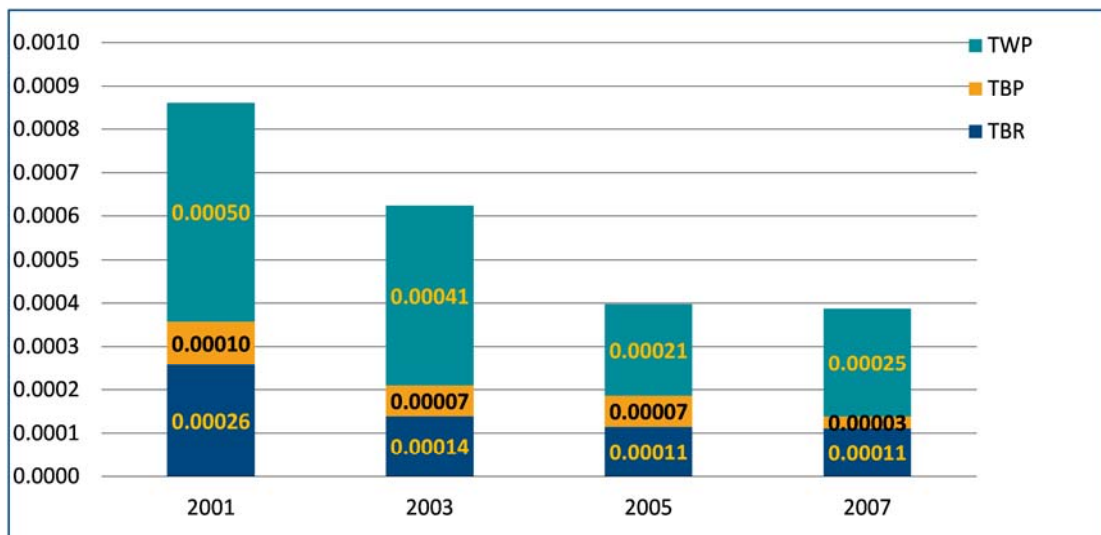


Note: Net Enrolment Rate is measured by the proportion of the children in the relevant schooling age who do go to school at that level.

Source: Authors' calculation, Komite Pemantauan Pelaksanaan Otonomi Daerah (KPPOD/ Regional Autonomy Watch).

113. As a result the differences in the primary school participation rate are very low and can only be seen after three decimal places of the Theil index. Despite an apparently lower primary school participation rate in Papua, Figure 28 shows that the disparity index within province is still higher than between regions. This means that within a province in regions other than Papua, there could be a district that has a much lower participation rate than Papua's average.

Figure 28: Decomposed Theil Index of district level regional disparity of Primary School Net Enrolment Rate 2001-2007



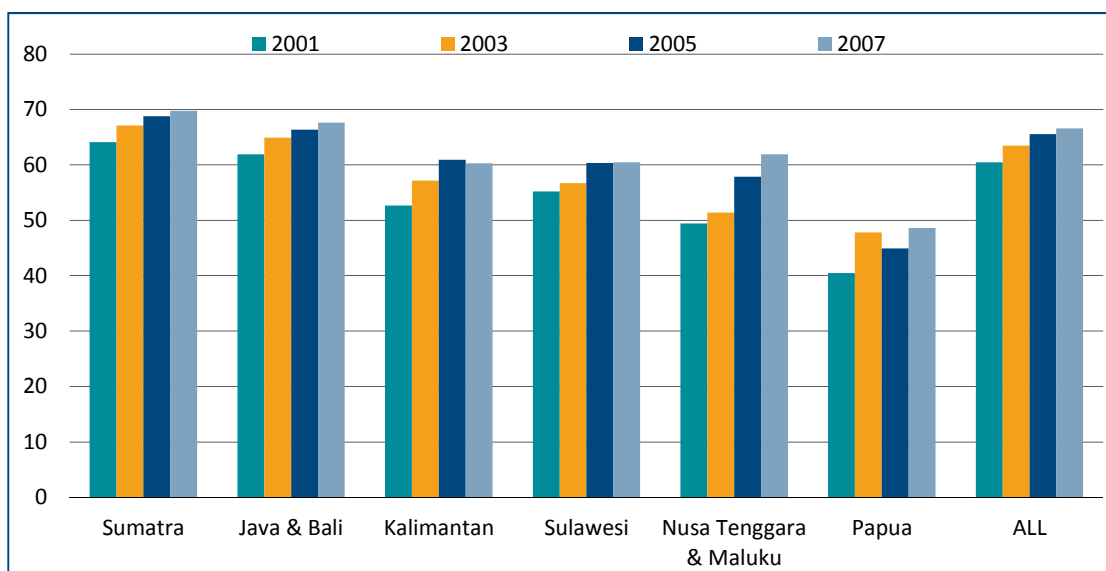
Note: TWP: Theil Index within Province, TBP: Theil Index between province and TBR: Theil Index between region.

Source: Authors' calculation, Komite Pemantauan Pelaksanaan Otonomi Daerah (KPPOD/ Regional Autonomy Watch).

114. As shown in Figure 29, the participation rate in junior high school (years 7 to 9 in the Australian context) is much lower than primary schooling, however there has been an increasing participation trend in all regions in Indonesia during the 2001-2007 period. These increasing patterns are likely to be attributed to the push to make junior high school become compulsory. Although this effort began since

1994, the effort was formalised in 2003 through enacted Law no 20. There are clear differences between Sumatra and Java with the net enrolment ratio at junior high level at nearly 70 per cent compared to other regions in Indonesia, where the participation rates are still around 60 per cent. Papua again stands out as an outlier, where only less than half participate in junior high school education. However, with the exception of Papua, other regions appear to catch up, especially up to 2005.

Figure 29: Net Enrolment Rate of Junior High School children by regions 2001-2007 (per cent)

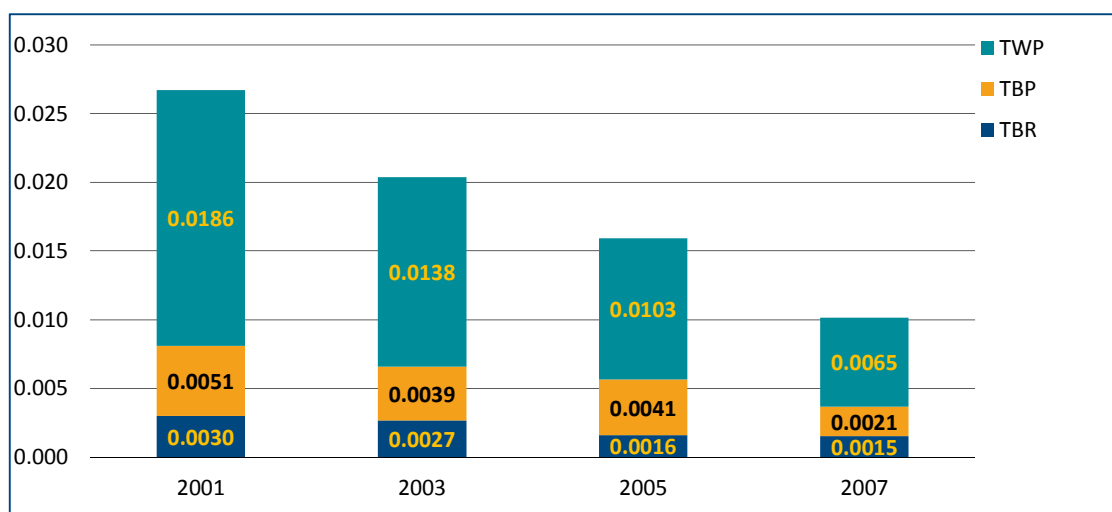


Note: Net Enrolment Rate is measured by the proportion of the children in the relevant schooling age who do go to school at that level.

Source: Authors' calculation, *Komite Pemantauan Pelaksanaan Otonomi Daerah* (KPPOD/ Regional Autonomy Watch).

115. As a consequence, regional variation of school participation at junior high level is much higher than primary school level (see Figure 30). Nevertheless, this disparity tends to gradually decrease during the analysis period of 2001-2007. This is not only due to the reduction of disparity between region as the participation in Kalimantan, Sulawesi, Nusa Tenggara and Maluku increased, but also within province and between provinces. Moreover, the index for the disparity among districts in one province still dominates the overall disparity of school participation at junior high level at district level.

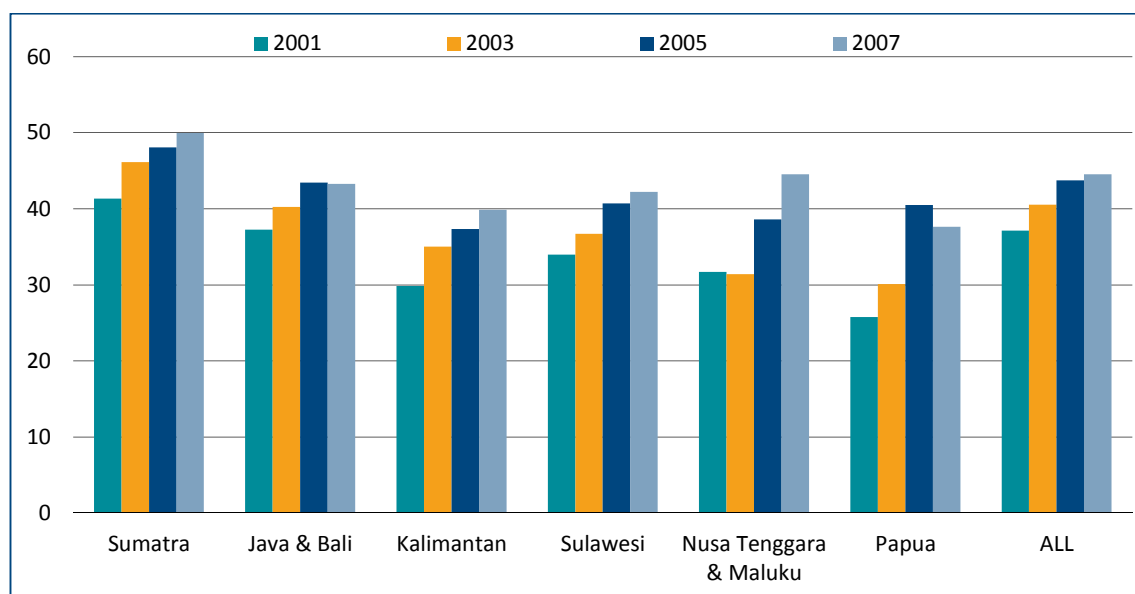
Figure 30: Decomposed Theil Index of district level regional disparity of Junior High School Net Enrolment Rate 2001-2007



Note: TWP: Theil Index within Province, TBP: Theil Index between province and TBR: Theil Index between regions.
 Source: Authors' calculation, Komite Pemantauan Pelaksanaan Otonomi Daerah (KPPOD/ Regional Autonomy Watch).

116. As the Indonesian government envisage the possibility of continuing the compulsory schooling program until senior high school level (*i.e.* years 10-12 in the Australian schooling system), the data shows that in most regions in Indonesia the net enrolment rate is still less than half (see Figure 31).

Figure 31: The Net Enrolment Rate of Senior High School Aged children by regions 2001-2007 (per cent)



Note: Net Enrolment Rate is measured by the proportion of the children in the relevant schooling age who do go to school at that level.

Source: Authors' calculation, Komite Pemantauan Pelaksanaan Otonomi Daerah (KPPOD/ Regional Autonomy Watch)

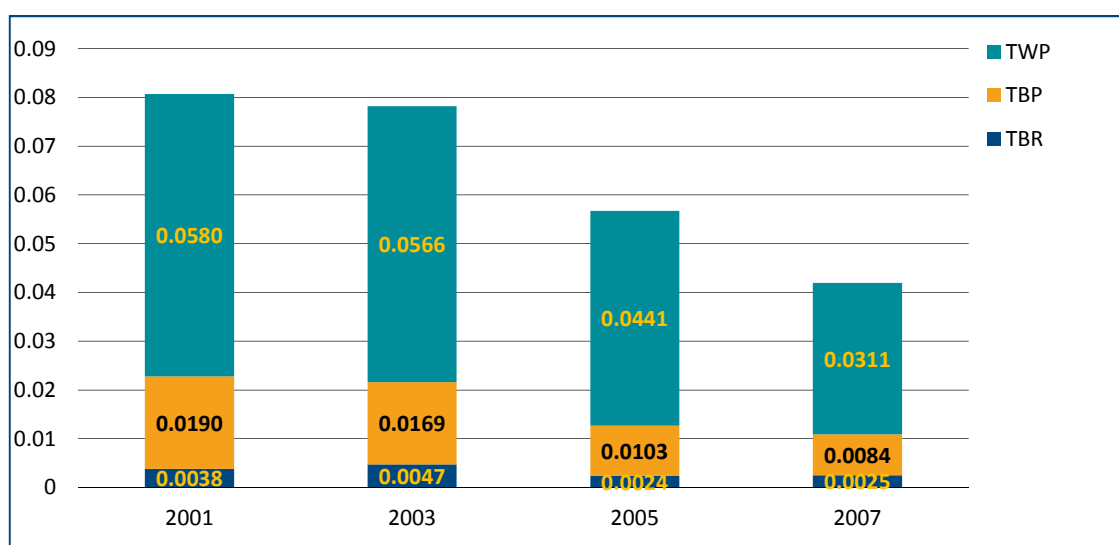
117. However, there has been a gradual increase in the participation rate since 2001, when enrolment was generally less than 40 per cent in most Indonesian regions. Only Sumatra was slightly higher than 40 per cent and has since increased to nearly 50 per cent in 2007, while in other areas enrolments have

reached around 40 per cent. Another positive note from the results is the big improvement in the Nusa Tenggara and Maluku and Papua regions.

118. The differences of net enrolment rate of senior high school among districts are higher than those in Junior high school level and once again the disparity among districts within provinces is dominating as indicated in Figure 32. The gradual increase of participation in Nusa Tenggara and Maluku and Papua after 2003 is likely to have contributed in decreasing the disparity between regions, however the disparity of senior high school net enrolment rate between and within province has reduced more significantly over time. It is possible that the compulsory junior high school program that was introduced in 1994 and becoming the Law in 2003 also increased participation in senior high school especially for those in the least developed districts.

119. There is an increasing trend of education participation using a proxy of net enrolment ratio in all regions/islands in Indonesia. The participation rate at primary school that has been generally high around all Indonesia provinces is being followed by an improvement in participation in Junior and Senior high school. The districts within Kalimantan, Sulawesi and Nusa Tenggara and Maluku have improved markedly over time, catching up with the districts in West Indonesia (Sumatra and Java and Bali) - especially when examining junior high school participation.

Figure 32: Decomposed Theil Index of district level regional disparity of Senior High School Net Enrolment Rate 2001-2007 (per cent)



Note: TWP: Theil Index within Province, TBP: Theil Index between province and TBR: Theil Index between region.

Source: Authors' calculation, *Komite Pemantauan Pelaksanaan Otonomi Daerah* (KPPOD/ Regional Autonomy Watch).

120. Although there is an apparent difference between enrolment rates among these regions, the decomposition of district disparity using the Theil Index shows that the disparity in schooling is actually dominated by the differences among districts within province rather than those between provinces or between regions. This means that there are districts that may have significantly lower or higher participation than other districts within the same province. These findings will be explored further.

2.5 Characteristics of Persons or Households Vulnerable to Poverty

121. The previous sections discuss that Indonesia's growth has been slowing compared to the period prior to the Asian economic crisis. Poverty rates have also been declining and there have been improvements from non-monetary measures of wellbeing as shown by the Human Development Index and

MDG indicators. However there are still areas of concern and questions around who is experiencing a good life and those that are comparatively worse off have become important.

122. While, most of the analysis in the report, makes use of the official BPS poverty line, particularly to ensure a longer time series analysis is captured in order to examine trends, unless specified differently for example in Section 3; this section provides an analysis of the characteristics of persons or households that are considered to be vulnerable to poverty defined as persons or households living in the bottom and second quintile of household consumption per capita.

123. The choice of a relative poverty should be in line with poverty reduction strategies which emphasise improving the well-being of this group and align with current key policy issues in Indonesia to reduce inequality. Vulnerability to poverty is still an issue for many Indonesians. As discussed by Suryahadi *et al.* (2011) these 40 per cent of the poorest population include those who still live above the poverty line but are vulnerable to fall below the poverty line if for example a severe economic shock occurs such as a recession, a natural disaster, or social conflict. In addition, as discussed by The National Team for Accelerating Poverty Reduction in Indonesia (TNP2K, 2011), Indonesia's social security programs also focus on this population group (40 per cent of the poorest population).

124. Characteristics that have been examined cover five key domains (i) demographic; (ii) socio-economic; (iii) labour market; (iv) living conditions; and (v) connectedness. These domains are considered to be associated with drivers of poverty. The SUSENAS 2008 Consumption Modules and Core are used for this analysis¹⁰

125. Either person or household characteristics have been examined, depending on the indicators selected, and whether the indicators are attached to an individual or a household. Person or household weighted quintiles have been produced based upon household consumption per capita. The top quintile represents the least disadvantaged/most advantaged group while the bottom quintile represents the most disadvantaged group.

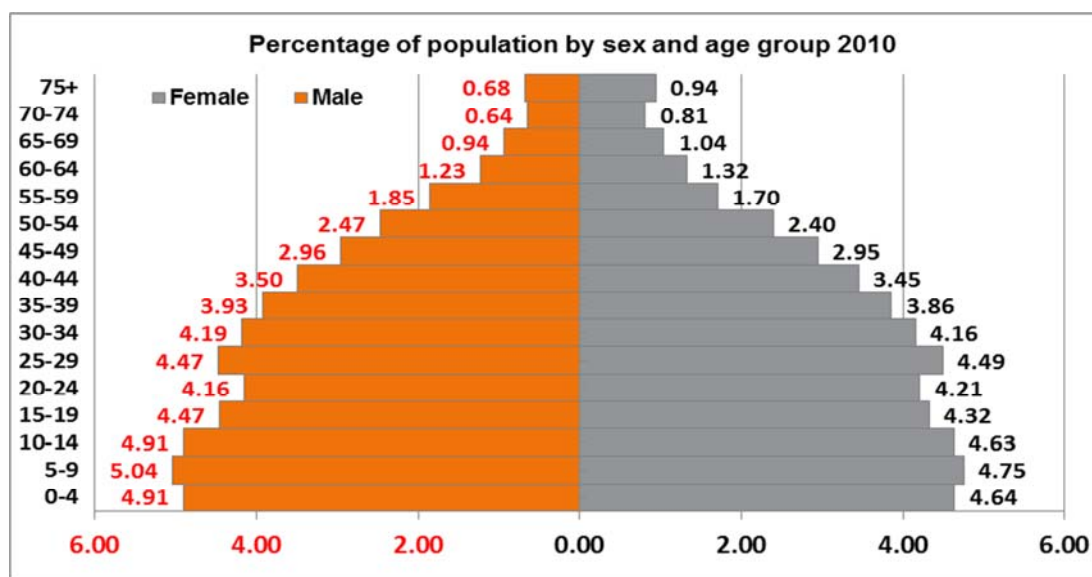
2.5.1 Demographic characteristics

126. Indonesia's population in 2010 was 237.6 million people. The population grew by 1.4 per cent per annum between 2000 and 2010, increasing by 31.4 million people over this period. The labour force participation rate is currently around 66 per cent (those aged 15-64 years) while 5 per cent of those aged 65 years old or above were also active in the labour market. As life expectancy is increasing (averaging 69.1 years for the period 2005-2010) and fertility is falling (2.12 in 2010), the number of older people is also growing, at rates higher than the growth of the total population (Arifin *et al.*, 2012). Population growth in the older age group, grew by 2.3 per cent per annum during the last decade, more than double the growth of that of population growth in the labour force which averaged 1.1 per cent per annum, but is still slightly less than population growth of children aged under 15 years old (2.5 per cent per annum).

127. Broken down by gender, the total population is divided into almost 50 per cent of women and slightly more than 50 per cent of men. However, there were more older women than men - 6.6 million women aged 65+ compared to 5.4 million men or 9.7 million women aged 60+ compared to 8.3 million men using the official old age cut-off – 60 years). In 2010, the elderly female population aged 75 years old or above contributed almost 1 per cent to the total population while in comparison it was 0.7 per cent for men (see Figure 33).

¹⁰ As most of the analyses are based on SUSENAS 2008 data, changes that have taken place between 2008 and 2012 are not captured in the data.

Figure 33: Percentage of total population by gender and age group, 2010



Note: Percentage is calculated to total population.

Source: Authors' calculations, National Population Census, 2010.

128. Table 5 shows the distribution of age by consumption quintiles. Almost half of the population aged 65 years and above are in the bottom and second lowest quintiles of consumption per capita (47.3 per cent). This proportion is higher than it is for children (45.3 per cent) and people in the labour force aged 15-64 years (37 per cent). However, of those persons falling in the bottom quintile (figures not shown), the largest population are those aged between 15 and 64 (57 per cent), followed by children (36 per cent) and older people (7 per cent).

