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GROWTH, STABILITY, BUT WHAT ABOUT EQUITY? REASSESSING INDONESIAN INEQUALITY FROM A COMPARATIVE PERSPECTIVE

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GROWTH, STABILITY, BUT WHAT ABOUT EQUITY? REASSESSING INDONESIAN INEQUALITY FROM A COMPARATIVE PERSPECTIVE[1]

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ABSTRACT

Inequality estimates derived from household consumption expenditure surveys (Susenas) suggest that economic inequality in Indonesia was comparatively moderate during the rapid economic transition in the Suharto era (1966–1998). Yet the expenditure distribution concept and problems of underreporting and selection bias constrain meaningful international inequality comparisons. This paper reassesses Indonesian inequality from a comparative perspective employing various alternative data sources and indicators. A comparison with Brazil, Mexico and the US reveals that Indonesian inequality levels are generally closer to Latin American levels than to US levels. Except for large short-term fluctuations, we did not find an overall increasing or decreasing inequality tendency between 1966 and 1998.

Keywords: Indonesia, inequality, Theil index

JEL classification: N15, O11, O17, P44

1 INTRODUCTION

For more than three decades (1966–1998) socioeconomic policies in Indonesia were based on President Suharto's development trilogy "growth, stability and equity" *(Trilogi Pembangunan)*. Scholars widely agree that Suharto's rule established growth and stability, but widespread disagreement remains about the equity objective. The Gini coefficients of household consumption expenditure, published by the Indonesian Central Bureau of Statistics (*Badan Pusat Statistik*, BPS) for the period 1964–2002,

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suggest that the level of economic inequality was relatively moderate compared to international standards. They also suggest that the trend was rather flat during the rapid economic transition achieved during the 32 years of Suharto's reign. However, the poor representativeness of the data, the details of which we will highlight further on, have hampered a meaningful comparative assessment of Indonesian inequality levels and trends. This is especially unfortunate since Indonesia is a school example of a transition country recording high rates of growth and a rapid pace of structural change in a well-delineated period of time (i.e. from the late 1960s onwards until the Asian crises in 1997–1998), and therefore presents an excellent case for analysing the effects of structural economic transformations on the distribution of income.

This justifies an alternative approach to studying the development of income inequality in Indonesia during the post-war era. Instead of looking at the existing expenditure Gini coefficients, we focus on three important constituents of income inequality, which we deem more consistent over time and across space, that is: 1) The ratio of unskilled wages to GDP per worker, which provides information about the relative degree of earnings of a large category of unskilled wage workers vis-à-vis the combined incomes of skilled workers and capital owners. As pointed out by Jeffrey Williamson, trends in the wage-GDP per worker ratio provide a good indication of whether the relative position of the low-income groups improves or worsens (Williamson 1997, 2002, 2006; Prados de la Escosura 2006; Frankema 2010). 2) The Theil coefficient of the inter-industry wage distribution in the manufacturing sector. Given its size and variation in relative skill, capital and technology intensity, the manufacturing sector wage distribution sheds light on the relative earnings gaps between typically labour-intensive and capital- or skill-intensive industries. Hence trends in the Theil coefficient are likely to reflect changes in skill premium or the diffusion of monopoly profits in sectors facing reduced competition (Conceiçao and Galbraith 2001; Galbraith and Kum 2005). Moreover, since the manufacturing sector played a leading role in terms of labour productivity growth after the late 1960s, the effects of structural change on the earnings distribution become readily observable (Marks 2009). 3) The development of the relative size of the urban informal sector, approximated by the percentage share of self-employed in total non-agricultural employment. Although the urban informal sector is not a direct income distribution component, it reveals how structural change has impacted on the composition of the urban labour force. Since urban informal sector workers in developing countries constitute one of the least productive and, on average, poorest segments of the labour force, the comparative magnitude of the informal sector is a significant indicator of comparative inequality levels (PREALC 1982; Bhattacharya 2007).