Table 5: Percentage of total population by gender and age group, 2010

Consumption quintile	Bottom	Second	Third	Fourth	Top	Total
Age group	%	%	%	%	%	
Children (<15)	24.4	20.9	19.8	18.9	15.9	100
Labour force (15-64)	17.7	19.3	20.0	20.7	22.3	100
Older people (65+)	24.2	23.1	20.8	17.3	14.7	100

Source: Authors' calculations, SUSENAS 2008

129. When analysing poverty, it is often assumed that everyone in a household will share resources and food, thus, analysis based on household type becomes important. As can be seen in Table 6, household types are categorised based on household composition, and whether the household only consists of single family households or multiple family households, which are further differentiated between those with immediate extended family members such as grandparents, in-laws and grandchildren or those with other relatives only. As expected the household distribution shows that 53 per cent of households in Indonesia are categorised as couples with children (the definition of children includes all ages of children and not only children aged less than 15 years old) which illustrates the dominance of the nuclear family in Indonesia.

Table 6: Household Type by Household Consumption Per capita Quintile (per cent), 2008

Household Type	Bottom	Second	Third	Fourth	Top	Total	Difference	
							between highest and bottom quintile	Difference between highest and second quintile
One family								
Lone person	2.5	4.9	5.3	5.8	12.5	6.2	10.0	7.6
Couple only	6.6	8.5	8.9	9.0	11.8	9.0	5.1	3.3
Couple with children	51.6	53.2	55.5	55.8	48.8	53.0	-2.8	-4.4
Single parent	5.5	6.3	6.8	6.8	6.0	6.3	0.5	-0.3
Extended family								
Couple with children with immediate extended family	17.7	13.4	10.9	9.2	6.3	11.5	-11.4	-7.1
Single parent with children with immediate extended family	5.0	3.9	3.4	3.2	2.3	3.6	-2.7	-1.7
Other relatives								
Couple with children with other relatives	1.8	1.7	1.9	2.7	2.9	2.2	1.2	1.2
Single parent with other relatives	0.3	0.3	0.3	0.3	0.3	0.3	0.0	0.1
Other type of households								
	9.1	7.9	7.0	7.3	9.1	8.1	-0.0	1.2
Total	100	100	100	100	100	100		

Note: Extended family includes immediate extended family only such as grandparents, in-laws and grandchildren without any other relatives. While household types with other relatives include other relatives only, without any immediate extended family.

Source: Authors' calculations, SUSENAS 2008.

130. An interesting finding from the analysis is that the couple with children and immediate extended family members group contributes to 17.7 per cent of households in the bottom quintile, 13.4 per cent for households in the second quintile, compared with only 6.3 per cent in the top quintile. However, this group of households is a relatively small household type, comprising only 11.5 per cent of total households. The presence of immediate extended family members within these households may indicate two things. First, this family may have to rely on the financial, domestic and social support of the immediate extended family. Second, it may mean, they are required to look after their immediate family members or vice versa, which places additional pressure on the household budget.

131. The other striking gap between the bottom and top consumption quintiles is that the percentage of lone person households in the top quintile is five times the percentage of lone person in the bottom quintile. These households are likely to reflect single, young, wealthy people working in high skilled occupations.

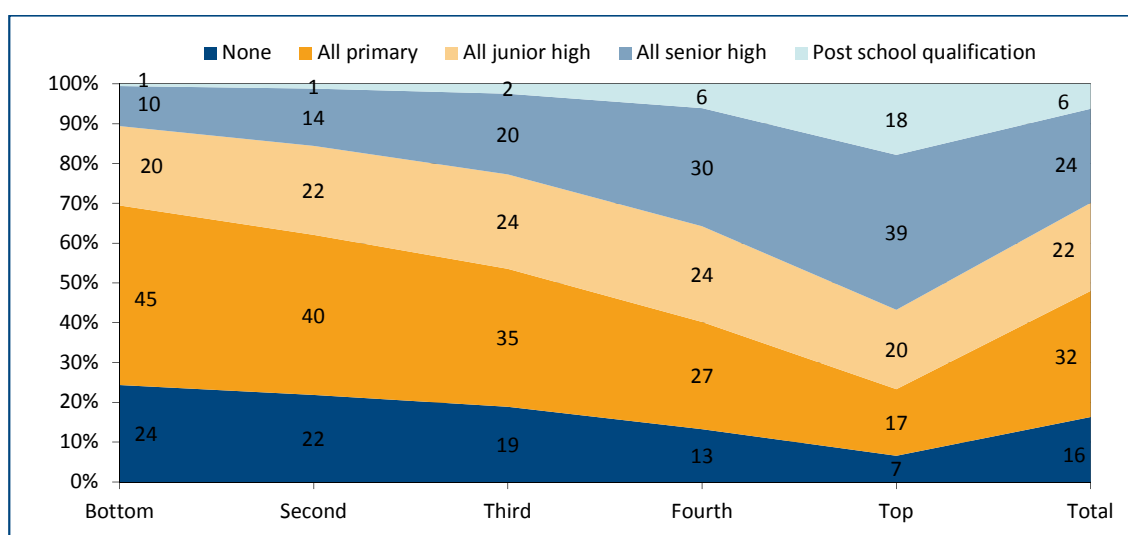
2.5.2 Socio-economic

132. The socio-economic domain covers several indicators, including (i) educational attainment; (ii) school participation for children less than 15 years of age; and (iii) the ability to read and write for adults aged 15 years and over.

133. Figure 34 shows educational attainment for the adult population aged 15 years and above. It is clear that educational attainment of people in the bottom and second consumption quintiles lags behind the population in the top quintile, highlighting the potential importance of educational attainment in alleviating poverty.

134. Around 69 per cent of the population in the bottom quintile did not complete primary education or just finished primary education, while for the second quintile it is 62 per cent. The gap between the top and bottom quintiles in terms of completion of primary school education or no education is 45 percentage points, and 38 percentage points between the top and second quintile. Most people in the bottom two quintiles only complete primary school, while the majority of people in the top quintile complete senior high school (39 per cent) or a post school qualification (18 per cent).

Figure 34: Educational attainment by Consumption quintile (per cent of population), 2008



Note: Coverage of the population is persons aged 15 years and above. Totals may not add to 100 due to rounding. Junior high includes regular junior secondary school, *madrasah tsanawiyah* (Islamic junior secondary school) and vocational junior secondary. Senior high includes regular secondary school, *madrasah aliyah* (Islamic Senior Secondary) and vocational high school.

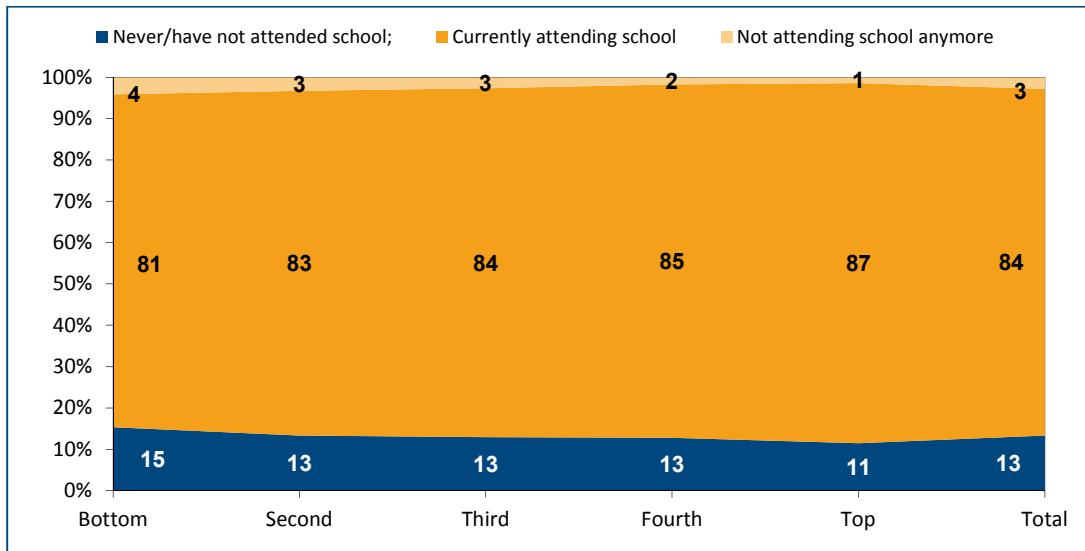
Source: Authors' calculations, SUSENAS 2008.

135. Another interesting finding is the similar proportion of those with junior high school completion as their highest level of educational attainment across consumption quartiles. This may represent some impact of the compulsory nine year education program that has been enacted in Law No 20/2003, which covers six years of primary and three years of secondary school. The law based on a “universal education” approach gives access for all families to education but gives no sanction for parents who do not send their children to school. This program has also motivated some of the vulnerable poor to finish junior high school, although school retention to senior high school tends to drop substantially after compulsory education is completed.

136. The impact of the compulsory nine year education program is reflected in current education participation for children aged under 15 years (Figure 35). Small differences in education participation between those who are living in the bottom and second quintiles compared with children who are in the top

quintiles can be seen, with slightly higher participation rates of children in the fourth and fifth quintiles. Generally, more than 80 per cent of children are currently attending school, although the distribution of school level attended may not be similar across quintiles.

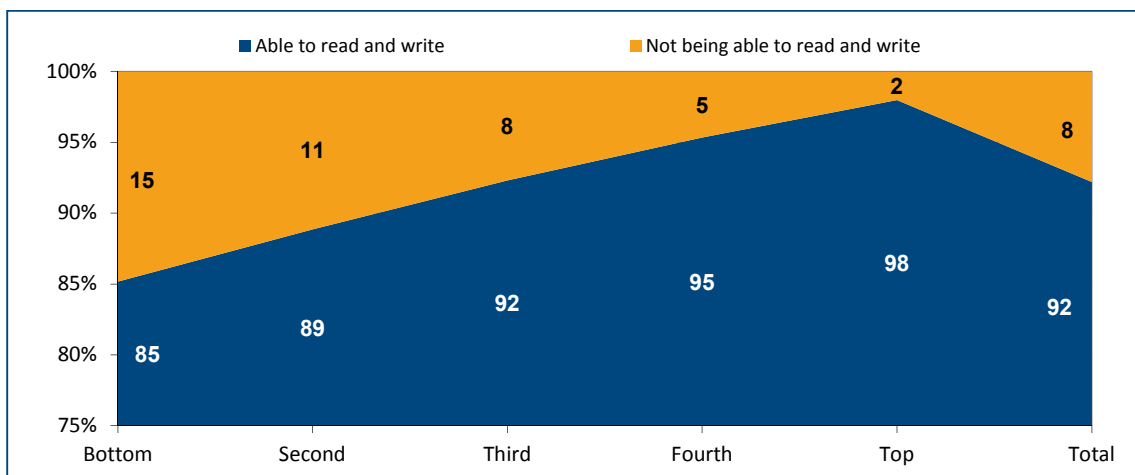
Figure 35: School participation by Consumption Quintile (per cent of population), 2008



Note: Coverage is persons aged below 15 years old. Totals may not add to 100 due to rounding.
 Source: Authors' calculations, SUSENAS 2008.

137. As expected, illiteracy is also problematic for people in the bottom and second quintiles as there are still more than 10 per cent of the population in these groups who are unable to read and write (see Figure 36).

Figure 36: Illiteracy by Consumption Quintile (per cent of population), 2008



Note: Coverage is persons aged 15 years and above.
 Source: Authors' calculations, SUSENAS 2008.

2.5.3 Labour markets

138. Table 7 shows selected labour market characteristics of the population based on the quintile of consumption per capita. Labour force participation rates for persons aged 15-64 years are relatively similar across the distribution with slightly higher LFPRs for both men and women in the bottom quintile compared to the top quintile of consumption per capita. What is striking are differences between genders, with male labour force participation rates much higher than their female counterparts, by around 29-34 percentage points.

139. Although there is hardly any difference in terms of labour force participation across quintiles, when analysing industry of employment, almost 6 in 10 adults in the bottom quintile and 5 in 10 adults in the second quintile work in the primary sector of agriculture and related industries. This contrasts to only 12 per cent in the top quintile. This may suggest that poverty risks depends less on whether an individual works or not but rather in what industry and whether employment is formal or informal.

Table 7: Labour market characteristics of adult population by Consumption Quintile (per cent of population), 2008

	Bottom	Second	Third	Fourth	Top	Total
Labour force participation rate						
Men 15-64 years old	85.3	85.9	85.0	84.2	81.9	84.4
Women 15-64 years old	54.1	54.8	52.6	51.1	53.3	53.2
<i>Total 15-64 years old</i>	<i>69.4</i>	<i>70.2</i>	<i>68.8</i>	<i>67.6</i>	<i>67.4</i>	<i>68.6</i>
Employment by industry						
Agriculture, plantation, forestry, hunting and fishery	59.6	52.1	43.3	27.8	11.7	38.3
Mining and excavation	1.3	1.2	0.9	1.1	1.6	1.2
Manufacturing industry	9.8	10.7	11.6	12.5	11.6	11.3
Electricity, gas and drinking water and construction	4.9	5.5	5.5	5.0	4.5	5.1
Trade, restaurant and accommodation service	10.7	15.0	18.8	24.9	28.2	19.8
Transport, warehouse and communication	3.2	3.8	4.8	5.5	5.2	4.5
Other services	10.6	11.7	15.1	23.2	37.2	19.9
<i>Total</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>
Employment by working status						
Formal employment						
Worker/employed	18.8	22.4	28.6	39.7	55.7	33.5
Informal employment						
Self-employed	40.4	42.3	43.1	40.6	32.9	39.8
Casual worker	18.2	15.3	11.5	7.0	3.3	10.9
Unpaid worker	22.6	20.0	16.8	12.8	8.2	15.9
<i>Total</i>	<i>100</i>	<i>99.9</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>

Note: Coverage is persons aged 15 years and above except for the labour force participation rate, which covers those aged 15-64 years. Labour force is calculated as a percentage of the population who work or who do not work but are actively looking for work (unemployed) to the total working age population. Employment covers working activity in the previous week. Other services include financial institutions, real estate, leasing/hiring and corporate services; community, social and personal services and others. Totals may not add to 100 due to rounding. Statistics that capture employment by working status in this table may not match exactly to Figure 17 as the data source for that figure is the SAKERNAS (Labour Force Survey).

Source: Authors' calculations, SUSENAS 2008.

140. Adults in the top quintile mostly work in the service sector (mostly in other services), including those financial institutions, real estate, leasing/hiring services and corporate services; community, social and personal service and others (37.2 per cent). This demonstrates that these people are likely to be white collar professional workers with higher educational attainment.

141. Employment by working status also shows substantial differences for the adult population across quintiles. The gap between the top and bottom quintiles for those who are employed in the formal sector is 36.9 percentage points and 33.3 percentage points between the top and second quintile.

142. Most adults in the top quintile are employed in the formal sector, aligning with the industry of employment breakdown, with the majority of workers in the top quintile working in service sectors. In contrast, most of the labour force in the bottom quintile are informally employed, with 40 per cent self-employed and more than 22 per cent unpaid or family workers, which coincides with most adults in this group working in the primary sector or agriculture and related sectors.

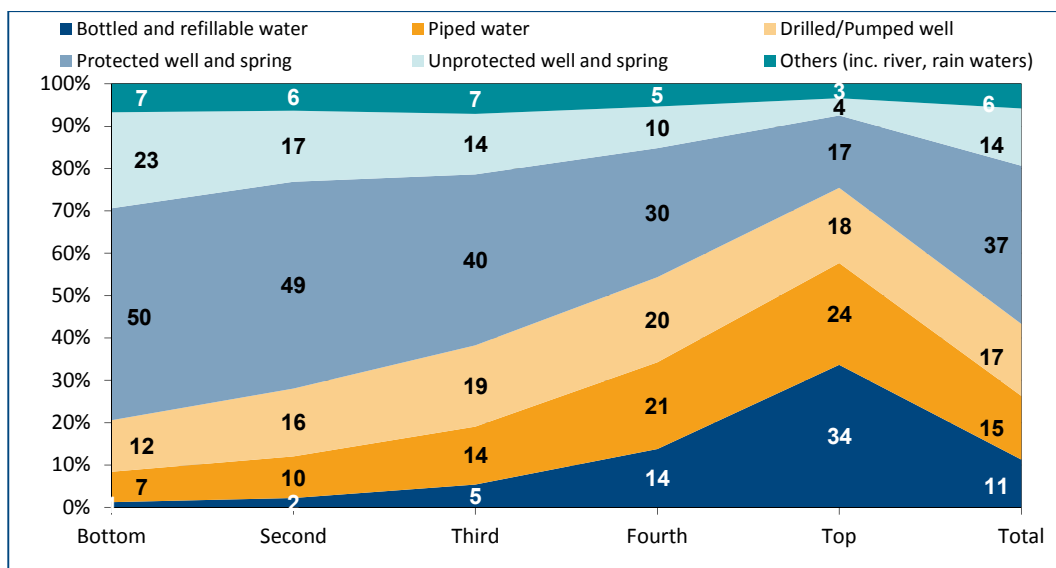
143. It is also interesting to note that from the SUSENAS 2008 data 7.7 per cent of children aged under 15 years old and living in households in the bottom quintile, are more likely to be engaged in the labour force than the average for all children - 5.6 per cent (results not shown). Most of these children in the bottom quintile work in the agriculture sector and are typically unpaid, with many children helping their parents work in paddy fields throughout Indonesia.

2.5.4 Living conditions

Living conditions discussed in this section cover five domains and include several indicators such as (i) source of drinking water, (ii) type of toilet, (iii) main source of energy for cooking, (iv) source of light and (v) roof, wall and floor. Where data is available, trends in living conditions are also presented.

144. Clean water availability is an important indicator of healthy living conditions. Unavailability of clean water is one of the key indicators of poverty. Clean water is also an important part of Indonesian culture, where 88 per cent of the population are Muslim and require clean water to practice wudu' (washing and cleaning parts of the body) before praying five times a day. Figure 37 shows the source of drinking water by consumption quintiles. There are still 30 per cent of households in the bottom quintile and 23 per cent of households in the second quintile who source their drinking water from an unprotected well and spring and other sources.

Figure 37: Source of drinking water by Consumption Quintile (per cent of households), 2008



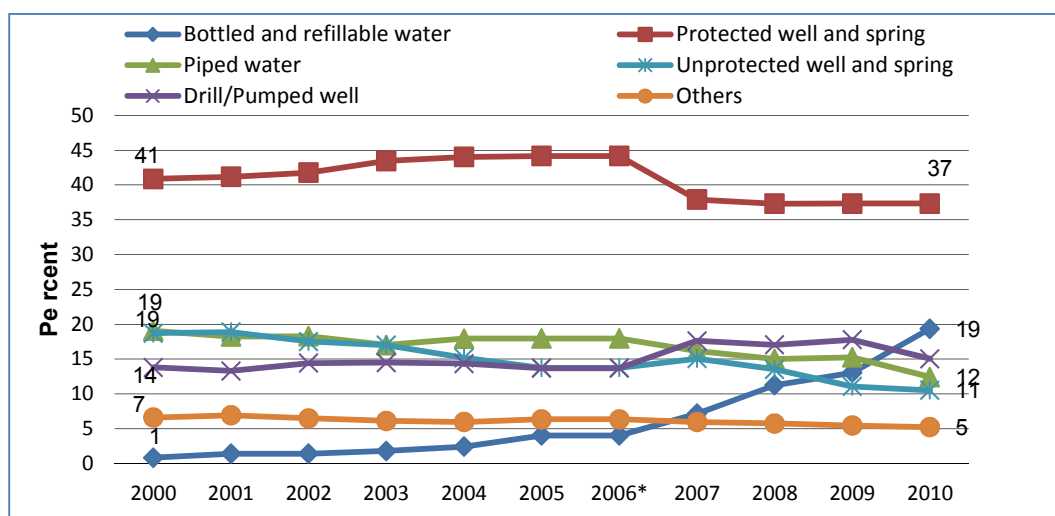
Note: Coverage of the population is households. Totals may not add to 100 due to rounding.

Source: Authors' calculations, SUSENAS 2008.

145. More than a third of total households in the top quintile drink bottled or refillable water. This may reflect that although households in the top quintile have more access to clean water (protected wells and springs, piped water or drilled/pumped wells), the quality of the water may still not be good enough for people to drink.

146. This phenomenon is also supported by trends in source of drinking water shown in Figure 38. The proportion of households drinking bottled and refillable water has been increasing substantially over the past 10 years, with only less than 1 per cent of households drinking from this source in 2000, increasing to around 19 per cent in 2010. As well as the wider availability of bottled water, pollution could be another factor driving this trend, with many households living in high density urban areas.

Figure 38: Trends in source of drinking water, 2000-2010 (per cent)

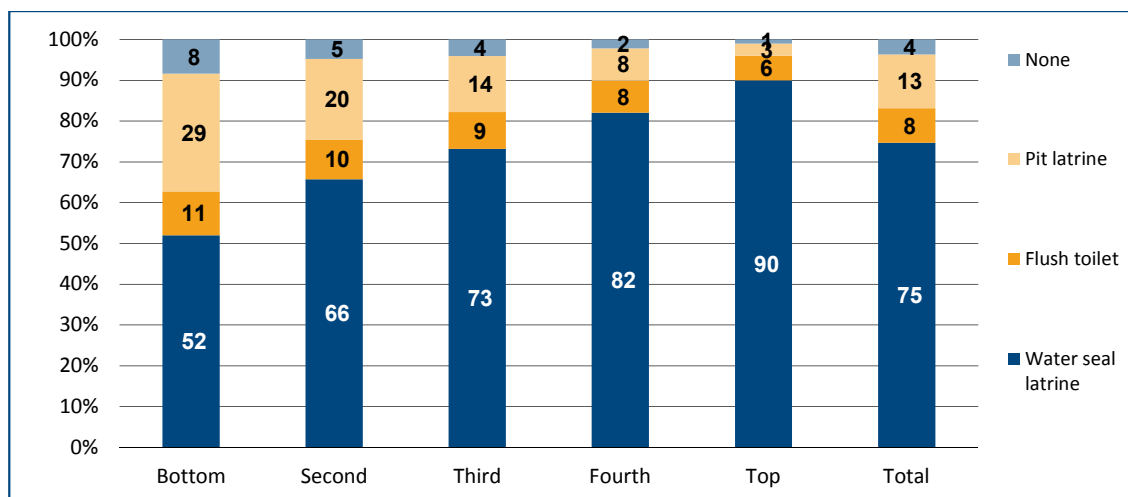


Note: The 2006 figures are similar to the 2005 figures.

Source: Statistics Indonesia 2001-2011.

147. The type of toilet used shows that although the majority of households in the bottom or second quintiles have used water seal latrine as their toilet, there are still 29 per cent of households in the bottom quintile and 20 per cent of households in the second quintile who only have access to a pit latrine. This compares to 3 per cent of households in the top quintile who are using a pit latrine (see Figure 39).

Figure 39: Type of toilet by Consumption Quintile (per cent of households), 2008



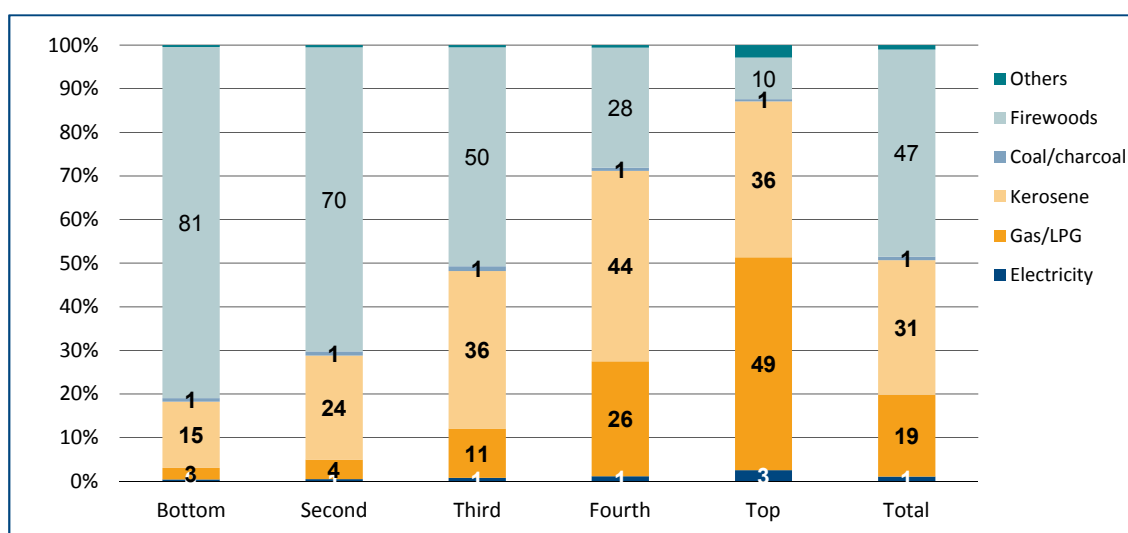
Note: Coverage of the population is households. Totals may not add to 100 due to rounding.

Source: Authors' calculations, SUSENAS 2008.

148. In 2008, firewood was the main source of energy used for cooking for households in Indonesia with 47 per cent of households using this type of energy, which is concentrated in households in the bottom, second and third quintiles (Figure 40).

149. Moving across consumption quintiles, the percentage of households who use gas/LPG as their main source of energy for cooking increases. The discrepancy between the top quintile and the two bottom quintiles is quite substantial, with the ratio between the top and bottom for those who use this method as a main source of energy for cooking being 16:1 for the bottom quintile and 12:1 for the second quintile.

Figure 40: Main source of energy for cooking by Consumption Quintile (per cent of households), 2008

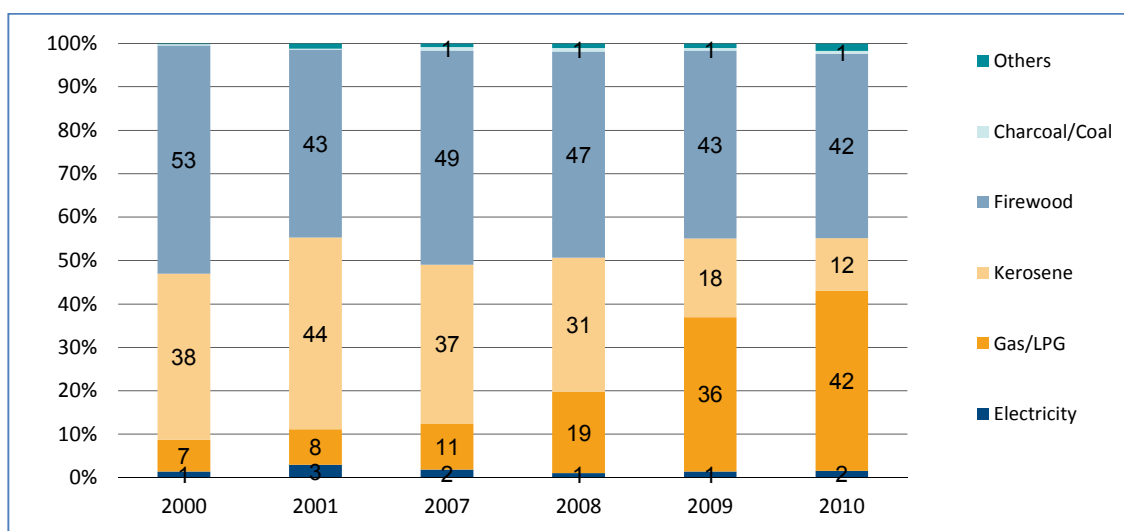


Note: Coverage of the population is households. Totals may not add to 100 due to rounding.

Source: Authors' calculations, SUSENAS 2008.

150. The proportion of households who use gas/LPG is expected to increase much more in the due to a massive government program to replace kerosene with LPG currently being rolled out. LPG stoves and cylinders have been distributed free of charge, particularly in urban areas (Mourougane 2010). The shift towards household use of Gas/LPG is further demonstrated in Figure 41, with the proportion of households using this kind of energy for cooking more than doubling from 19 per cent in 2008 to 42 per cent in 2010. This increase is in line with a decline in households using firewood and kerosene for cooking.

Figure 41: Main source of energy for cooking (per cent of households), 2000-2010



Note: Data between 2002 and 2006 are not available, as the coverage is different and includes not only cooking but also lighting and transportation.

Source: Statistics Indonesia 2001-2011.

151. Table 8 shows that access to state electricity includes households in the bottom and second quintiles, although there are still gaps between these households and those within the top quintile (around 12 percentage points). The other notable difference is the use of tamper/oil lamp/torch where 11.8 per cent of households in the bottom quintile use these as the main source of light in their homes.

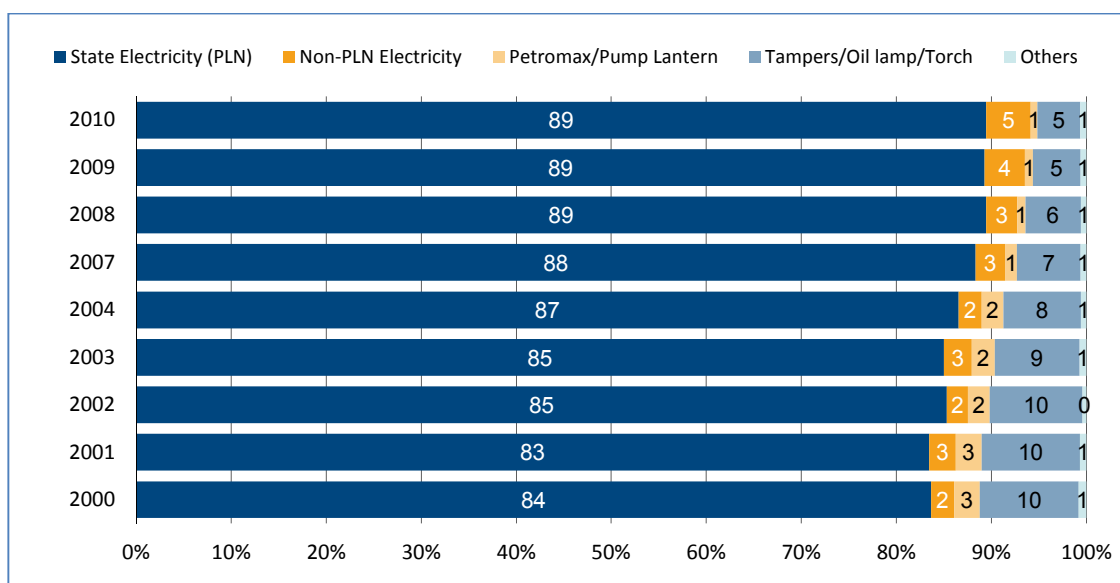
Table 8: Source of light by Consumption Quintile (per cent of households), 2008

Source of light	Bottom	Second	Third	Fourth	Top	Total
Electricity provided by State Electricity Company	83.2	88.4	89.3	91.5	95.0	89.5
Non-PLN Electricity	2.5	2.5	3.6	4.4	3.3	3.3
Petromax/Pump lantern	1.3	1.0	0.9	0.8	0.3	0.9
Tamper/Oil lamp/torch	11.8	7.7	5.7	3.0	1.0	5.8
Others	1.2	0.4	0.4	0.3	0.4	0.6
Total	100	100	100	100	100	100

Note: Coverage of the population is households. Totals may not add to 100 due to rounding.

Source: Authors' calculations, SUSENAS 2008.

152. Over the past decade (2000-2010), there has been a substantial shift in the way households light their homes, moving from a heavy reliance on tampers/oil lamp/torch to electricity providers (either state Electricity company (*Perusahaan Listrik Negara*) or non-non-state electricity company (Figure 42).

Figure 42: Source of light (per cent of households), 2000-2010

Note: Data for 2005 and 2006 are not shown as data is not available for these time periods.

Source: Statistics Indonesia, 2001-2011.

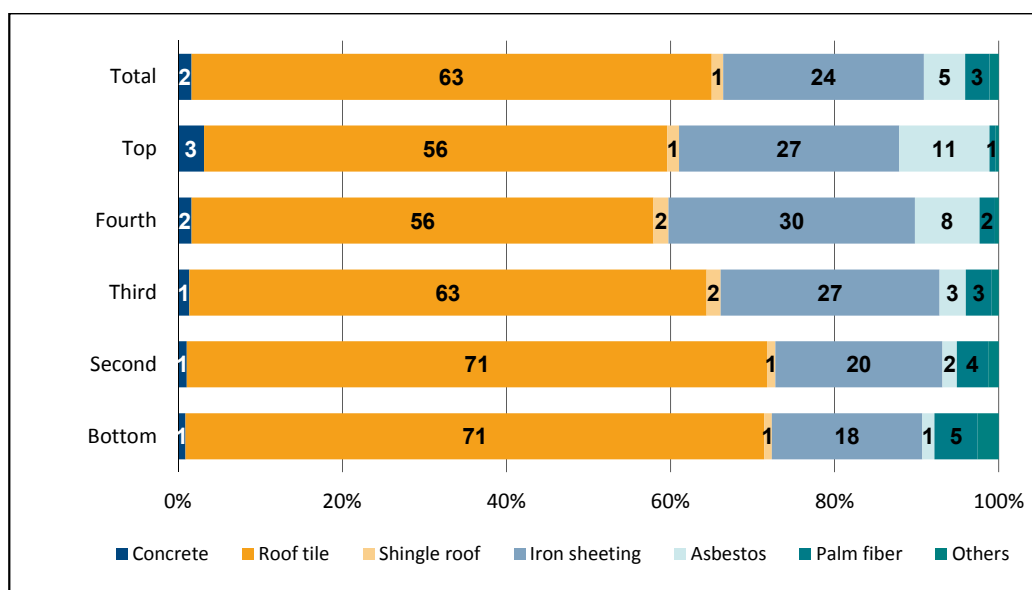
2.5.5 Dwelling quality: “roof, walls, and floor”

153. In 2007 misdirection of poverty alleviation strategies became an issue, with many programs mistargeted and resulting in ineffective outcomes. Since this time, the government has made efforts to verify and improve the database of poor households that are eligible as recipients of anti-poverty programs. In addition to minimising targeting issues, a new method of data collection - the *Pendataan Program Perlindungan Sosial (PPLS)* was rolled out, aimed at collecting information about the poorest Indonesian population, in order to better inform policy related to poverty alleviation. This population consisted of those in the lowest 40 per cent of households, based on social and economic characteristics, and classified as very poor, poor, and nearly poor.

154. Thus to fulfil this criteria, BPS (2008) has included more non-monetary indicators, which cover household assets such as the type of roof, wall, and floor. The use of non-monetary indicators to measure poverty is not new in the literature. Thorbecke (2005) has argued the importance of multi-dimensional poverty measures given that poor people generally do not have assets. However, the utilisation of these non-monetary variables as proxies of household assets is dependent on each country’s standard of living profile. Zeller *et al.* (2006) evaluates the methods to target the poorest in Asia, Africa, and Latin America, and they find that dwelling conditions are good indicators to determine and target the poor population in developing countries and areas such as rural India. In contrast, this method was less-reliable in the poor countries in Africa where housing and other assets were relatively homogenous.

155. Indonesia households have similar characteristics as other developing countries, and therefore using these kinds of non-monetary indicators is a relatively good indicator to use to detect poor households. Based on Susenas 2008 data, which includes these indicators, the majority of households (63 per cent) had used roof tile, a popular type of roof in the country, followed, by iron sheeting (24 per cent) to provide shelter for their home (Figure 43). However, in the bottom 20 per cent of households, many of these homes used traditional (yet inferior) types of roof material like palm fiber. The vast majority of households in the poorest households (71 per cent) used roof tile to provide shelter to their dwelling.

Figure 43: Material Used for the Largest Section of Roof (per cent of households), 2008

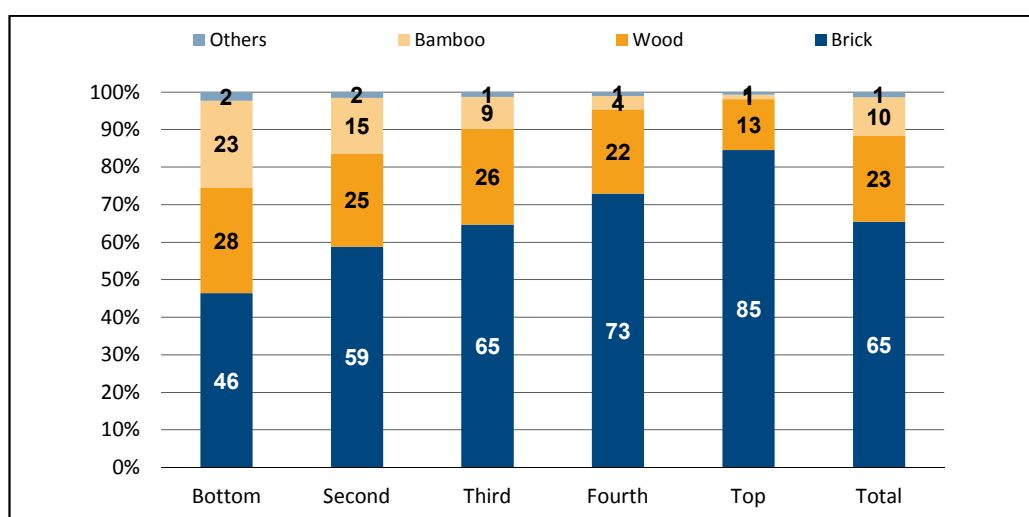


Note: Coverage of the population is households. Totals may not add to 100 due to rounding.

Source: Authors' calculations, SUSENAS 2008.

156. While the roof indicator from SUSENAS 2008 data may not be suitable for poverty targeting alone, other dwelling indicators may be relevant in identifying poor households. Only 46 per cent of households in the bottom quintile had used brick for their walls, compared with 65 per cent nationally. The majority of low consumption households use wood (28 per cent) and bamboo (23 per cent) for the largest section of wall (Figure 44). However, it is important to note that houses with wood material are not always related to low-income or even poor households, as 23 per cent of households at the national level use this type of material and the trend is distributed almost equally across all quintiles except for the top consumption quintile. Bamboo is more likely to be used to characterise poorer households, with larger contrasts observed.

Figure 44: Material Used for Largest Section of Wall (per cent of households), 2008

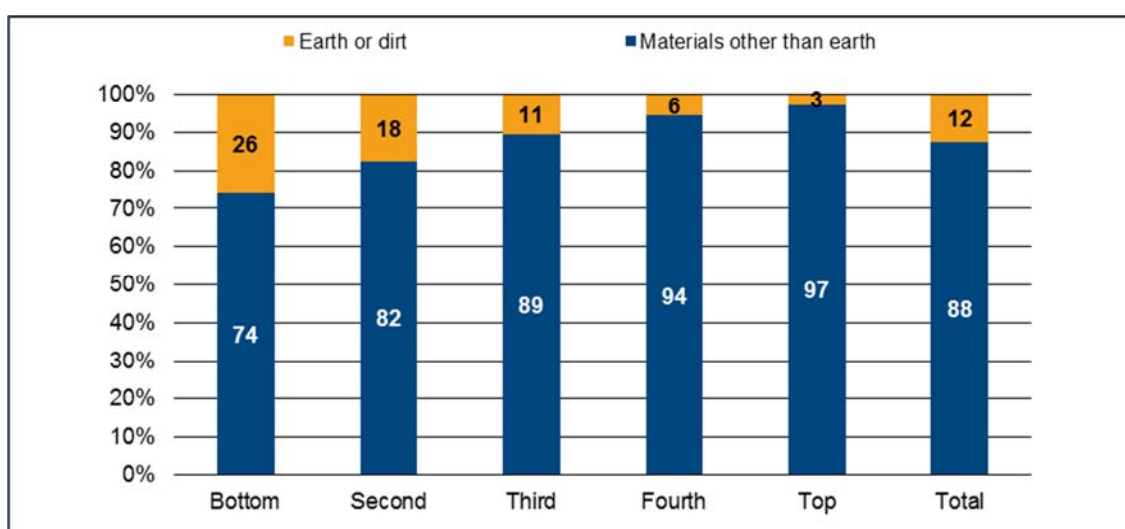


Note: Coverage of the population is households. Totals may not add to 100 due to rounding.

Source: Authors' calculations, SUSENAS 2008.

157. In terms of material used for the dwelling floor, the indicator is simply whether the house is with or without floor covering – that is, materials other than earth. The data conceivably reflects the quality of the home, with 26 per cent of households in the lowest quintile and 18 per cent in the second lowest quintile having an earth or dirt floor. This compares starkly with the national average of 12 per cent, and only 3 per cent of households in the top consumption quintile report having an earth or dirt floor (Figure 45).