We assess Indonesian inequality estimates in comparison with two large Latin American countries, Brazil and Mexico, and the US. The first two countries recorded some of the highest income inequality levels in the world during the post-war era. Brazil and Mexico, like Indonesia, belong to the most populous countries in the world and all three have undergone a rapid transition from a pre-modern rural production structure towards an urban economy with considerable industrial and service sectors. In addition, all three countries are known to have developed large informal economies in the wake of this transition process (Mulder 1999; Frankema 2009). We include the US

in our comparison for a different reason. Because the US was the world's productivity leader during the 20th century, apart from being another large country, the structure of the US economy serves to contrast with these three developing economies. We will demonstrate that all of the indicators we present below point to a higher level of income inequality in Indonesia, Brazil and Mexico than in the US, whereas the Gini coefficients that have been used in the conventional literature show that Indonesian income is distributed more equally (Cameron 2002). Hence the inclusion of the US in our comparative analysis helps to sharpen our conclusions.

We yield three main conclusions: Firstly, Indonesian inequality levels are generally closer to Latin American levels than to US levels, which counters the patterns revealed by Indonesia's expenditure Gini coefficient. Secondly, no clear increasing or decreasing tendency can be discerned in the long-run trend between 1966 and 1998, which is in line with the patterns displayed by Indonesia's expenditure Gini coefficient. Thirdly, the volatility that can be observed in the Indonesian inequality indicators is comparatively large, which is not reflected by Indonesia's expenditure Gini coefficients.

The remainder of the article is organised as follows: The next section surveys the literature on Indonesian inequality and discusses the drawbacks of the expenditure Gini coefficients. We then proceed with three consecutive sections on each of the three indicators, followed by a summary and conclusion of the main results.

2 ACCOUNTING FOR INDONESIAN INEQUALITY

Table 1 below serves to illustrate the sweeping transition of the Indonesian economy during the second half of the 20th century. The labour force expanded rapidly, from an estimated 32.7 million to 87.1 million in 2001. This yields an average annual growth rate of 2.5. Like many other East Asian and Latin American economies, the share of the economically active population in agriculture declined rapidly, from circa 73% of the labour force to 38%. This decline is undoubtedly continuing today and will continue in the future. As observed by Marks (2009: 88–89), one of the more striking features of the structural changes of the Indonesian economy is the relatively large expansion of the service sector as opposed to the more productive industrial sector.

It is this characteristic in particular that makes a comparison with some populous Latin American countries such as Brazil and Mexico potentially fruitful. In these countries the expansion of the service sector labour force underpinned went hand in hand with a mere explosion of low value added urban informal sector activities (Frankema 2009:155–158). Part of the high and increasing levels of income inequality in post-war Latin America are explained by the increasing income and productivity differentials in the service sector (Mulder 1999; De Soto 2000; Frankema 2010). This raises the question: To what extent did a comparable process occur in Indonesia?

Table 1: Labour force composition and structural change in Indonesia, 1961–2001

	Agriculture		Industry		Services		Total
	x1000	%	x1000	%	x1000	%	x1000
1961	23,980	0.73	2,037	0.06	6,672	0.20	32,689
1971	25,820	0.66	3,200	0.08	10,190	0.26	39,210
1981	29,623	0.55	5,486	0.10	18,649	0.35	53,758
1991	34,396	0.48	9,451	0.13	27,728	0.39	71,575
2001	33,176	0.38	14,036	0.16	39,876	0.46	87,088

Source: Marks (2009: Appendix 7, 316–319)

As stated in the introduction, the study of Indonesian income distribution suffers greatly from a lack of accurate data. Hardly any data are available on the early post-war years to assess trends in national income inequality (Arndt 1975; Booth and Sundrum 1981). With the introduction of the National Socio-economic Survey (*Survei Sosial-Ekonomi Nasional*, *Susenas*) in 1963 and the National Labour Force Survey (*Survei Tenaga Kerja Nasional*, *Sakernas*) in 1976, richer data sets became available for the last decades of the 20th century. The consumer expenditure data from the *Susenas* became the main source for inequality studies in Indonesia. The Gini coefficients derived from the BPS elaboration of *Susenas* data, as presented below in figure 1, have become the main source for conclusions on the inequality trend during Suharto's presidency.[4]