Figure 45: Material Used for Largest Section of Floor (per cent of households), 2008



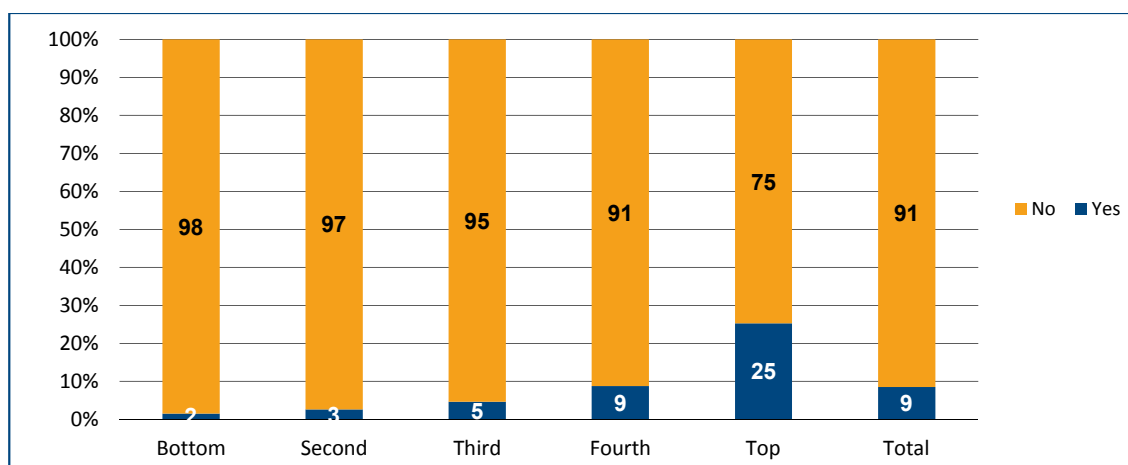
Note: Coverage of the population is households. Totals may not add to 100 due to rounding.
Source: Authors' calculations, SUSENAS 2008.

2.5.6 Connectedness

158. The connectedness domain represents access to information, communication and technology as in the era of globalisation exposure to what is happening worldwide and the use of the internet as an educational tool becomes increasingly important. This domain covers (i) internet use, (ii) ownership of personal computers and (iii) ownership of personal telephone. These indicators can also reflect socio-economic status, as the ability to purchase these goods and services can reflect a higher standard of living.

159. Figure 46 shows that only 9 per cent of total Indonesian households have access to the internet, although a quarter of households in the top quintile have access to this type of technology. This contrasts with only two and three per cent of households in the bottom and second quintiles respectively. However, with knowledge of the fast penetration of mobile phones with internet access capacity in recent years, it will be interesting to see whether more recent data will show large increases in households who have access to the internet.

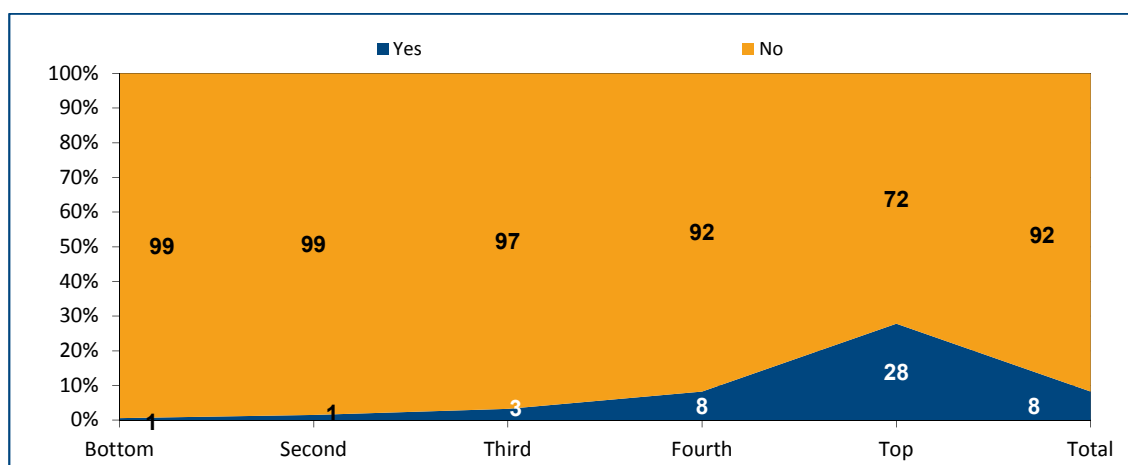
Figure 46: Internet Use by Consumption Quintile (per cent of households), 2008



Source: Authors' calculations, SUSENAS 2008.

160. The pattern of internet access can also reflect the possession of a personal computer within a household. In 2008, only 8 per cent of total households in Indonesia had either a computer or a notebook (see Figure 47). A huge gap also exists between households in the top and bottom quintile - a 27 percentage point difference. For the first four quintiles (bottom to fourth quintile) there is a smaller proportion of households who own a personal computer than those who have accessed the internet. This may indicate that these households may be accessing through warnet (a popular internet shop) or accessing via their mobile phones or through their place of work or school. This pattern is different from households in the top quintiles which are likely to be using their own personal computers to access the internet. Differences in internet access and ownership of personal computers may also reflect accessibility problems, with warnet not often available in many rural or isolated areas.

Figure 47: Ownership of personal computer by Consumption Quintile (per cent of households), 2008



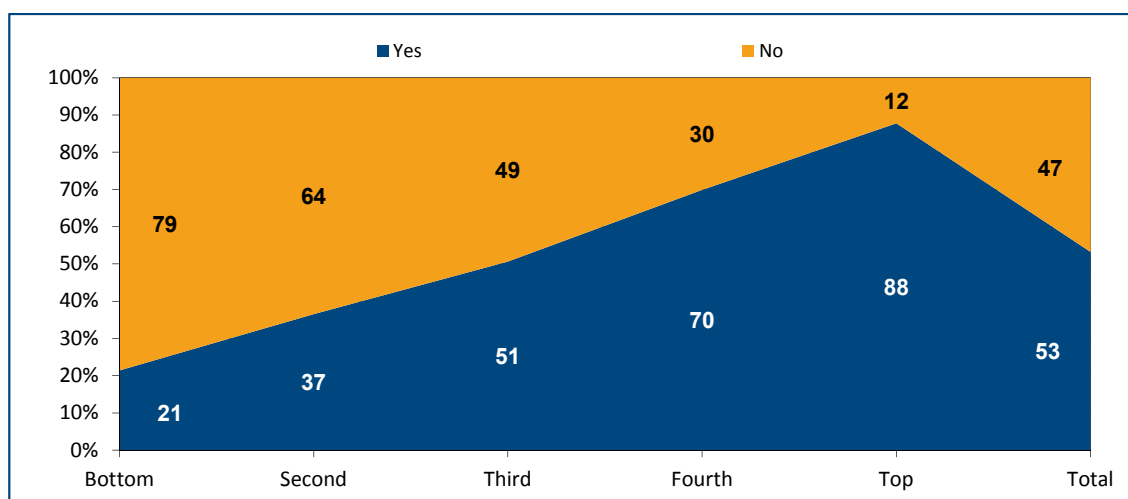
Source: Authors' calculations, SUSENAS 2008.

161. While many Indonesian households still lag behind in terms of computer and internet access, more than half of Indonesian households have either a line telephone or any one household member is in possession of a mobile phone (Figure 48). However, only around 1 out of 5 households in the bottom quintile and 3 in 5 in the second quintile have a personal telephone. Of those who do have access to a personal telephone, mobile phones are the most popular for households in the bottom quintile, with only 1 per cent of these households having a land line telephone and the remainder owning a mobile phone (results not shown). This may indicate greater mobile phone accessibility and affordability when compared

with phone lines as these can often be purchased at a cheaper price and phone line infrastructure is not universal throughout Indonesia.

162. Figure 48 also shows that as we move across the quintiles, the possession of a personal telephone as the main communication equipment also increases with 88 per cent of households in the top quintile owning either a line telephone or mobile phone.

Figure 48: Ownership of personal telephone by Consumption Quintile (per cent of households), 2008



Source: Authors' calculations, SUSENAS 2008.

2.6 Summary

163. The analyses provided in this section show that regional disparities have strong associations with both poverty and inequality. Factors such as differing economic conditions experienced by each region; the impact of the economic crises at the end of the 1990s; the spread of industrialisation in Sumatera; and the continuing slow-down of mining districts, are all likely to have contributed to the poverty and inequality patterns seen over the past decade.

164. Clear improvements in education access can be seen, with school participation rates increasing considerably over the last decade. Reasons for this improvement are still considered to be attributed to national policies such as the compulsory schooling program rather than as a result of the new authority that local governments have. However, there have been some districts that have allocated part of their budget to improve local education further than what the national program has contributed (Simatupang, 2009).

165. Despite the strong growth in GDP per capita that Indonesia has experienced in the past decade, economic growth has been slowing down in several mining districts, especially those with relatively high GRDP per capita. Nevertheless, not all districts with high GRDP per capita exhibit strong growth. The disparity of GRDP per capita has shown a decreasing trend during this period mainly due to the decreasing disparity among districts within a province while the disparities between provinces and between regions are relatively stagnant.

166. Following the strong economic growth, there has been a clear reduction in poverty rates among districts, especially those with extreme poverty rates. Nevertheless, regional disparity of poverty rates has increased slightly across this same period. This is mostly due to the widening gap of poverty rate among districts within a province. The different trends observed between regional inequalities of GRDP per capita

and the disparity poverty rates is a clear indication of the lack of correlation between GRDP per capita and poverty rate at district level.

167. The results and discussion on the characteristics of population vulnerable to poverty in this section illustrates that there is still a wide gap between the population or households who are in the top and bottom two quintiles of consumption per capita. From the socio-economic domain, while education participation for children has been relatively uniform across quintiles, educational attainment still varies with many adults in the bottom and second quintiles not having any education, and only a small proportion of these persons have attained the level after primary school. The analysis from the living condition domain shows that there is a substantial proportion of households in the bottom and second quintiles that do not have access to clean water or adequate toilet facilities, and rely on traditional sources of energy for cooking using firewood and tamper/oil lamp/torch as source of light. This may represent that equal access to infrastructure which can be provided through government intervention is still a major issue.

168. From a labour market perspective, although the labour force participation rate is generally uniform across quintiles, the population who are vulnerable to poverty are characterised by working in sectors that typically have lower wage rates and inferior working conditions. The discussion from the connectedness domain shows that households in the bottom or second quintiles of consumption per capita have rarely accessed the internet and do not own a personal computer. Only a fifth of the bottom quintile has access to a telephone, compared with almost 90 per cent of households in the top quintile.

169. In contrast to the decreasing poverty trends observed, consumption inequality has been increasing across the decentralisation period, with the Gini coefficient steadily rising from 0.33 in 1999 to 0.38 in 2010. Urban inequality aligns with national trends and rural inequality is generally lower, reflecting greater homogeneity in these areas in terms of consumption.

170. Regional differences in inequality are also evident; however, high inequality values do not always necessarily align with high poverty rates. Two newly delineated provinces - Gorontalo and Banten, recorded the highest rates of inequality. These two provinces have also seen a relatively rapid increase in inequality between 2001 and 2010; while Riau, Maluku and Papua saw relatively now change across the same period.

171. MP3EI with its five economic corridors has been launched to explore the economic potential of each island and reduce the dominance of Java as the main economic centre in Indonesia. As investment in human capital in the form of education has been an important poverty reduction strategy, linking MP3EI with education policy can be explored to generate education programs that match the needs of the local industries and generate local employment.

3. ESTIMATING THE IMPACT OF CONSUMPTION GROWTH AND INEQUALITY ON POVERTY DURING THE DECENTRALISATION PERIOD

3.1 Background and overview

172. A series of aggregate measures of consumption growth, inequality and poverty for Indonesia were presented in the introductory section to this Report, and served to highlight some key changes that have occurred over time, and particularly over the last decade. The following summarises those major findings of relevance to the empirical analysis in this Section:

- Economic growth in Indonesia has been lower in the last decade than prior to the Asian crisis (see Table 2). With the Indonesian economy growing on average 5.3 per cent per annum since 2001, mean consumption per capita increased by an average of only 2.4 per cent per year over the period between 2002 and 2010.
- The degree of consumption inequality has risen over the same period, as indicated by an overall increase in the Gini coefficient measure from 0.329 in 2002 to 0.380 in 2010. There is some debate among researchers regarding the effective magnitude of this change (see Figure 12).
- The national poverty headcount in Indonesia has declined substantially, from 18.2 per cent in 2002 to 13.3 per cent in 2010, or from 29.3 per cent to 18.1 per cent during the same period if the poverty line \$1.25 a day (PPP) is used

173. An important next step in this Report is to explore the direction and strength of associations between poverty, inequality and growth over the main development periods in Indonesia. Miranti (2010) examined the impact of changes in consumption growth and changes in inequality on headcount poverty during three development episodes between 1984 and 2002. Expanding Miranti's work, this chapter incrementally examines the consumption growth elasticity of poverty during the fourth major decentralisation period, again taking into account changes in inequality. Has the decentralisation period been pro-poor? To what degree has the change in the degree of inequality offset the alleviating impact on poverty of growth in consumption?

174. One of the key elements in this next stage of analysis is to take account of the high degree of heterogeneity in circumstances that exist across provinces in Indonesia. To assess effectively the underlying impact of consumption growth and inequality on poverty within provinces, it is essential to control first for local differences in economic conditions. This is achieved through the use of econometric methods that exploit the longitudinal nature of provincial data on headcount poverty derived from successive series of the Indonesian SUSENAS micro survey.

3.2 Data

175. Data on provincial headcount poverty (since 1996), monthly mean consumption per capita and provincial inequality are sourced from SUSENAS data published by the BPS from 1984 to 2010. Prior to 1996, the provincial headcount poverty data are sourced from poverty series used in Miranti (2010) which allow more consistent comparison with the revised poverty rates published by the BPS since the 1996. In particular, Miranti (2010) has re-estimated BPS poverty figures from 1984 to 1993 using the 2003 BPS methodology.

176. The provincial level was chosen as an appropriate geographical unit through which to construct a consistent panel data source for empirical analysis. In this section, eleven waves of SUSENAS consumption data are used to assemble the provincial panel used in estimation - every three years from 1984 to 1996, 2002, 2005 and then annually from 2007 through to 2010. Although official poverty figures have been published annually by the BPS over the period of analysis, the Gini coefficient is based on SUSENAS consumption data. A provincial series is therefore only available every third year from 1984 to 2005 using the SUSENAS Consumption Module (regular) data, and then annually from 2007 using the SUSENAS Consumption Module (panel) data.

177. SUSENAS data were not collected in some years for several conflict provinces such as Aceh, Maluku and Papua. This creates a small number of missing observations, leading to an unbalanced panel of provincial data. A second issue relates to an expansion in the number of provinces from 26 prior to 2002 to 33 in 2003. To create a degree of consistency, these new provinces were reallocated back to the original provincial boundaries that occurred prior to 2002. Specifically, Bangka Belitung is combined with South Sumatra, Riau Island is combined with Riau, Banten is combined with West Java, Gorontalo is combined with North Sulawesi, West Sulawesi is combined with South Sulawesi, Maluku Utara is combined with Maluku and West Papua is combined with Papua. The end result is a workable dataset with 308 observations. These data cover 26 provinces in Indonesia.

178. Mean per capita consumption (in expenditure terms) is preferred as a proxy of household income rather than per capita GDP income data from national accounts. This follows previous literature in this field (see Deaton, 2001; Ravallion and Chen, 1997; Ravallion, 2003; Adams, 2004 and the discussion in Miranti, 2010) and is justified on the basis of three reasons, (i) the weak correlation observed between provincial headcount poverty and economic growth from either national or regional accounts (see our discussion earlier), (ii) to examine whether an increase in the average living standards has been translated into poverty reduction (trickle-down effect) and (iii) to allow a consistent time series of data that is used in Miranti (2007, 2010) which perform a basis for the regression used in this section.

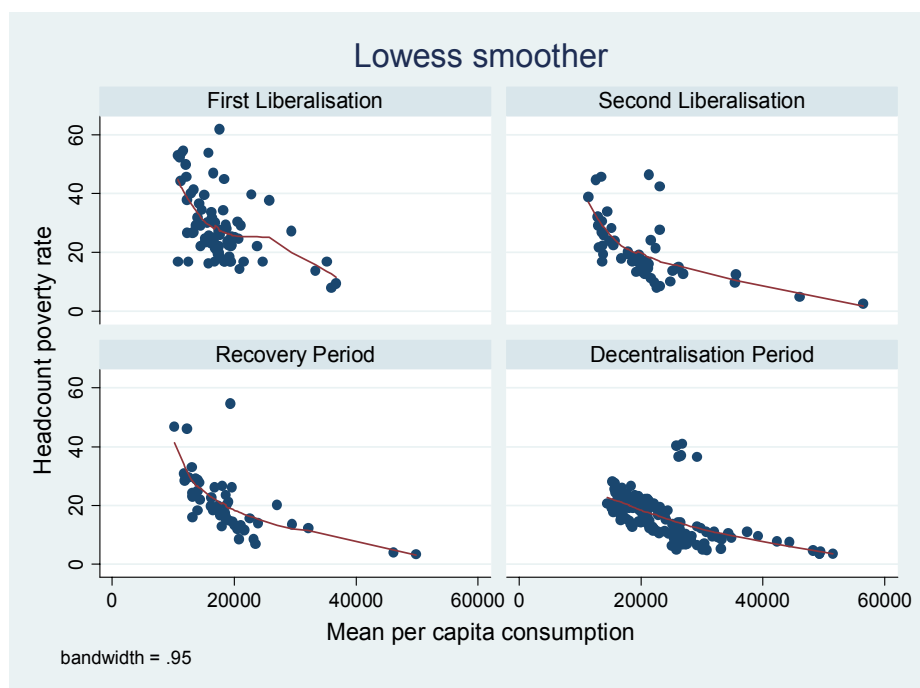
179. It should be acknowledged that either mean per capita consumption or per capita GDP is not free from measurement errors and may cause either underestimation or overestimation of the estimate. For example, Bhalla (2002) has argued that using the survey mean as a growth proxy has the effect of seriously underestimating the growth elasticity of poverty in the developing countries. Ravallion (2001) has also tried to correct to this problem by using the growth rate from the national accounts as an instrumental variable for the growth rate in the survey mean, but growth rate from the national accounts may not be the best instrument as this may be correlated with the error terms in the regression. Exploratory analysis to compare both variables will be useful for future research. Thus in this section, growth is defined as the percentage change in mean consumption per capita.

180. Headcount poverty rates and Gini indices are chosen to represent provincial poverty and inequality, respectively. Both are simpler to understand compared to other types of poverty and inequality measures, and both data sources are officially published by the BPS (except for poverty data prior to 1996

used in this section). To allow for comparisons over time, the mean consumption (expenditure) per capita data is expressed into 1984 IDR (Indonesian Rupiah) using provincial poverty lines as a deflator.

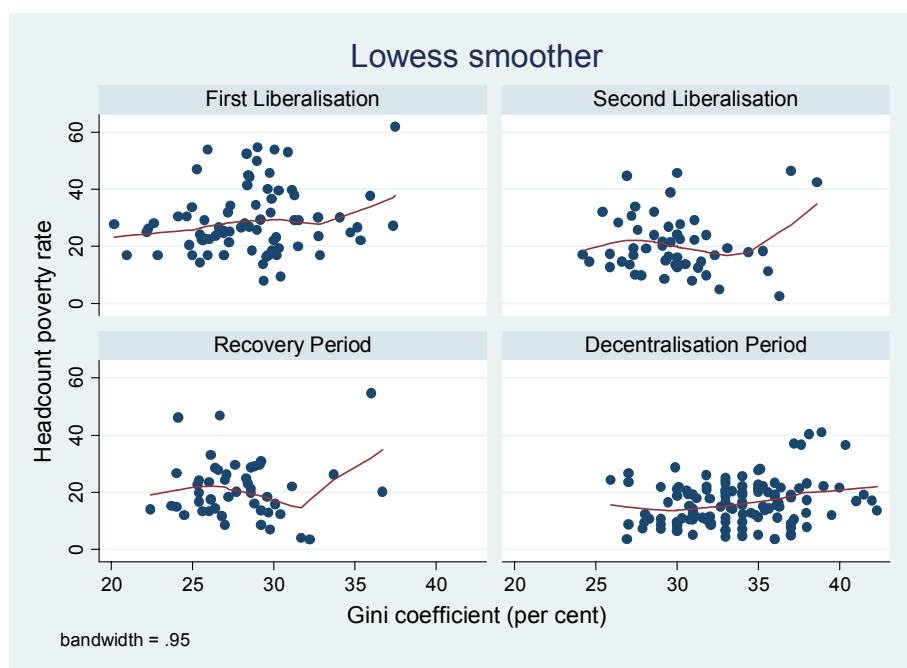
181. Consumption growth and inequality act together to influence the provincial headcount poverty rate, with strong prior expectations of a negative relationship between poverty and mean consumption. Research also suggests a positive relationship between poverty and inequality (as measured through the Gini coefficient), for reasons discussed earlier in this report. Simple scatterplots of the (bivariate) association between poverty and either consumption (Figure 49) or inequality (Figure 50) in each of Indonesia's development periods provide indicative support for these priors. They also reveal some variation in the strengths of such relationships over time.

Figure 49: Provincial headcount poverty rates and mean per capita consumption, by development period



Notes: Data on mean headcount poverty and mean Gini coefficient are calculated for each time period from 1984 to 2010 using SUSENAS data. Locally smoothed regressions are generated using the LOWESS method, with a bandwidth of 0.95.

Source: Authors' calculations based on SUSENAS data.

Figure 50: Provincial headcount poverty rates and Gini coefficients of inequality, by development period

Note: Data on mean headcount poverty and mean Gini coefficient are calculated for each time period from 1984 to 2010 using SUSENAS data. Locally smoothed regressions are generated using the LOWESS method, with a bandwidth of 0.95.

Source: Authors' calculations based on SUSENAS data.

182. Two caveats apply when seeking to draw conclusive inferences about the direction and strength of association between poverty, consumption growth and inequality using the simple representations in Figures 49 and 50. Firstly, it is important that such effects are simultaneously controlled for when estimating growth and inequality elasticities of poverty. Not to do so will lead to a bias in the estimated effects – for example, ignoring the marginal impact of inequality on poverty will force the growth elasticity to absorb this additional influence.

183. Secondly, the apparent association between poverty and consumption in particular is affected to a large degree by systematic and persistent differences in poverty, consumption and inequality between Indonesian provinces. For example, Papua will inevitably record both a higher level of poverty, and lower mean consumption, than Jakarta, in whichever time period one examines. Not to control for such differences can also lead to bias in the apparent impact of growth and inequality on poverty within each province of Indonesia.

184. We deal collectively with these issues in a series of empirical specifications presented in the next section of this report.

3.3 Empirical Methodology

185. Two general models are estimated to examine consumption growth and inequality elasticities of poverty, both of which are derived from the basic model suggested by Ravallion and Chen (1997) and both applied in Miranti (2010):

$$\ln P_{i,t} = \gamma_0 + \gamma_1 \ln MEAN_{i,t} + \gamma_2 \ln GINI_{i,t} + \sum_{e=1}^{e=6} \beta_e d_t + \delta_i + \varepsilon_{i,t} \quad (1)$$

$$\ln P_{i,t} = \gamma_0 + \sum_{p=1}^P \gamma_{1p} e_p \ln MEAN_{i,t} + \sum_{p=1}^P \gamma_{2p} e_p \gamma_2 \ln GINI_{i,t} + \sum_{p=1}^P \beta_{ep} e_p + \delta_i + \varepsilon_{i,t} \quad (2)$$

where

- $P_{i,t}$ represents headcount poverty in province i at time t (%)
- $MEAN_{i,t}$ represents mean consumption per capita (IDR/month, 1984 prices)
- $GINI_{i,t}$ is the Gini coefficient of province i at time t
- t is the year index:
t = {1984, 1987, 1990, 1993, 1996, 2002, 2005, 2007, 2008, 2009, 2010}
- d_t are the year dummies for each Susenas year from 1984 to 2010:
eg. $d_{1984} = 1$ if t = 1984, 0 otherwise
- e_p represent dummies for four distinct development periods in Indonesia: the First Liberalisation period (1984-1990); the Second Liberalisation period (1991-1996); the Recovery period (1999-2002); and the Decentralisation period (2003-2010):
- $e_1 = 1$ if t = {1984, 1987, 1990}, 0 otherwise
 $e_2 = 1$ if t = {1993, 1996}, 0 otherwise
 $e_3 = 1$ if t = {1999, 2002}, 0 otherwise
 $e_4 = 1$ if t = {2005, 2007, 2008, 2009, 2010}, 0 otherwise
- δ_i is the province fixed effect (unobserved heterogeneity)
- $\varepsilon_{i,t}$ is a white-noise error term that includes errors in the poverty measure.

186. In each case, the relationships between poverty, consumption growth and inequality take a logarithmic form for both dependent and independent variables in order that the coefficients on each of the core explanatory variables are presented directly as elasticities.

187. Under this choice of specification, the coefficients attached to the variables involving $\ln MEAN$ refer to a one per cent change in monthly mean consumption per capita, and the coefficients on the variables involving $\ln GINI$ refers to a one per cent change in inequality. The first specification (1) assumes constant growth and inequality elasticities of poverty across all periods of Indonesian development, whereas the second specification (2) is a generalisation that allows for a different elasticity to be estimated in each development period.

188. Fixed effects methods are used in this report to capture systematic and persistent provincial differences in poverty over development periods. Ravallion and Chen (1997) and Adams (2004) use First Differences estimation in their analyses to control for provincial heterogeneity. We prefer a two-way fixed effects approach to control simultaneously for both provincial heterogeneity, and systematic national trends in poverty over time. This method is known to generate more efficient results because in any province, random errors are usually assumed to be serially independent – *i.e.* not serially correlated with each other across time periods (see Wooldridge 2003). Time fixed effects are controlled for through the use of year dummies to capture macroeconomic conditions in each SUSENAS consumption module year used.

3.4 Empirical Results

189. Table 9 and Table 10 provide a series of regression results for the range of specifications nested in equations (1) and (2) above. The first panel of results in Table 9 restrict the growth and inequality to remain constant over the full period of analysis, whereas the second panel in Table 10 provide separate elasticity estimates for each of the four main development periods in Indonesia: the First Liberalisation period (1984-1990); the Second Liberalisation period (1991-1996); the Recovery period (1999-2002); and the Decentralisation period (2003-2010).

190. Both sets of results demonstrate the importance of controlling for systematic provincial differences in the estimation of consumption growth and inequality elasticities of poverty. The first two columns of results presented in Table 9 report estimates of the (constant) growth elasticity of poverty (GEP) without controlling for provincial fixed effects. When inequality is ignored, the growth elasticity of poverty is estimated to be -1.34 (Column I). The additional control of inequality (Column II) adjusts the GEP to -1.37 (which means that a 10 per cent increase in average consumption per capita will reduce the poverty rate proportionally by 13.7 per cent).

191. The additional estimated inequality elasticity of poverty (IEP) in Column II is 0.26, but insignificant even at the 10 per cent level. These results are broadly in line with those of Pritchett (2010), who compares the poverty elasticity of growth as the ratio of the percentage reduction in the poverty headcount rate to the percentage increase in GDP per capita during the periods 1976-1996 and 2000-2008, but with no controls for systematic provincial differences in poverty and growth. Pritchett (2011) finds an average elasticity of -1.15 in 1976 to 1996, and a calculated GEP of -0.70 for 2000 to 2008.

192. When provincial fixed effects and time effects are included in estimation, two effects occur. Firstly, the estimated GEP strengthens substantially, to -2.30 when controlling only for provincial fixed effects (Column III), or -2.28 with the addition of time effects (Column IV). The second effect to note is the rising impact of inequality on poverty when provincial differences are accounted for. The inequality elasticity of poverty (IEP) strengthens to 0.81 and 0.86 respectively, and becomes statistically significant. This is an important result, and emphasises how the positive impact of growth on poverty across Indonesian provinces can be diluted by high levels of consumption inequality.

Table 9: Growth elasticity regression results (constant across development periods)

Explanatory variable	I			II			III			IV		
	Coeff.	t	Sig	Coeff.	t	Sig	Coeff.	t	Sig	Coeff.	t	Sig
Consumption and inequality												
<i>ln(mean consumption)</i>	-1.34	-20.62	***	-1.37	-20.24	***	-2.30	-19.36	***	-2.28	-19.49	***
<i>ln(GINI)</i>	-			0.26	1.63		0.81	5.60	***	0.86	6.16	***
Development period												
<i>EPISODE1 (First liberalisation)</i>	-			-			0.08	1.85	*	-		
<i>EPISODE2 (Second liberalisation)</i>	-			-			-0.08	-2.24	**	-		
<i>EPISODE3 (Recovery)</i>	-			-			-0.14	-3.34	***	-		
<i>EPISODE4 (Decentralisation)</i>	-			-			-			-		
Constant	16.18	25.09	***	15.62	21.46	***	23.37	19.94	***	23.05	19.18	***
Provincial fixed effects	No			No			Yes			Yes		
Year effects	No			No			No			Yes		
Sample size	308			308			308			308		
Adjusted R-squared	0.58			0.58			0.90			0.91		

Notes: Significance at the 1, 5 or 10 per cent levels is denoted by ***, ** and * respectively. Figures in parentheses are t-ratios. For regressions that include provincial and time fixed effects, the reference province is Jakarta and 2010 is the reference period.

Source: Authors' calculations based on SUSENAS data from 1984 to 2010.

Table 10: Growth elasticity regression results (varying across development periods)

Explanatory variable	V			VI			VII		
	Coeff.	t	Sig	Coeff.	t	Sig	Coeff.	t	Sig
Consumption and inequality									
<i>EPISODE1 x ln(mean cons)</i>	-0.88	-6.08	***	-2.08	-15.42	***	-2.00	-15.49	***
<i>EPISODE2 x ln(mean cons)</i>	-1.38	-9.11	***	-2.31	-17.87	***	-2.33	-19.19	***
<i>EPISODE3 x ln(mean cons)</i>	-1.38	-8.88	***	-2.34	-17.51	***	-2.29	-18.25	***
<i>EPISODE4 x ln(mean cons)</i>	-1.37	-12.81	***	-2.50	-19.77	***	-2.46	-20.13	***
<i>EPISODE1 x ln(GINI)</i>	0.48	1.54		0.52	2.71	***	0.50	2.82	***
<i>EPISODE2 x ln(GINI)</i>	0.68	1.37		0.54	1.88	*	0.93	3.49	***
<i>EPISODE3 x ln(GINI)</i>	0.36	0.74		0.75	2.66	***	0.92	3.49	***
<i>EPISODE4 x ln(GINI)</i>	0.77	2.94	***	1.13	6.57	***	1.13	6.87	***
Development period									
<i>EPISODE1 (First liberalisation)</i>	-			-			-		
<i>EPISODE2 (Second liberalisation)</i>	3.95	1.53		2.06	1.55		-		
<i>EPISODE3 (Recovery)</i>	4.91	1.84	*	1.48	1.08		-		
<i>EPISODE4 (Decentralisation)</i>	3.42	1.52		1.95	1.65	*	-		
Constant	10.30	5.82	***	22.40	15.56	***	23.94	18.14	***
Provincial fixed effects	No			Yes			Yes		
Year effects	No			No			Yes		
Sample size	308			308			308		
Adjusted R-squared	0.63			0.90			0.92		

Notes: Significance at the 1, 5 or 10 per cent levels is denoted by ***, ** and * respectively. Figures in parentheses are t-ratios. For regressions that include provincial and time fixed effects, the reference province is Jakarta and 2010 is the reference period.

Source: Authors' calculations based on SUSENAS data from 1984 to 2010.

193. These findings are further explored in Table 10, by allowing for separate estimates of GEP and IEP across the four development periods that occurred in Indonesia from 1984 to 2010, ending with the period of decentralisation after 2002. Column V in Table 10 reports a series of growth and inequality elasticities of poverty for each of Indonesia's main development phases, but with no controls for systematic provincial differences. Again, results are biased downwards on this basis, but nevertheless align broadly with those of Pritchett (2011) and show a rising impact of growth on poverty as Indonesia progressed through each phase of development.

194. The last two columns of Table 10 provide the most reliable estimates of GEP and IEP, with respective controls for provincial fixed effects (Columns VI) and both provincial and time fixed effects (Column VII, reproduced in Table 11 below). Two key stories emerge from these results:

195. Firstly, the effectiveness of growth in alleviating poverty across provinces is greater during the Decentralisation period after 2002 than at any earlier point in Indonesia's development history. The growth elasticity of poverty post-2002 is estimated to be -2.46, which means that a 10 per cent increase in average consumption per capita would reduce the poverty rate proportionally by 24.6 per cent.

196. A second important result from the estimates in Column VII relates to the rising influence of inequality on provincial poverty rates over time. The inequality elasticity of poverty is estimated to be 0.5 during the First Liberalisation period (suggesting that a 10 per cent increase in inequality would increase headcount poverty rates by 5 per cent). The strength of this effect rises systematically through time, peaking during the Decentralisation period at an IEP of 1.13 (suggesting that a 10 per cent increase in inequality will now increase headcount poverty rates by more than 11 per cent).

Table 11: Summary of GEP and IEP, 1984-2002; 2002-2010

Period	GEP	IEP
First liberalisation period (1984-1990)	-2.00	0.50
Second liberalisation period (1990-1996)	-2.33	0.93
Recovery period (1999-2002)	-2.29	0.92
Decentralisation period (2002-2010)	-2.46	1.13
All periods (average)	-2.28	0.86

Source: Tables 9 and 10.

197. It should be noted that the effects of other explanatory factors not separately included in the empirical specifications may be absorbed into the year and provincial fixed effects. The explanatory variables that may have not been included in the estimation include, in particular, relevant government policies or interventions such as various targeted poverty alleviation programs. These are discussed in the next section.

3.5 Quantifying the Consumption Growth and Inequality effects on Poverty

198. Table 12 shows the quantified impacts of growth and changes in inequality effects on poverty change combining the period included in Miranti (2010) and the new Decentralisation period covering 2002-2010. The quantified impacts represent the contribution of growth and changes in inequality to changes in the poverty rate.

199. The findings indicate an offsetting impact from inequality changes (1.88 percentage points) to the negative impact of growth on poverty change (5.71 percentage points). Although growth has been pro-poor during this Decentralisation period, the increasing degree of inequality over the same period has hampered the growth impact. In line with the national figure of consumption inequality, for most provinces other than Aceh, Maluku and Papua (for which there were no data in 2002), inequality increased noticeably during the period from 2002 to 2010. It may well be worth exploring further whether this outcome represents an adverse impact from Decentralisation for districts within a province, and if so, what mechanisms are in play that may cause such a rise in inequality.

200. Previous literature has conjectured that the Decentralisation in Indonesia has not improved household welfare significantly (see for example Mahi 2010) or reduced inequality (see for example Hartono and Irawan 2008). Hartono and Irawan (2008) argue that this may be because of lack of coordination between central and local governments, with local government too focused on generating local income rather than contributing to the national program of poverty alleviation.

Table 12: Contribution of Consumption Growth and Inequality to Change in Poverty

Period	Contribution to poverty change (percentage points)		Total poverty change (percentage points)
	Growth	Inequality Change	
First liberalisation period (1984-1990)	-3.54	-0.61	-4.15
Second liberalisation period (1990-1996)	0.54	0.79	1.33
Recovery period (1999-2002)	-4.84	0.99	-3.85
Decentralisation period (2002-2010)	-5.71	1.88	-3.83
All periods (average)	-13.55	3.05	-10.50

Note: The contribution of growth and inequality to poverty change is calculated as the formulas below:

$$\Delta \frac{\ln P_t}{\ln MEAN_t} = \gamma_1 \Rightarrow \frac{\left[\frac{\Delta P_t}{P_t} \right]}{\left[\frac{\Delta MEAN_t}{MEAN_t} \right]} = \gamma_1 \Rightarrow \Delta P_t = \frac{(\gamma_1 * \Delta MEAN_t * P_t)}{MEAN_t} ; \quad \Delta \frac{\ln P_t}{\ln GINI_t} = \gamma_2 \Rightarrow \frac{\left[\frac{\Delta P_t}{P_t} \right]}{\left[\frac{\Delta GINI_t}{GINI_t} \right]} = \gamma_2 \Rightarrow \Delta P_t = \frac{(\gamma_2 * \Delta GINI_t * P_t)}{GINI_t}$$

Source: Authors' calculations.

3.6 Summary

201. This section uses eleven waves of the National Socioeconomic Survey (SUSENAS) consumption modules to calculate the impact of consumption growth and inequality on poverty with a particular focus on the decentralisation period and taking into account unobserved heterogeneity of provinces.

202. The results show that the growth elasticity of poverty during the decentralisation period is negative and significant. This means that an increase in average living standards in terms of consumption per capita has gone hand in hand with poverty reduction. In contrast, inequality

elasticity of poverty is positive and significant, which suggests that increasing inequality is associated with an increasing poverty rate.

203. The impact of periods on poverty differs over time and it is interesting to find the impact of consumption growth and inequality on poverty are the largest during the decentralisation period. In addition, the results also suggest an offsetting impact from inequality changes to the negative impact of consumption growth on poverty change. Although consumption growth has been pro-poor during the decentralisation period as in other development periods (first and second liberalisation period and the recovery period) the offsetting impacts from inequality changes may represent increased inequality in most provinces in Indonesia during 2002-2010.

204. The previous chapter has explored some potential drivers that may explain inequality in Indonesia, ranging from the role of the labour market to regional disparities. The fact that increasing in inequality is countering the pro-poor growth may indicate some relevant policy implications *i.e.* Indonesia may need to have more specific policies to target reducing inequality and poverty rather than just relying on economic growth. For example, it is indeed that consumption share held by the top 20 per cent was higher than the bottom 20 per cent of the population. Further, the discussion on Theil Index decomposition using district level has also indicated some persistence in terms of high disparities between districts within a province over time. Further empirical exercise to test the potential drivers of factors that hamper the growth impact on poverty reduction will be interesting to do in the future.

4. GOVERNMENT STRATEGY OPTIONS

205. The previous chapter has demonstrated the positive association between consumption growth and poverty alleviation. However, it has been noted in earlier chapters that relying on economic growth solely may not be enough to eradicate poverty and effective government policies targeted to improve both inequality and poverty should exist. This section discusses government policies that are directly targeted at the poor or groups of people or households who are vulnerable to poverty.¹¹

206. Direct government intervention poverty alleviation strategies have been intensive over the last decade, with significant anti-poverty programs and specific funding allocated in annual central and local government budgets. However, the potential impact of these efforts at a macro-level remain to be questioned, including whether the contribution from government has played a significant role in poverty reduction or whether the national and international economic climate have been more influential. Prior studies underline that improving growth performance (both using mean consumption per capita or GDP per capita) remains an effective way to alleviate poverty through enhancing per capita income (Ravallion, 1995; Dollar and Kraay 2001; Balisacan *et al.*, 2003; Miranti, 2007 and 2010). Empirical results shown in the previous chapter have also concluded that increasing income has a reducing impact on poverty.

207. The main-stream paradigm among scholars has shifted to consider direct government assistance as an important aspect in reducing poverty. Many empirical studies show that with competent public spending, governments may improve social welfare and hence reduce the number and depth of persons in poverty (Van De Walle, 1998). Nevertheless, institutional credibility plays a crucial role in implementation (Blaxall, 2000). In this section, unless specified differently, government refers to the Indonesian “Central Government”.

4.1 Direct Government Strategy for Poverty Alleviation

208. The first three years of decentralisation (2001-2004) denoted a parallel government intensive effort to reduce poverty, especially after the impact of the Asian financial crisis (1997-1998).¹² During this period, poverty alleviation strategies did not only focus on the newly poor, but also specifically people who were more vulnerable to poverty. Suryahadi and Sumarto (2003) defined a household’s vulnerability to poverty as the risk or probability that a household will be poor in the near future¹³. They found that the proportion of this group almost doubled from 18 per

¹¹ Scherer and Scherer (2011) also argue there are policies that may not necessarily focus on poverty but may have an impact on poverty such as labour market policies. In a comprehensive literature review, Scherer and Scherer (2011) have discussed labour market policies in detail, including minimum wages and severance pay which is likely to be indirectly associated with poverty.

¹² The government also marked the first three years of decentralisation by enacting Law No 40/2004 of the National Social Protection System (*Jamsosnas*) which provided health, accident protection in the workplace, disability, pension, and life insurance cover to workers and their families. This Law is expected to be fully-implemented in 2014.

¹³ This may differ from the term vulnerability used in other sections of this paper.