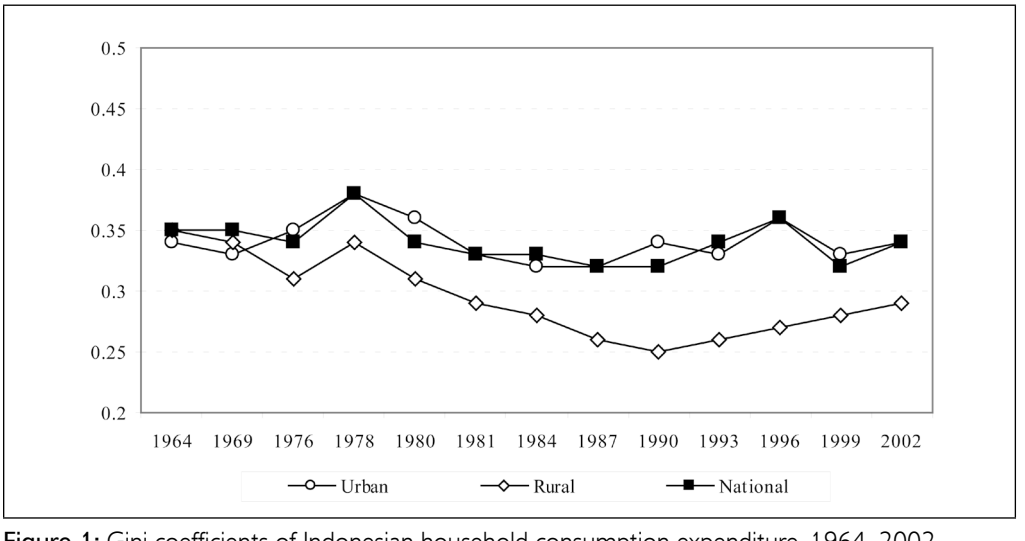

Figure 1: Gini coefficients of Indonesian household consumption expenditure, 1964–2002

Source: BPS, Statistical Yearbook of Indonesia, various issues.

4 See, for example, Booth (1992:335); Hill (2000: 197); Booth (2000: 75); and Dick et al. (2002: 227). See also the discussion of the inequality literature by Cameron (2002).

The graph shows that during the Suharto era (1966–1998), the Gini coefficient of the national consumption expenditure distribution fluctuated between 0.33 and 0.38, suggesting that Indonesian inequality was relatively moderate compared to international standards and has also been fairly stable over time. On the basis of these data, Boediono (1990) concludes that high growth rates in Indonesia have been associated with a slight overall decline in total inequality, affirming the success of Suharto's development trilogy. Yet, Dick et al. (2002: 227) argue that contrary to this statistical evidence, people held the view that economic disparities were widening, because of the excessive self-enrichment of elite circles around the Suharto family as well as increasing income gaps between urban and rural areas. The occurrence of such opposing views can be partly explained by a number of specific peculiarities concerning Indonesia's income distribution data.

As mentioned earlier, in most of the Indonesian inequality literature, expenditure Gini coefficients are used to identify trends. However, Atkinson and Brandolini (2001) argue that expenditure distributions tend to reveal lower levels of inequality since the better off are likely to save part of their income, whereas the household expenses of the poor are usually equal to or above net income. Moreover, since poor households in particular tend to smooth their expenditure in response to income shocks, the effects of economic crises on the distribution of income are less likely to be adequately picked up.[5] In addition, since a vast majority of countries base their distributional analyses on income surveys, international comparisons of Indonesian inequality are fraught with problems. Table 2 compares the decadal averages of the Indonesian expenditure Gini coefficients with the income Gini coefficients in Brazil, Mexico and the US. The figures indicate that the decadal average Indonesian consumption expenditure inequality is much lower than gross income inequality levels in the US throughout the period 1960–2005. Few scholars would conclude from these figures, however, that Indonesian income inequality is lower than that in the US.

To accommodate the problems of the expenditure concept, Akita and Lukman (1995) adopt a different approach. Using provincial GDP per capita figures for the period 1975–1992 as a proxy of provincial average income, they find that the inter-regional disparities in consumption expenditure are much more limited than in GDP. Others have found that in the mid- to late 1980s, income Gini coefficients based on *Susenas* data for a few benchmark years suggest a rise in inequality which is not captured by the expenditure Gini coefficients (Asra 2000: 102; Cameron 2002: 12).[6] More recently, Alatas and Bourguignon (2005) conducted an in-depth analysis of the income data in the *Susenas* survey for 1980 and 1996 and recorded a rise in household income inequality during this period.[7] They attribute this increasing inequality trend primarily to shifts from wage labour to non-agricultural self-employment under the influence of rural-urban migration.