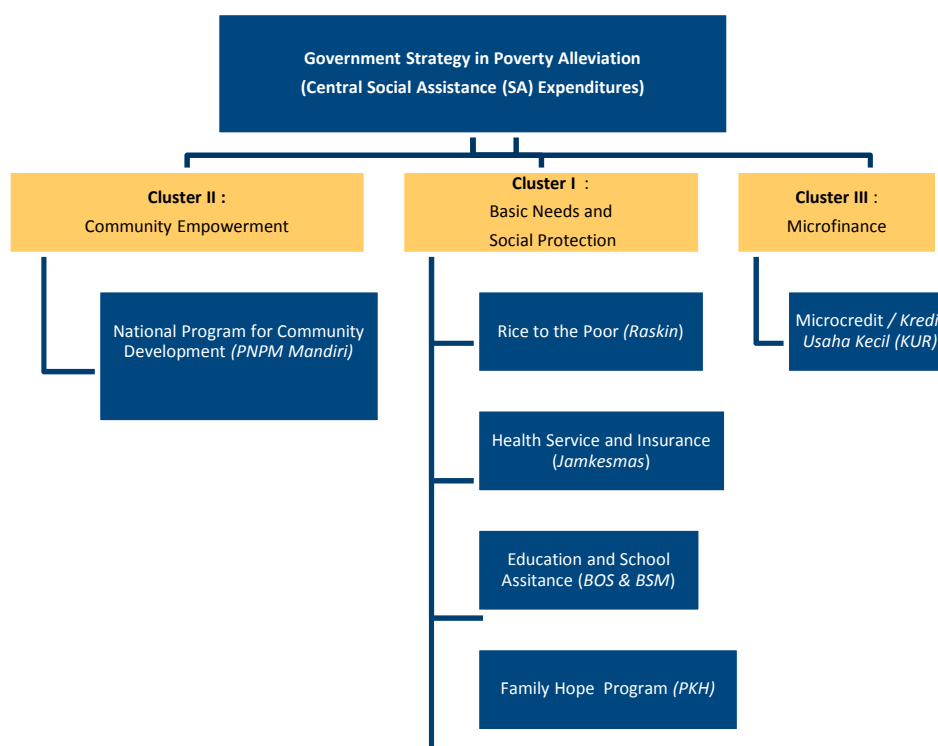
cent before the Asian crisis to 34 per cent after the crisis. This significant change in the poverty profile initiated government intervention to allocate more funding to reduce poverty, which caused a substantial increase in the budget required for antipoverty programs from previously 0.3 per cent of GDP in 1997/1998 to 1.4 per cent of GDP by the end of 1999 (Daly and Fane, 2002). Government spending was essentially directed towards the introduction of a social safety net program (Jaringan Pengaman Sosial), a policy that included programs around greater food security, improved job creation, and improved education and health of the poor.

209. Government evaluation of the national development plan (Propenas) which also assessed the implementation of the social safety net found that this strategy was ineffective, as many eligible recipients failed to receive the benefit. In response to this assessment, the National Medium Term Development Planning (RPJM 2004-2009) was established by the new government under President Bambang Susilo Yudhoyono, which divided the poverty alleviation strategy into three clusters.

210. Cluster 1 focuses on providing basic needs to poor households, and restoring consumption levels of these groups. Cluster 2 is designed for community development, by empowering local community capacities to improve welfare. The government also created a channel for microcredit in Cluster 3, which is aimed at providing assistance to small businesses. These three clusters relate strongly with the findings in the previous section that strong consumption growth is required to make the provision of health and education more accessible for the poor. A diagrammatic structure of these three clusters and their coverage is shown in Figure 51.

211. Currently, these three clusters have been assigned to be under the responsibility of The National Team for Acceleration of Poverty Reduction (*Tim Nasional Percepatan Penanggulangan Kemiskinan*).

Figure 51: Poverty Reduction Strategy Clusters



Note: Rice to the poor is calculated at 39 per cent, Jamkesmas - 18 per cent, and the Family Hope Program - 4 per cent of the total SA budget in average of 2004-2010. The budget for PNPM, KUR, and Education programs was listed not only on SA budget, but also in other areas. Details in Table 17.

Source: Indonesia Poverty Profile, Bappenas Report (2009).

Cluster I: Basic Needs and Social Protection

212. Several poverty programs have been introduced during the first Medium-Term Development Planning period (2004-2009). The prominent program included unconditional cash transfers (*Bantuan Langsung Tunai/BLT*), which ran from 2005 to 2008 as compensation to the poor when the central government decided to reduce subsidies to the historical national fuel subsidy program. This decision resulted in a large increase in fuel prices, and became a major political and economic issue in that period. However, part of the savings created from reducing the subsidies then was used to fund the unconditional cash transfer program. It has been argued that reducing the fuel subsidy should have been applied earlier for sustainable fiscal policy.¹⁴ On the other hand, experts viewed that the re-allocated the budget for poor people as an unconditional cash transfer was ineffective and no more than a temporary solution (Sen and Steer, 2005).

213. The government also intensified existing anti-poverty programs to provide basic needs by delivering affordable rice to the poor or Raskin. In the health and education sectors, the insurance program has been renewed to reach more of the poor population (Jamkesmas), and access to education was made widely open and free by covering operational costs of primary and secondary schools (BOS). The government also launched a conditional cash transfer (CCT) program for families with school-aged children and/or pregnant women (PKH) as a long-term strategy to draw the poor away from poverty traps.

(a) *Rice to the Poor (Raskin)*

214. Raskin is a poverty program where eligible households can purchase up to 10 kg of rice at a subsidised price, which commenced in 1998 to provide basic needs of staple food. The purpose of this program was firstly to respond to an economic recession, and second to cope with a food crisis issue as Indonesia experienced a long dry period between 1997 and 1998. Previously the OPK program (*operasi pasar khusus*) not only delivered affordable rice for the poor, but also stabilised the price. Data from the Logistic Bureau (BULOG) shows that the distribution of Raskin during 2005-2009 ranged between 1.6 – 3.2 million tons. Previously, the government used the data of Raskin recipients based on National Family Planning Board (BKKBN) to decide on the amount of distributed rice, however not all poor households were covered by these data.

215. In 2007, the government switched to data from the Central Bureau Statistics (BPS) to identify more accurately poor households (Rumah Tangga Miskin or RTM) in order to better assess the needs and distribution of the Raskin program. The official purchase price for poor families was between Rp 1,000/kg to Rp 1,600/kg or less than 30 per cent of market price. In 2008, based on the National Socio Economic Survey (SUSENAS), there were 30.5 million households that received Raskin, and only 9.3 million households or 30.4 per cent were from the lowest consumption quintile (see Table 13). Distribution leakage is demonstrated by a significant amount of recipient households from the fourth quintile, with 14.6 per cent or 4.5 million households in receipt of Raskin in 2008.

¹⁴ The petrol subsidisation program has been an increasing burden on the government's budget.

Table 13: Distribution of RASKIN by Consumption Quintile, 2008

Targeting	Proportion of household recipient by quintile (per cent)	Distribution across quintiles (per cent)
Quintile 1 (most disadvantage)	80.6	30.4
Quintile 2	72.4	27.3
Quintile 3	58.8	22.2
Quintile 4	38.8	14.6
Quintile 5 (least disadvantage)	14.7	5.5
Total	53.1	100

Note: Quintiles are based on household consumption per capita.

Source: Authors' calculations, *SUSENAS* 2008.

216. Based on *SUSENAS* 2008 data, households in the lowest quintile still paid around Rp 1900/kg of Raskin which is above the official ceiling price. Another surprising outcome was the average purchase of Raskin. The top quintile on average purchased 10kg of Raskin per month while the three bottom quintile groupings bought around 9.7kg, showing that there was no substantial difference in the amount of Raskin purchased between these groups. This finding is exacerbated when taking into account of household size, with those households in the bottom quintile having on average more people than those in higher consumption quintile households – 4.5 compared with 3.5 (Table 14); with Raskin having to be shared between more people in poorer households, demonstrating a stronger need for the assistance.

217. Although the aim of Raskin is to provide basic needs for the poor by subsidising rice purchases, the government acknowledges there are some constraints in the implementation of the program, particularly in targeting and distributing this to the recipients and also issues related to budget constraints. Essentially, Raskin is covered by the Central government budget and local/regional governments are involved in the distribution process. However, since decentralisation in 2001, the central government no longer possesses the authority to request additional local government budgets to be allocated to the Raskin program. This has resulted in some inequalities and inefficiencies, with Raskin delivery not being able to be optimised and potentially mistargeted. Another crucial problem lies in the physical distribution of Raskin within local areas and accessibility problems as some potential beneficiaries are located far from the distribution point. Olken (2006) has linked distribution issues with corrupt behaviours at the local level. Olken finds that at least 18 per cent of rice was missing from government warehouses, further exacerbating this distribution issue.

Table 14: Mean household size by consumption quintile

Consumption quintile	Mean household size
Bottom	4.49
Second	3.95
Third	3.86
Fourth	3.82
Top	3.46
All	3.92

Note: Quintiles are based on household consumption per capita.

Source: Authors' calculations, *SUSENAS* 2008.

(b) Health Services (Jamkesmas)

218. Within the health sector, the central government strengthened health services through initiating an insurance program for the poor (Askeskin) in 2005. This program moved to individual level insurance, with Askeskin replacing Jamkesmas in 2008. The Department of Health initially identified 60 million people were in receipt of this program in 2005, increasing to 76.5 million people in 2008, and consisting not only of the poor population but also the nearly poor or high-vulnerability groups. Jamkesmas participants receive a payment of IDR 60,000 – IDR 78,000 per year, with access to grade A-D hospitals, mobile health services including those in remote areas, and immunization programs. The allocated budget for this program increased by over one-fifth, from IDR 3.9 trillion in 2005 to IDR 4.6 trillion in 2008 (approximately US\$ 370 million to US\$ 450 million (Sparrow *et al.*, 2010).

219. In comparison, Indonesia's health expenditure was far below that of other Asian countries, including India and China. On average based on the World Development Indicators (2012), from 2005 to 2010 Indonesia only spent 2.5 per cent of GDP on health, compared with Malaysia (4.1 per cent), Thailand (3.8 per cent), India (4 per cent), and China (4.7 per cent). However, in terms of per capita spending Indonesia was slightly better than India with US\$ 51/per capita compared with US\$41/per capita (PPP), although Indonesia still lagged behind other EE's (see Table 15).

Table 15: Health Expenditure (per cent of GDP and Per Capita) in selected economies

In Average of 2005-2010	Health Expenditure (per cent of GDP)	Per capita Health Expenditure (US\$ PPP)
Indonesia	2.5	50.6
Malaysia	4.1	284.2
Thailand	3.8	138.3
Phillipines	3.5	59.3
China	4.7	142.9
India	4.0	40.9

Source: World Development Indicators (WDI) 2012.

220. However, based on SUSENAS 2008, the coverage of Jamkesmas was far below the target, with only 13 per cent of the total population (30.5 million individuals) in possession of this health care card. Only 35.9 per cent or 11 million persons in the bottom quintile of household consumption per capita are in possession of the card. The distribution of Jamkesmas recipients (Table 16) shows that mistargeting continues to be the main issue causing mismatches from central and local databases (World Bank, 2012). Decentralisation also affected the program as some local governments decided to provide free services for the entire population. Records show that in 2008, 65 districts were providing free health care (Gani *et al.*, 2009).

Table 16: Distribution of JAMKESMAS by Consumption Quintile, 2008

Targeting	Proportion of population recipient by quintile (per cent)	Distribution across quintiles (per cent)
Quintile 1	24.0	35.9
Quintile 2	17.6	26.3
Quintile 3	12.9	19.4
Quintile 4	8.9	13.3
Quintile 5	3.5	5.2
Total	13.4	100

Note: Quintile is based on household consumption per capita.

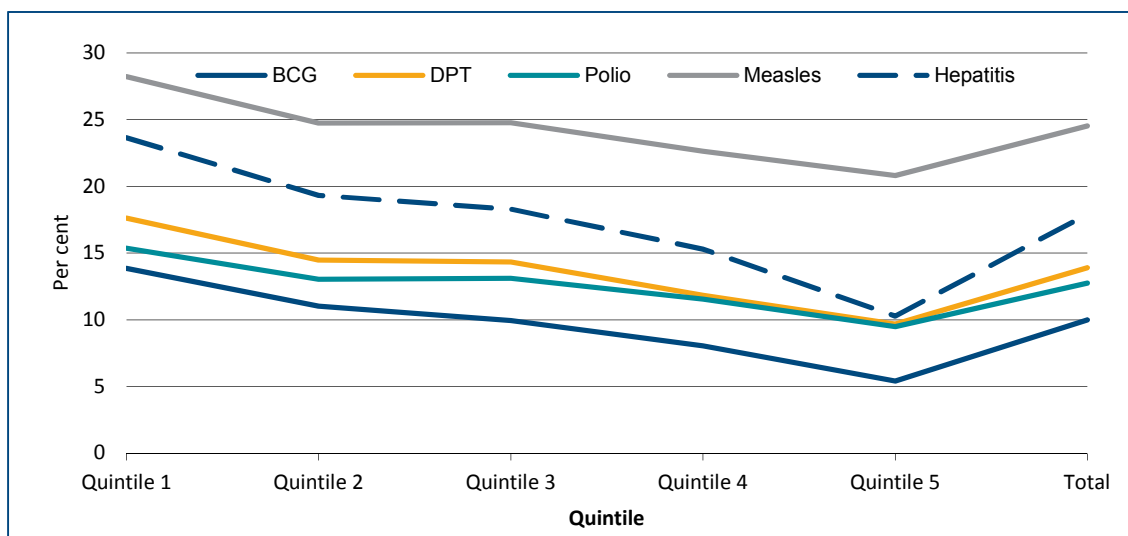
Source: Authors' calculations, SUSENAS 2008.

221. Based on the same data (figures not shown), the population in the bottom consumption quintile also had lower utilisation of insurance treatments in public hospitals (2 per cent) and polyclinic (10.5 per cent) that are provided under the scheme. Community health centres (puskesmas) remain as the primary health service choice, with 33.5 per cent of people in the lowest quintile accessing this facility. A statement from the Coordinating Minister for Social Welfare in 2010 asserts that the budget execution ratio for the health sector, particularly Jamkesmas in recent years has recorded a steady decline or unsmooth disbursement, meaning in terms of the realisation of the budget, Jamkesmas is underutilised.

222. The World Bank (2012) asserts that there are three main reasons for this underutilisation. First, out of pocket expenditures for medication are still too high for the insurance holders/beneficiaries to bear for example, there may be high transport costs and opportunity costs of losing wages if these beneficiaries are seeking medical attention and not working. Second, they do not fully understand the local scheme and corresponding regulations, and third delays in disbursement is a regular issue, which is due to a drawn-out procedure of identification and verification, resulting in payments only being able to be received in the second-half of the fiscal year.

223. Puskesmas is well-known as a primary and vital health facility for the poor population, especially in delivering immunisations for small children under 5 years old. Nevertheless, access to puskesmas may still be an issue as findings from SUSENAS 2008, also demonstrate that children in the lowest quintile, also have the greatest proportions who are not in receipt of various immunisation programs (see Figure 52). The results also show that immunisation rates for measles and hepatitis are well below those for Diphtheria, Polio and BCG.

Figure 52: Proportion of children under 5 years old who are not immunised (per cent) by type of immunisation and Consumption Quintile, 2008



Note: Quintiles are based on household consumption per capita. BCG = Tuberculosis DPT= Diphtheria

Source: Authors' calculations, *SUSENAS* 2008.

224. Decentralisation has also impacted upon budget allocations for puskesmas, which was previously distributed directly from the central government, but since 2001, is now the responsibility of District governments (Sumarto *et al.*, 2004). Sumarto demonstrates that this has resulted in substantial fee increases per patient, rising by 50 per cent (from IDR 2000 before to IDR 3000 after decentralisation) and almost doubling in some districts. Erlyana *et al.*, (2011) estimates that health fees have strong elasticities in decisions based around whether or not to seek health services, especially in public health centres. If travel distance is increased by 10 per cent, the probability of visiting will decline by 2.2 per cent to public health care, 0.8 per cent to paramedic, and 1.3 per cent to a doctor or clinic. They also indicate that household size and distance have been significant factors for the poor in gaining access to health care services. People in rural areas are more likely to live further away from public health facilities making it more difficult to gain access to these services, where as those who live in larger households are also more likely to have less means. In addition, there are also supply side constraints such as inadequate service provision and perceived low service quality.

(c) Education Assistance (BOS and BSM)

225. The enactment of Law 20/2003 demonstrated increased commitment towards the education sector, involving governments formalising the nine-year compulsory education requirement and minimum 20 per cent of government expenditure on education. This minimum requirement has been applied as a mandatory requirement for both central and district government budgets. Thus, to deliver education access, including to the poor, the government provides school assistance (BOS) which means there is no charge for pupils in public primary (SD/MI) and secondary (SMP/MTs) schools. Additionally for the poor, the central and local government also provide scholarships from primary students until university level, known as Bantuan Siswa Miskin (BSM). The potential impacts of these programs as reported by the Bureau of Statistics include increases in net enrolments rates for both primary and secondary school levels. For example net enrolment rates for primary school increased from 92.5 per cent in 2003 to 94.8 per cent in 2010 across Indonesia, and net enrolment rates for secondary school rose from 63.5 per cent to 67.7 in the same period. As discussed in the regional disparities section, the Government has increased its efforts to elevate enrolment rates particularly in the secondary school. However, transition from primary school to secondary school is still an issue particularly for low income households.

226. However, alignment of central and district government budgets with Law20/2003 has not occurred. A recent report from the national forum for budget transparency FITRA (a non-government organisation) has shown that in 2008, from IDR 854.6 trillion of total expenditure, the central government allocated only IDR 64 trillion or 7.5 per cent – a shortfall of 12.5 per cent to the 20 per cent mandatory requirement. In 2009 education expenditure from the central government decreased further to 5.9 per cent of total expenditure (IDR 61.5 trillion of IDR 1,037 trillion).

227. At a district level, although decentralisation was intended to promote improved welfare through local knowledge, authority and planning, budget allocations towards education at this level did not increase. Based on data for 29 district samples collected by FITRA in 2008, the proportion of education spending ranged between 1.4 and 8.8 per cent, and averaged 4.6 per cent of total expenditure. Governments argued that the 20 per cent budget target for education has been included in education expenditure across all government departments and bureaus, with integration between poverty alleviation programs that related to education.

228. Kristiansen and Pratikno (2006) discover a contrary finding, where in the early stages of decentralisation in 2003, selected districts had already achieved ratios of education spending to total spending above 20 per cent. However, this evidence was provided for only four districts – mainly those with middle and high-income profiles. In these four district samples, three were middle-income districts, Bantul in Yogyakarta, Mataram in Nusa Tenggara, and Ngada in Flores Island; with education budgets on average beyond 40 per cent (Table 17). On the other hand, the last district sample – Kutai Kartanegara in East Kalimantan, which is well-known as one of wealthiest districts in Indonesia, had a ratio of only 9.8 per cent. However, the authors also highlight that the large proportion of education spending was followed by significant leakage. Based on in-depth interview and focus group discussion, Kristiansen and Pratikno's study places little doubt that there is likely to be a large degree of concealment in true figures and that corrupt behaviour and practices have dominated the education sector. This behaviour often involves all stakeholders, from government officials, legislative members, and school administrators.

Table 17: Government Budget in Selected Districts 2003 (IDR 9000 = 1 USD)

District	Total budget in APBD (in billion IDR)	Education Budget (in billion IDR)	Share of total budget (per cent)	Education budget per capita (in thousand IDR)	Education budget per student (in thousand IDR)
Bantul (Yogyakarta)	436.0	198.2	45.5	259.1	1660.8
Mataram (NTB)	196.0	86.6	44.2	274.9	1180.5
Kuta Kartanegara (East Kalimantan)	2456.6	241.2	9.8	524.4	2450.5
Ngada (NTT)	227.4	71.1	31.3	302.6	1454.1

Sources: Kristiansen and Pratikno (2006), BPS Districts Statistics, Bappeda.

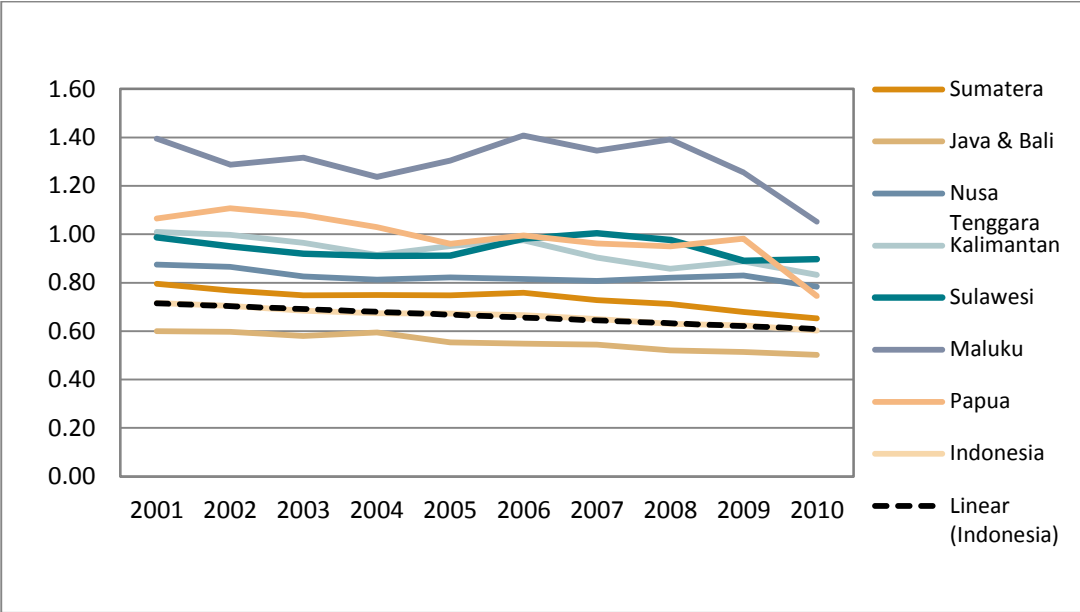
229. The number of education facilities has also become a concern. Data compilation from annual Statistics Indonesia shows that the numbers of primary schools remained relatively stagnant across the period between 2001 and 2010. However, interestingly in 2002 there were 148,516 primary schools, decreasing in 2006 by 252 schools to 148,262. Further, the latest Statistics Indonesia report shows that there have been further decreases in the number of primary schools,

decreasing by 5,010 schools to 143,252 between 2005 and 2010. The decrease in primary education facilities is related in part to a large number of damaged schools and limitations in government capacity.