5 For a more extensive discussion on the advantages and disadvantages of the income and expenditure approach see also Deininger and Squire (1996), and François and Rojas-Romagosa (2005).

6 Income inequality Gini coefficients calculated from the raw *Susenas* income data were 0.42 for 1984 and 0.43 for 1990 (Cameron 2002: 12).

7 For 1996, their figures were complemented by the *Susenas* savings and income survey.

Table 2: Indonesian expenditure Gini coefficients in an international comparative perspective, decadal averages, 1960–2005

	Concept	1960s	1970s	1980s	1990s	2000–2005
Indonesia	Consumption expenditure	0.35	0.36	0.33	0.34	0.34
Brazil	Income, gross	0.55	0.60	0.59	0.59	0.61
Mexico	Income, net disposable	0.56	0.52	0.50	0.55	0.53
United States	Income, gross	0.39	0.39	0.41	0.44	0.45

Sources: BPS, Statistical Yearbook of Indonesia, various issues; UNU/WIDER, World Income Inequality Database (WIID), May 2008, Version 2C.

Notes: Factors affecting the comparability of income inequality estimates across countries or over time may relate to differences between net disposable and gross income, monetary and total income, the income recipient (households or individuals) and population coverage (total or economically active population; rural, urban or national). The figures for Japan, the Philippines, Brazil and the U.S.A. refer to gross national monetary household or personal income; for Mexico the figures refer to net disposable income; and for Brazil in the 1960s, the observations are categorised by UNU/WIDER as being of suspect quality.

Although the income approach seems a promising avenue to further our understanding of Indonesian inequality, some of the problems of the *Susenas* expenditure data are equally valid for the *Susenas* income data. Sudjana and Mishra (2004: 5) suggest that the *Susenas* survey tends to exclude the very wealthy since they are the least likely to be reached by the enumerators, and if they are, they are often excluded from the data as outliers. The World Bank refers to this selection bias stating that "*BPS indicated that often their interviewers were not received at the houses of the very wealthy, resulting in a selective non-response*" (World Bank 2003: 52, endnote 5). Aaberge (2001) shows that such sampling errors could have major consequences for cross-country comparisons of income Ginis.

Hofman, Rodrick-Jones and Thee (2004) illustrate the possible implications of selection bias. They show that, according to the *Susenas* data of 2002, the upper one percentile of households earns an improbable low average monthly income of circa $300 per household, which corresponds with an income Gini of 0.41. This is undoubtedly a severe underestimation. Assuming that the upper one percentile of households earns a monthly income ten times as large as the actually reported amount of 2.5 million Rupiahs (hence, circa $3,000 in 2002 prices), the Gini coefficient would rise to 0.68 (Hofman, Rodrick-Jones and Thee 2004: 35).

Van der Eng (2001) provides further evidence of a selection bias in the *Susenas* data. He shows that estimates of private consumption based on the *Susenas* data are significantly lower than those in the national accounts, deviating more than 50% on average. Van der Eng attributes this underestimation to the exclusion of non-food expenditures, and particularly such consumer durables as televisions and cars. In support of this argument, Sudjana and Mishra (2004) argue that the list of consumption

items of the survey is too confined to accurately capture the consumption bundle of the very rich, which comprises high quality products and luxury goods. [8]

Yusuf (2006) further supports this notion showing that food expenditure in the input-output table is a factor 1.74 higher than in the corresponding *Susenas*, whereas non-food expenditure is a factor 3.27 higher. This suggests that the *Susenas* in particular underreports expenditure on non-food items. The differences are illustrated in table 3. The reason for this can be either underreporting of non-food consumption by higher income groups or a misrepresentation of these groups themselves. In both cases the outcome is the same: underestimated inequality levels. The problem of underreporting also affects the reliability of the time series, since the amount of underreporting is likely to be positively correlated with the relative expenditure share of the top income groups.