230. The Minister for Education and Culture, Mohammad Nuh as discussed in *TEMPO* (2012), has stated that the number of damaged schools (primary and secondary) has been spread equally across regions. He has further stated that based on data collected by the Department Education and Culture in early 2012, as many as 132,317 classrooms in primary schools and 41,027 classrooms in secondary school are in need of urgent renovations and upgrades.

231. An analysis of the ratio of primary schools to population shows that primary school availability per 1000 population is the lowest in Java and Bali and highest in Maluku (Figure 53), with ratios in each Province declining between the 2001 and 2010 period.

Figure 53: Regional Ratio Primary School per 1000 Population, 2001-2010



Source: CEIC, Survei Penduduk Antar Sensus (SUPAS), Ministry of Education, BPS.

232. Based on PISA (Programme for International Student Assessment) and TIMSS (Trends in International Mathematics and Science Study) scores, student performances in Indonesia remain below the international average (Suryadarma and Soemarto, 2011). Access to important educational resources is one of the key issues, with teacher absenteeism problematic, particularly given that substitute teachers are often unavailable in many developing countries.

233. Usman *et al.* (2007) report that the pattern of non-attendance teacher in Indonesia’s primary schools during 2002-2003 was considerably large. From their 10 district samples and involving 2,854 teachers in 147 schools, the average teacher absence rate was 19.4 per cent (Table 18), ranging from 11.8 per cent in Pasuruan to 33.5 per cent in Pekanbaru. Usman *et al.* (2007) also emphasise that the condition of school facilities seems to play an important role in teacher absence rates. Moreover, the remoteness of a region, low incentives for teaching, and lack of control from education authorities are other factors affecting teacher absenteeism (Suryahadi and Sambodho, 2012). This finding can explain that although the ratio of primary teacher to population is relatively flat for Indonesia on average in the period of 2001-2010 across the majority of Provinces (Figure 54), teacher attendance rates, may not be consistent and adversely affecting education outcomes. Policies to reduce this problem typically focus on the effort to improve teacher welfare, followed

by enhancing control mechanisms such as requiring the presence of a school principal, regular inspection by local education authorities, and facilitating regular school committee meetings.

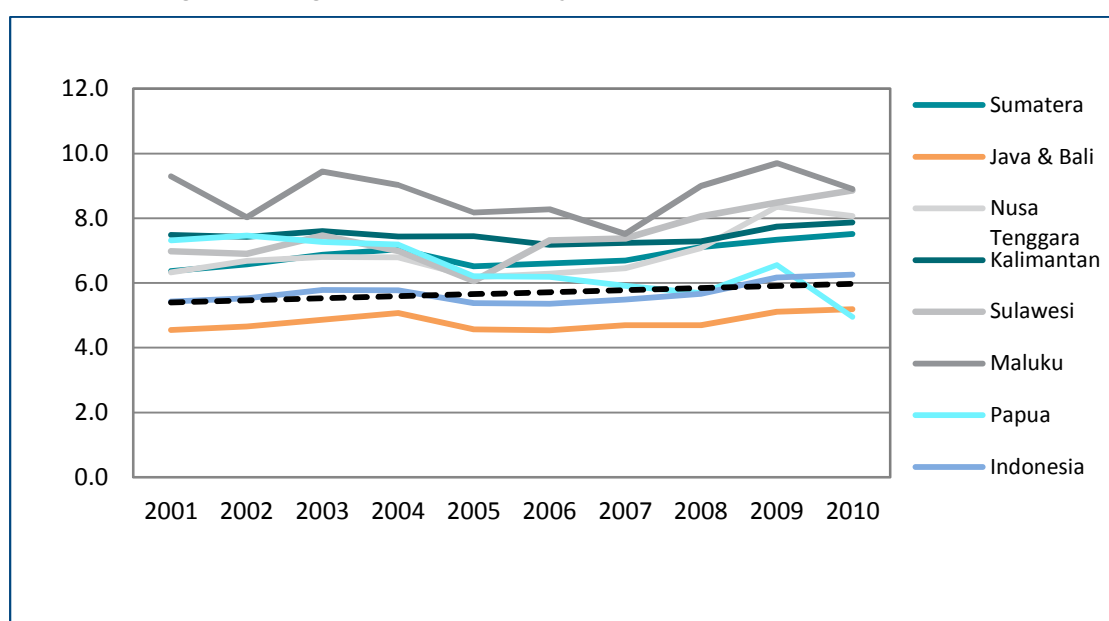
Table 18: Teacher Absence Rate in Selected Districts, 2002-2003

District	Province	Classification	Absence Rate (%)
Tuban	East Java	Rural	22.9
Rejang Lebong	Bengkulu	Rural	18.8
Gowa	Southern Sulawesi	Rural	20.7
Lombok Tengah	West Nusa	Rural	17.7
Magelang	West Java	Rural	7.4
Bandung	West Java	Urban	27.1
Cilegon	West Java	Urban	18.1
Pekanbaru	Riau	Urban	33.5
Surakarta	Central Java	Urban	16.0
Pasuruan	East Java	Urban	11.8
Average Rate			19.4

Source: Usman *et al.* (2007).

234. In addition, teacher quality is also a major concern. Although the Central government had intervened by enacting Teacher Law No. 14/2005 to improve skills and qualifications, only 36 per cent of total teachers had attained a certified Bachelor degree (Jalal *et al.*, 2009). Upgrading certification itself has been met with a positive response by teachers as an economic incentive exists in the form of a professional allowance. However, education institutions have not responded as effectively in preparing well qualified teachers.

Figure 54: Regional Ratio of Primary Teacher and Population, 2001-2010



Source: CEIC, Survei Penduduk Antar Sensus (SUPAS), Ministry of Education, BPS.

(d) Family Hope Program/Program Keluarga Harapan (PKH)

235. In order to strengthen poverty alleviation programs, the government designed Program Keluarga Harapan (PKH) in 2007 as a pilot of a conditional cash transfer (CCT) program, commencing in 40 districts across 7 provinces. In 2010, the coverage of the program increased to 25 provinces out of 33, and 118 out of 497 districts, reaching approximately 816,000 households. The program was also complementary to other social assistance (Raskin, Jamkesmas, and BSM). The program delivers a quarterly cash benefit to the very-poor families with children and/or with pregnant women. Eligibility of families are verified regularly through school enrolment and attendance, regular health check-ups, nutritional status, infant immunization, and monitoring pregnant women. The financial benefits for families ranged between IDR 0.6 -2.2 million per year, or on average IDR 1.4 million per year which is equivalent to the average of the 30 per cent of poverty line.¹⁵ Bappenas and ADB (2008) reports that the PKH program is expected to continue until 2015 and there has been a plan to increase coverage to a number of districts and provinces included in the program.

236. PKH is funded by the central government budget, as part of social protection expenditure. One of the objectives of PKH is behavioural shifts, including greater health facility usage by the poor, for instance in terms of accessing birth health services to reduce maternal mortality rates. One example of behavioural shifts and positive policy outcome is that in 2008, in the lowest consumption quintile, birth assistance by a midwife increased from 45.2 per cent in first delivery to 50.2 per cent in last delivery. In contrast, the trend of traditional birth assistance also declined - 44.7 per cent in first delivery to 39.5 per cent in last delivery. Moreover, the World Bank (2012a) states that PKH provides income-effect to households in the short-term, and in the long-term this program is also likely to improve nutrition conditions, education, and income capacity for children, creating long-term intergenerational benefits.

237. The World Bank (2012a) also estimates that only 13 per cent of households who live below the poverty line were receiving the actual benefit from PKH. Several issues have arisen due to the complexity of the program, from the selection and validation process where beneficiaries may not be representative of the very poor households at the district level; insufficient socialisation of the program to the participant district/provinces; and monitoring compliance which is often based on inaccurate data. Coordination between central and local governments is also essential. Facilitators (pendamping) perform a key role in mobilising and informing households of their rights and obligations, assisting and encouraging PKH practices, and monitoring household eligibility to receive benefits and are a central element of the PKH. Furthermore, the World Bank also identifies that the amount allocated for education, which is transferred through the PKH is currently too low, and therefore it creates less-incentive to improve child education. Filmer and Schady (2011) find a similar result in the implementation of CCT for education in Asia and Latin America, where low provision of scholarships adversely affect school attendance rates.

Cluster II: Community Empowerment (PNPM)

238. In addition to the PKH, the government has also created a conditional cash transfer program for community development called Program Nasional Pemberdayaan Masyarakat (PNPM). The difference with CCT programs in other countries is that PNPM allows communities to formulate their own plan to reduce poverty, and then implement the plan into actions designed specifically to meet program targets. A condition for participating communities is that they have to commit to improve education and health, as determined by its population, size, and poverty level. The communities also received facilitators to assist with the program and to assess progress (World Bank, 2008). Initially, in 2007 the participants were 1,993 sub-districts (kecamatan) in rural areas

¹⁵ The maximum benefits specified is IDR 2.2 million per year and minimum is IDR 600,000 per year.

and 8,054 villages (kelurahan) in urban areas, thereafter the amount increased drastically in 2011 with 6,622 sub-districts in rural and 1,153 sub-districts in urban included in the program.

239. Scherer and Scherer (2011) report that PNPM program seems to be effective compared with other anti-poverty programs. For instance, PNPM program in urban areas that support loans to groups of women have an outstanding rate of return with 92 per cent of loans repaid. A study by Yulaswati and Sumadi (2011) state that the benefit from PNPM program has a significant impact to the bottom 20 per cent through enhancing per capita consumption, health care, and employment. However, the program has also weaknesses. A survey conducted by Syukri *et al.* (2011) found that although PNPM is considered valuable for the community, especially in providing infrastructure in rural areas, they also find that there are rarely projects to develop skills or training for the community. In some districts, the PNPM program appears to have no impact. For example, The Jakarta Post (2011) reports that although for the realisation of 7,400 PNPM projects in Purbalingga-West Java, between 2005 and 2010, the government has disbursed IDR 74.1 billion (equivalent to US\$7.5 million), however, the number of poor persons in this region is 1.2 million and the poverty rate has remained unchanged - at close to 30 per cent.

Table 19: The Allocation for PNPM 2007-2010

<i>in million IDR</i>		2007	2008	2009	2010
Rural	PNPM	1,955,650	3,936,500	7,885,900	9,685,750
Urban	PNPM	3,852	1,984,360	1,849,615	1,356,425
Other	PNPM (Social and Infrastructure)		711,000	1,275,250	791,876
Total	Direct	1,959,502	6,631,860	11,010,765	11,834,051
Community Assistance (BLM)					
<i>% annual growth</i>			238	66	7
Central	Budget Proportion (APBN)	1,440,677	4,321,760	7,646,594	9,203,421
<i>% total</i>		74	73	69	78
Local	Budget Proportion (APBD)	518,975	1,599,100	3,364,172	2,630,630
<i>% total</i>		26	27	31	22
Participants					
No	Sub-District in	1,993	2,389	4,371	4,805
Rural					
No	Sub-District in		955	1,145	885
Urban					

Sources: Authors' calculations, Ministry of National Development Planning Agency (Bappenas).

240. The PNPM program is financed by funding shared by the Central and local governments. The Central government has the largest share since PNPM is a national anti-poverty program. Bappenas estimates that in 2007 when the program was initiated, the allocated budget for the program was nearly IDR 2 trillion which reflects a 73.5 per cent share of the national budget of APBN (central) or IDR 1.4 trillion, while the remaining or IDR 519 billion is sourced from the regional budget of APBD (local). The contribution from regional/district government increased in the first three years of implementation, but has since dropped substantially between 2009 and 2010

– from 31 to 22 per cent of total share. In 2010, with a required budget of IDR 11.8 trillion, APBN contributed 78 per cent or IDR 9.2 trillion, and APBD only shared 22 per cent or IDR 2.6 trillion.

Cluster III: Microfinance/*Kredit Usaha Rakyat* (KUR)

241. One of the key strategies in poverty alleviation is government provision of microcredit (KUR) for small-medium enterprises (SME), which was introduced directly by the President in 2007. For the distribution of microcredit, state-owned banks become the main channel of the KUR delivery, starting with the top six state banks and in 2010, credits were circulated by 19 national and regional banks. In terms of credit schemes, the poor can receive credit up to IDR 500 million, and there is no collateral for credit that would need to be provided for credit below IDR 5 million. The overall program is protected by government insurance.

242. Data from the KUR Committee, a Bureau under Coordinating Ministry for Economy to oversee the program, states that the KUR program improves access to capital for small-medium businesses. The reports shows that the realisation of KUR increased from a very minimal proportion of 1 per cent in 2007 (as initially only state-owned banks which can distribute the microcredit) to all total microcredits provided to the SMEs to 8.9 per cent in 2010 (approximately US\$ 1.75 billion in nominal term) as indicated in Table 20, with very-low rates of non-performing loans (under 5 per cent in the period of 2007-2010) which reflect an outstanding credit performance. However, in terms of ratio to the total microcredit delivered by all banks, the proportion of KUR remains below 10 per cent in the period of 2007-2010.

Table 20: KUR Realisation and Ratio to Total Microcredit (SMEs)

Year	KUR (in billion IDR)	Total Microcredit (SMEs)	Ratio KUR/Total Microcredit (%)
	in billion IDR		
2007	982	96178.2	1.0
2008	11475	136270.8	8.4
2009	4733	106456.1	4.4
2010	17229	193691.3	8.9

Sources : KUR Committee, Central Bank (Bank Indonesia).

243. In addition to KUR from banks, microcredit recipients also receive business credit from sub-district (kecamatan) development program (KDP), urban development program (UDP), and other government microcredit programs such as those directly from the cooperative foundation programs. However, the implementation of business credit through these programs seems to be less effective. Based on SUSENAS 2008, less than 1 per cent of total Indonesian households receive business credit through government programs. In 2008, only 0.45 per cent of households in the bottom consumption per capita quintile received business credit, 0.53 per cent received credit from urban development program, and 0.34 per cent from other government microcredit programs.

244. It appears that people prefer to receive credit offered directly by the bank rather than through government programs. The SUSENAS 2008 also reports that, compared with the government program, there were 3.59 per cent or 2.06 million households in receipt of credit through a bank program, and 1.34 per cent of households who are in the lowest consumption quintile accessed this type of credit. Credit from cooperative (koperasi) or foundation programs also remains popular for small businesses, including farmers in rural areas. The total credit

recipient under this cooperative program was 1.51 per cent of total households or 870, 735 households with 109,911 households (12 per cent) from the bottom consumption quintile as indicated in Table 21.

Table 21: Distribution of Microcredit Recipients

Targeting	Receive microcredit through KDP (Kecamatan Development Program) (per cent)	Distribution across quintiles (per cent)	Receive microcredit through UDP (Urban Development Program) (per cent)	Distribution across quintiles (per cent)	Bank (per cent)	Distribution across quintiles (per cent)	Cooperative/ Foundation Program (per cent)	Distribution across quintiles (per cent)
Quintile 1	0.45	19.57	0.53	17.97	1.34	7.47	0.95	12.58
Quintile 2	0.61	26.52	0.68	23.05	2.78	15.49	1.44	19.07
Quintile 3	0.54	23.48	0.67	22.71	3.66	20.39	1.69	22.38
Quintile 4	0.43	18.70	0.64	21.69	4.58	25.52	1.8	23.84
Quintile 5	0.27	11.74	0.43	14.58	5.59	31.14	1.68	22.25
Total	0.46	100	0.59	100	3.59	100	1.51	100

Source: SUSENAS 2008.

245. The Department of Cooperative and Small-Medium Enterprises (SME) states that the lack of access to KUR, and that SME still prefer other sources of credits highlight three key implementation issues. First, banks still need to cover 30 per cent of the loan guarantee, which means that the risk is not fully-covered by the government. Second, the procedure to receive the credit is complicated, particularly those with collateral and verification systems. Third, there is no-incentive for providing low interest rates by the creditor, hence interest rates for the loan is market-based which is high.

4.2 Budget for Poverty Programs

246. The first medium-term development plan (RPJM) 2004-2009 obliges the central government to allocate budget for social assistance (SA) as part of the overall poverty alleviation strategy. Budget allocation is an important input into the poverty alleviation process. On average in 2010 constant prices, as shown in Table 22, the allocation for social assistance grew at 11.6 per cent over the period of 2004-2010, from IDR 13.5 trillion in 2004 to IDR 26.1 trillion in 2010. However, as a percentage of total expenditure, the proportion remains below 10 per cent, which reflects the reduced capacity of the budget to tackle poverty. The highest proportion occurred in 2006 with 6.7 per cent from total spending or IDR 29.7 trillion allocated to social assistance, yet nearly 63 per cent or IDR 18.6 trillion was delivered as unconditional cash transfer (BLT), as a specific compensation package for increased petrol prices observed in 2005.

Table 22: Budget for Social Assistance Clusters I and II, 2004-2010

<i>(in billion IDR)</i>		2004	2005	2006	2007	2008	2009	2010
National Assistance Expenditure	Social (SA)	7,935	14,471	31,848	16,396	36,092	30,689	29,709
Central Social Expenditures	Government Assistance (SA)	6,730	12,846	29,681	14,213	33,089	27,459	26,127
<i>% share of national Total Expenditure</i>		85	89	93	87	92	89	88
<i>% share of national Total Expenditure</i>	Provinces (SA)	529	646	820	808	1,184	1,375	1,520
<i>% share of national Total Expenditure</i>	Districts (SA)	7	4	3	5	3	4	5
<i>% share of national Total Expenditure</i>		677	978	1,348	1,375	1,818	1,855	2,062
<i>% share of national Total Expenditure</i>		9	7	4	8	5	6	7
As Central Budget								
In constant 2010 prices		13,498	22,535	45,637	19,642	38,705	29,662	26,127
<i>% annual growth</i>			67	103	-57	97	-23	-12
<i>% total expenditures</i>		2.3	3.6	6.7	2.8	4.8	4.4	3.7
<i>% GDP</i>		0.3	0.5	0.9	0.4	0.7	0.5	0.4
By Anti-Poverty Program in Central Budget								
a. Raskin		4,831	5,218	5,570	6,584	9,926	12,987	13,925
<i>% central total SA expenditures</i>		71.8	40.6	18.8	46.3	30.0	47.3	53.3
b. Jamkesmas		-	1,300	3,074	4,567	4,448	4,620	4,763
<i>% central total SA expenditures</i>		-	10.1	10.4	32.1	13.4	16.8	18.2
c. PKH		-	-	-	605	946	1,068	1,123
<i>% central total SA expenditures</i>		-	-	-	4.3	2.9	3.9	4.3
e. BLT		-	4,487	18,619		13,966	3,733	
<i>% central total SA expenditures</i>		-	34.9	62.7		42.2	13.6	
d. PNPM (shared with local budget)		-	-	-	1,960	6,632	11,011	11,834
% Overall growth Central Budget								
2004-2010	<i>(constant 2010)</i>	11.6						

Note: Percentages may not add to 100 due to rounding.

Sources: Ministry of Finance, *Bappenas*, The World Bank (2012b, Tables 7 and 8), and Authors' calculations.

247. Although studies and assessments advise that the leakage is substantial in *Raskin* distribution (Olken, 2006; McCulloch and Timmer, 2008; Hastuti and Maxwell, 2003), this program has the largest proportion in Social Assistance expenditure, averaging 44 per cent of the Social Assistance budget during 2004-2010, almost tripling from IDR 4.8 trillion in 2004 to IDR 13.9 trillion in 2010. Jamkesmas received almost 17 per cent on average of Social Assistance spending from 2005 to 2010, increasing sharply between 2006 and 2007, but remained relatively stagnant afterwards. It shows that the majority of Social Assistance expenditure went to income

relief and food security rather than promoting productive programs. The low proportion in health and education reflects smaller amounts in human capital investment towards poverty alleviation. The PKH program, which was expected to synchronise with other poverty programs, and is evaluated as a cost-effective program has the lowest proportion of the SA budget – an average of less than 4 per cent between 2007 and 2010. These results show that the government only really raised the capacity of the SA budget when the BLT program was implemented.

248. In terms of the ratio to GDP, Indonesia's expenditure on social assistance is very minor, with an average of only 0.5 per cent of GDP between 2004 until 2010. This is surprising, particularly because literature has argued that the correlation between countries' social spending with poverty and inequality is essential. In OECD Social Indicators 2011, countries with higher social spending tended to have a more equal income distribution and lower income poverty. Moreover, the average social spending in OECD countries during the period of 2004-2007 was 19.6 per cent of GDP. Indonesia indeed lags behind other developing countries as the average of developing countries' expenditures for social assistance is around 1.5 per cent of GDP (World Bank, 2012b). Gupta *et al.*, (2002) with sample from 50 countries, mostly developing countries in Asia and Africa find that an increase in public social spending in education and health has a significant impact on education attainment and health status, and thus promotes welfare. They calculate that 1 percentage point increase in health care expenditure decreases infant mortality rates by 3 per 1000 live births.

249. The low spending on social assistance may also be related to low revenue. For example, in terms of tax revenue, Indonesian tax based resources have been historically relatively low compared to other comparator countries. The ratio of Indonesian tax revenues to GDP was around 12 per cent between 2002-2010, significantly lower than other emerging economies (for example, Brazil at 16 per cent, Russian Federation at 14.7 per cent, South Africa at 26 per cent; and even Thailand at 16 per cent). Thus, increasing taxation revenues to finance greater levels of social protection and to improve targeting is an important priority.

4.3 Summary

250. Throughout the first Medium-term Development Planning period (2004-2009), targeting the poor with direct government intervention programs became the main focus of policies to reduce poverty. Specific budget allocation for direct intervention programs through the provision of social assistance was created and grew on average by 11 per cent from 2004 to 2010. Direct social assistance commenced in 2005 through the implementation of unconditional cash transfers which were delivered to the poor to compensate for the adverse impact of cutting down fuel subsidies. Between October 2005 and September 2006, 19.2 million households received monthly transfers at about US\$10. However, unconditional cash transfers were considered to be unfairly distributed and some argue that they created a state of welfare dependency for some beneficiaries (Alatas *et al.*, 2011).

251. Since these initial social assistance provisions, other various anti-poverty programs have been introduced, ranging from providing basic needs to secure individual and households consumption levels for the poor, providing fundamental facilities, and through a complex mechanism of community empowerment. Consequently, a range of methods have been introduced to define the recipients of targeted poverty programs in Indonesia. This includes proxy means testing to determine where targeting is best suited. This is carried out based on information on household assets and demographic characteristics, and community level selection processes.

252. As has been discussed in this section, solving mistargeting issues remains as a major challenge for government authorities to make the programs more effective and thus accelerate poverty reduction. Alatas *et al.*, (2012) with their exploratory experiment in Indonesia, compared

two targeting methods - proxy means testing and community based approaches. Atlas found that each method has its own advantages and disadvantages, with community based targeting approaches yielding the highest satisfaction within the community as this method incorporates local knowledge better. In contrast, the authors also found that proxy means testing is often better at identifying poor households than the community approach, if improving consumption is the only objective of targeting the poor. As there is no consensus about which is best targeting method, the challenge is to derive and apply a more suitable method, where those most in need can be identified and poverty alleviation strategies targeted. An integrated database which contains information about the characteristics of the population who are likely to be the most appropriate beneficiaries of poverty alleviation programs would serve as a useful policy tool. The creation of the PPLS (*Pendataan Program Perlindungan Sosial*) 2011 data source, which consists the population who are in the lowest 40 per cent based on social and economic characteristics is once such database that aims to improve knowledge and targeting of various poverty alleviation programs.

253. Policy initiatives directed at improving data collections should also be supplemented by reforms and advances in the programs themselves. By synchronising anti-poverty programs with general development strategies such as expanding infrastructure, government resources and poverty alleviation programs will operate the most efficiently and effectively. Continuing programs need to be harmonised and complement other poverty programs, and efforts made to ensure that the recipients are those who are in most need. Finally, in this decentralisation era, the central government must strengthen the coordination of local authorities. Improving the coordination of initiatives will be required in producing better targeting strategies and governments can formulate the best approach in developing poverty alleviation programs.

5. CONCLUSIONS AND LESSONS FOR POLICIES

254. The political and economic environment in Indonesia has changed dramatically over the past decade, with potentially significant implications for individual wellbeing, regional economic prosperity and national economic growth. Against such a background, this Report seeks to examine economic and social patterns and trends – particularly in relation to poverty and inequality – over the various development periods in Indonesia up to the most recent decentralisation period.

5.1 Trends in poverty and wellbeing, and areas of concern

255. After the crisis period in Indonesia in the late 1990s, a new era of decentralisation brought significant change in the country's political structure and consequently the economic and social development of the nation. From the macroeconomic indicators available, several key points stand out in terms of national performance during this period of decentralisation. Economic growth (measured by GDP and GDP per capita) was lower during the decentralisation period than it was prior to the Asian financial crisis, while in terms of employment, the role of the service sector has become more important during this period.

256. Absolute poverty reduction was very impressive prior to the crisis. Although the reduction rate is not as strong as it was prior to the Asian economic crisis period, there was a decreasing trend in poverty rates during 2001-2005. However, in 2006, the impact on poverty rates of a reduction in fuel subsidies in 2005 was evident, with increases in the price of rice and other commodities felt by millions of Indonesian families. Using the national poverty line, the poverty rate in 2010 was 13.3 per cent, almost half the poverty rate ten years earlier.

257. Prior to the economic crisis, when the central government was still under President Suharto most poverty alleviation policies were universal. In contrast, during the decentralisation period, policies were increasingly targeted directly towards helping the poor. While direct intervention strategies have had positive impacts, implementation challenges remain, especially in relation to appropriate targeting of beneficiaries.

258. This Report has identified a number of areas of concern in relation to persistent disparities between urban and rural poverty, with higher rates and more poor people living in rural areas. However, urban poverty is more vulnerable to economic shocks. For example, during the Asian economic crisis, the number of urban poor increased by 83 per cent between 1996 and 1999, compared to an increase of only 28 per cent in rural areas. One-third of the poor population in Indonesia is now living in urban areas.

259. Alternative measures of wellbeing, including the Human Development Index and MDG indicators have identified specific challenges in relation to Indonesia's development progress. These challenges include improving mothers' maternal health and living conditions in urban and rural areas. Progress has been made in several development areas, with gender equality being achieved in education and literacy, and improvements made in preventative health measures. However, compared with similar Emerging Economies, Indonesia's progress lags behind in some areas.

260. The importance of relative poverty in complementing the concept of absolute poverty has been highlighted in the report. Together with alternative wellbeing measurements such as the Human Development Index and MDGs, we are able to investigate and better understand wellbeing beyond average absolute poverty headcounts. Using relative poverty measures based on microdata analysis, there remains a wide gap between households in the top and bottom quintiles of consumption per capita. Large gaps are particularly identified in terms of educational attainment, living conditions and connectedness, which relates to issues around equal access to infrastructure and opportunities.

5.2 Addressing regional disparities

261. In addition to the role of the labour market, it is evident from the analysis undertaken in this Report that regional disparities exist throughout Indonesian provinces and are key to understanding patterns of inequality and poverty.

262. A key finding from the report is that while provincial poverty rates are lower in Java than in other provinces, the majority of poor people are concentrated in this island, indicating the high population density in this area. Papua, Maluku, East and West Nusa Tenggara are provinces that persistently record high poverty rates. Papua is shown to be a special case, as despite being endowed by rich natural resources and high GRDP, this does not necessarily translate into lower poverty rates or increased welfare of the communities and people living within this Province.

263. Indonesian districts (areas where much of the governance has shifted to) have also shown to have substantial differences in poverty rates, with regional disparities increasing slightly during 2001-2007. Further, a Theil Index decomposition shows that increasing disparities in District level poverty rates, are more likely to be a product of increasing disparity of poverty rates among districts in the same province.

264. Disparities in terms of GRDP per capita have shown a decreasing trend during the same period, which is mainly due to decreasing disparities among districts within a province. A contradictory result is found in terms of disparities in district level poverty rates which may reflect the lack of correlation between poverty rates and GRDP per capita at the district level.

5.3 Poverty alleviation strategies

265. It is well understood that Indonesia faces specific challenges in relation to the heterogeneity of its culture, archipelagic geography, industrial concentration, economic prosperity and wellbeing. Decentralisation has been one response to these unique challenges, and evidence from this Report indicates that the overall decline in poverty during the period has been driven principally through pro-poor economic growth. However, there remains an opportunity to support the decentralisation process through a series of flexible and integrated policy responses across a range of policy domains, particularly social assistance, education, industrial development, employment and wealth creation.

266. No single policy panacea can address the myriad challenges of poverty alleviation in Indonesia. Instead, effective poverty reduction requires a combination of policies at the national, provincial and district level. Policies should adapt flexibly to local needs and be integrated in design or impact, creating a mutually reinforcing system to deliver overall improvements in regional poverty and wellbeing. Universal policies should ideally respond flexibly to local needs, with national policy designs that nevertheless deliver support that relates to local benchmarks.

267. Provinces should be well informed, with systems in place to ensure that knowledge and best practice is transferred across regions to enable lessons to be learned regarding effective policy interventions and local initiatives.

268. One of the key findings from this Report relates to the more pronounced effects of income inequality on regional poverty rates during later development periods up to decentralisation in Indonesia post-2002. This indicates that the pro-poor impact of economic growth using mean consumption per capita as a proxy of economic growth during decentralisation (a reduction of around 5.7 percentage points in the headcount poverty rate) has been offset to a greater extent by rising income inequality (up from 0.329 in 2002 to 0.380 in 2010) and by the stronger negative impact of inequality on regional poverty rates. In combination, the stronger negative impact of rising inequality has contributed to an increase of around 1.9 percentage points in the headcount poverty rate.

269. These results have important implications for the design and targeting of poverty alleviation policies in Indonesia. First, the Report's findings point to the benefits from policies designed to reduce income inequality, rather than relying solely on economic growth as a poverty alleviation strategy. Second, the goal of reducing poverty in Indonesia will be delivered more efficiently by adapting policies that address the local geographic patterns of growth and interprovincial inequality.

5.4 Social assistance

270. The provision of social assistance remains a key policy pillar in the drive to alleviate poverty in Indonesia. Support for basic population needs is currently provided through a series of national level programs - RASKIN "rice to the poor"; conditional cash transfers; health insurance (Jamkesmas) and education assistance (BSM) - with delivery often devolved to district level governments. Direct poverty alleviation strategies associated with social protection have had some positive effects, particularly through improved access to health and education. However, many programs fail to deliver an appropriate level of support to those most in need because of ineffective targeting. Dealing with inefficiencies and "leakage" in social assistance therefore remains a key policy challenge.

271. Central and local governments should be more actively engaged in working at provincial and district levels to improve the targeting of social assistance. Efforts may need to be focused on improving the system of distribution of social assistance, with greater investment to improve the poor's access to basic infrastructure. This would ensure that those in greatest need have better access to the government's direct intervention programs, particularly for those in remote and isolated areas of the country.

272. Improving the quality of information on the circumstances of those who are either in receipt (or should be entitled to) social assistance will also be crucial. For example, the *Pendataan Program Perlindungan Sosial (PPLS)* survey was launched in 2011 and collects information from those in the lowest 40 per cent of households, based on social and economic characteristics. Investment to maintain and improve the PPLS will be of great benefit to public agencies and research organisations looking at the design and impact of policies related to targeted poverty alleviation.

5.5 Education and industrial development

273. There is substantial scope to develop an integrated policy program to strengthen the links between education and industrial zones in Indonesia, potentially anchored to the MP3EI "Economic Corridors" framework. Coordination could be facilitated through a network of regional

or provincial development agencies.¹⁶ A core objective of such programs would be to develop high quality regional education hubs to serve the needs of each Corridor through synergies and formal partnerships between educational institutions and regional industry. Flexible education programs could be designed to meet the needs of local industries and generate a pipeline of skilled workers, addressing skills mismatch and taking advantage of local employment opportunities.

5.6 Labour markets and employment

274. While the absolute poverty rates have declined during the decentralisation period, consumption inequality has in contrast increased. Focusing on the role of labour market and the existence of spatial disparities across Indonesia, our research suggests that increasing consumption inequality may be linked to the higher share of workers employed in the informal sector in Indonesia (70 percent are currently employed in the informal sector, and are hence not covered by minimum wage legislation or employment protections).

275. This highlights the potential for poverty alleviation to be delivered through targeted policies and programs that incentivise formal employment, expand employment opportunities in the formal sector, reduce barriers to labour market entry, and incentivise industrial diversification and geographical dispersion. Further research to test the association between these potential drivers and consumption inequality would also be beneficial.

5.7 Resourcing poverty alleviation

276. The level of support for poverty reduction in Indonesia can be extended both by increasing the revenues available for social assistance and poverty alleviation programs, and through an efficient allocation of resources either to support those in greatest need, or to fund effective initiatives to promote employment opportunities, industrial development and education access.

277. As has been discussed earlier, Indonesian taxed based resources have been relatively low. Efforts should therefore continue to secure a larger and more stable stream of revenue from taxation, for example by bringing in measures to deal with the problem of relatively low tax compliance.

¹⁶ Although some industrial development agencies do exist in Indonesia, no genuine network exists with broad regional coverage. For example, the Batam Industrial Development Authority (BIDA) was established in 1971 by the Government of Indonesia to promote and develop the Bareleng region. However, the location of Batam within the Indonesia-Malaysia-Singapore growth triangle provided a specific rationale for its establishment.

APPENDIX A - SOURCE OF DATA

In terms of data, there are three data sources used in this paper. The first is micro household data sourced from the National Socioeconomic Survey - SUSENAS 2008, the most current available SUSENAS data that includes a consumption module, when this project started in May 2012, published by the Biro Pusat Statistik (BPS/ Indonesian Central Bureau of Statistics). This micro data will be mostly used to examine characteristics of persons and households living in poverty and near poverty by focusing on those who live in the bottom or second quintile of household consumption per capita. This initial analysis will inform potential drivers of poverty, by profiling the poorest households in Indonesia.

The second data sources is District level data sourced from the 2001-2007 Komite Pemantauan Pelaksanaan Otonomi Daerah (KPPOD/ Regional Autonomy Watch). This data sources is will be specifically utilised to examine regional disparities in poverty and inequality.

The third data source is derived from other published/unpublished data collected and calculated by BPS and other Indonesian government agencies. These data include for example, provincial poverty level data from various SUSENAS publications (see Table A1), compiled as a time series.

In addition, the CEIC database houses over 100,000 time series of Indonesian economic and social data collections, including the national accounts, demographic and labour market indicators have also been used in the paper.

CEIC specializes in providing in-depth, high-quality and comprehensive macro-economic, industrial and financial time-series data for over 120 countries. Our reliable data are sourced from over 1,000 primary sources, including national statistical offices, central banks, government ministries and financial exchanges.

Table A1. Data source for Official Poverty Calculation

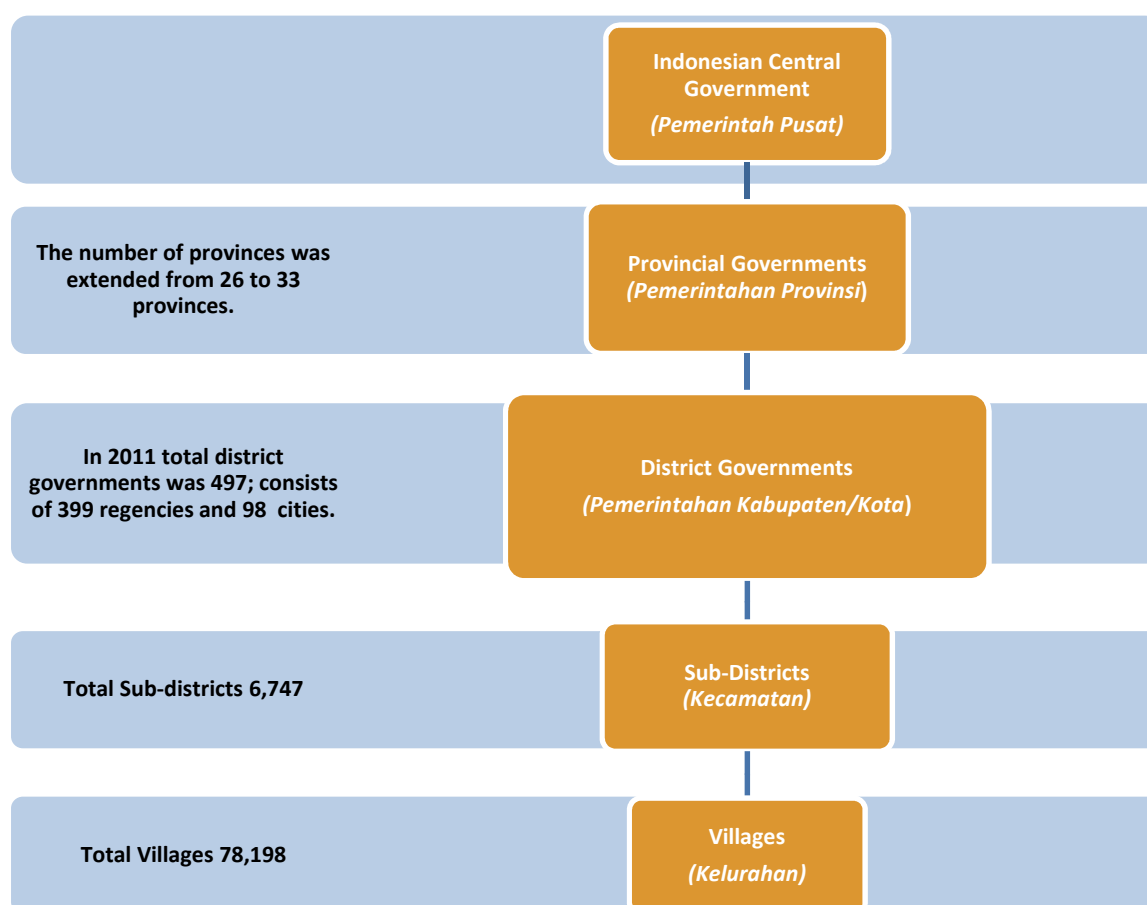
Year	Data Source	Sample (number of households - hh)	Coverage (U=Urban, R=Rural)
1976 - 1987	SUSENAS Consumption Module	Information N/A	National (U,R,U+R)
1990	SUSENAS Consumption Module (Feb)	Information N/A	National (U,R,U+R) 18 Provinces + 9 Combined provinces (U,R,U+R)
1993 and 1996	SUSENAS Consumption Module (Feb)	+/- 65,000	National (U,R,U+R), Province (U,R,U+R)
1998	SUSENAS December 1998	+/- 10,000	National (U,R,U+R)
1999	SUSENAS Consumption Module (Feb)	+/- 65,000	National (U,R,U+R), Province (U,R,U+R)
2000 and 2001	SUSENAS Core (Feb)	+/- 260,000	National (U,R,U+R), Province (U,R,U+R)
2002	SUSENAS Consumption Module (Feb) SUSENAS Core (Feb)	+/- 65,000 +/- 260,000	National (U,R,U+R), Province (U,R,U+R) District/Municipality
2003 and 2004	SUSENAS Consumption Module Panel (Feb) SUSENAS Core (Feb)	+/- 10,000 +/- 260,000	National (U,R,U+R) Province (U,R,U+R), District/Municipality (U+R)
2005	SUSENAS Consumption Module Panel (Feb) SUSENAS Consumption Module (July) SUSENAS Core (July)	+/- 10,000 +/- 68,000 +/- 280,000	National (U,R,U+R) National (U,R,U+R), Province (U,R,U+R) District/Municipality
2006	SUSENAS Consumption Module Panel (March) SUSENAS Core (July)	+/- 10,000 +/- 280,000	National (U,R,U+R) Province (U,R,U+R), District/Municipality (U+R)
2007	SUSENAS Consumption Module Panel (March) SUSENAS Core (July)	+/- 68,000 +/- 280,000	National (U,R,U+R), Province (U,R,U+R) District/Municipality
2008	SUSENAS Consumption Module Panel (March) SUSENAS Consumption Module (July)	+/- 68,000 +/- 280,000	National (U,R,U+R), Province (U,R,U+R) National (U,R,U+R), Province (U,R,U+R), District/Municipality
2009 and 2010	SUSENAS Consumption Module Panel (March) SUSENAS Core (July)	+/- 68,000 +/- 280,000	National (U,R,U+R), Province (U,R,U+R) District/Municipality
2011	SUSENAS Consumption Module	+/- 75 000 /quarter	National (U,R,U+R), Province (U,R,U+R), District/Municipality

Source: Unpublished publication, BPS.

APPENDIX B.

Figure B.1 shows Indonesian Governmental Structure after the enactment of Law No.22 and No.25 in 1999. The expansion of the number of regional governments can also be seen in this figure.

Figure B.1. Indonesian Government Structure after Decentralisation



Source: Directorate General of Regional Authority, Ministry of Home Affairs.

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