Table 3: Food and non-food expenditure from I-O tables and Susenas in 2000 (in million Rp)

	I-O		Susenas		
	Rp	Share	Rp	Share	Ratio
Food	326,001	0.23	187,225	0.36	1.74
Non-food	1,090,044	0.77	333,018	0.64	3.27
Total	1,416,045	1.00	520,243	1.00	2.72

Source: Yusuf (2006: 5)

Leigh and Van der Eng (2009) recently adopted a new approach. Following the seminal work of Piketty (2003) and Piketty and Saez (2003, 2006), they trace the evolution of top incomes in Indonesia on the basis of tax registers and household income data from *Susenas*. The authors conclude that the income share of the richest 10% of income earners remained relatively stable throughout the 20th century, but at relatively high levels comparable to countries like India and the US. Moreover, they record a significant rise of the top 1, 5 and 10% income shares in Indonesia during the 1980s and 1990s. Yet, Van der Eng and Leigh (2009) also explicitly admit the problems they encountered with the *Susenas* data they used for the years 1982–2002 (Leigh and Van der Eng 2009: 212) and call for further research on this topic using a variety of sources on income inequality.

In sum, the literature widely acknowledges that the Gini coefficients based on the *Susenas* household consumption expenditure surveys have to be interpreted with great caution. The few studies that have adopted an income approach either have a short-run focus (based on two or three benchmark years) or are based on *Susenas* income data, which are likely to suffer from underreporting. Besides, neither of these studies, with the exception of the recent work of Leigh and Van der Eng (2009), makes an attempt to assess Indonesian inequality in an international comparative perspective. Of

8 Nyberg (1976) addresses another weakness of the *Susenas* data, namely the timing of the survey. In some years, the Islamic feast, known as *Lebaran*, at the end of the fasting period, is included, while in others not, possibly affecting expenditure patterns. This makes these *Susenas* data difficult to compare between years.

course, the alternative data sources and indicators we adopt have their own limitations (as we will discuss further on) which confine the opportunities of a cross-country comparison. Ultimately, however, exploring alternative paths is the only way to further our understanding of Indonesian inequality.

3 RELATIVE EARNINGS OF UNSKILLED WAGE WORKERS

The ratio of nominal annual wages of unskilled wage workers over nominal GDP per worker provides insight into a significant dimension of the long-term secular inequality trend.[9] The relative level of wage earnings of unskilled labourers (w) reflects the income position of a specific category of people depending on wage income at the bottom of the income pyramid. GDP per worker (ỹ) benchmarks the average income generated by members of the workforce, including capital income and skill premiums. Hence, the long-run development of the unskilled wage-GDP per worker ratio (w/ỹ) reveals to what extent the income development of the lower-income strata keeps pace with the income development of the average person in the labour force.

Milanovic, Lindert and Williamson have recently demonstrated the existence of a significant negative correlation between w/ỹ and the Gini coefficient (based on social tables) in a sample of 11 ancient societies (2007: 23 and 85). In figure 2 we present a comparable result, for a confined sample of ten Asian and Latin American countries around 1970, based on ILO survey data of unskilled rural wages. We only included countries with a Gini coefficient based on gross household income (hence Indonesia is excluded) taken from the UNU/WIDER data set (see sources below figure). The simple bivariate correlation coefficient between w/ỹ and the Gini coefficient is 0.70. We find an elasticity of 0.84, which implies that for every 10% point increase of the wage/gdp per worker ratio, the income Gini increases by 8.4 percentage points.

The main limitation of this indicator is its one-dimensionality: it discloses the distributional dynamics occurring among different groups of skilled workers or capital owners. Hence this indicator is specifically suitable to study income inequality trends in less developed economies, where unskilled wage workers represent the majority or at least a considerable part of total income earners in the economy. This is the case for Indonesia, Brazil and Mexico in the period under consideration. For reasons of consistency and comparability, we based our series of Indonesia, Brazil and Mexico on the adult male wages of rural unskilled workers. At the starting point of our analysis in 1960, an estimated 75% of the Indonesian economically active population was engaged in agriculture. In Brazil and Mexico, this figure was around 60%. Although these shares

9 Jeffrey Williamson introduced this measure in various studies on the impact of globalisation on income distribution in the late 19th and early 20th century. His series for several Latin American countries were based on GDP per capita (see, for instance, Williamson 1999: 101; or Bértola and Williamson 2006: 54). To filter out the possible effects of demographic changes on GDP per capita, we have adopted GDP per worker to establish a more direct link between average labour productivity and relative income shares.

declined rapidly in all three countries, still more than 20% of the male labour force was occupied in agriculture at the close of the 20th century. The vast majority of this category was engaged in unskilled rural production, performing predominantly physical and manual labour tasks.

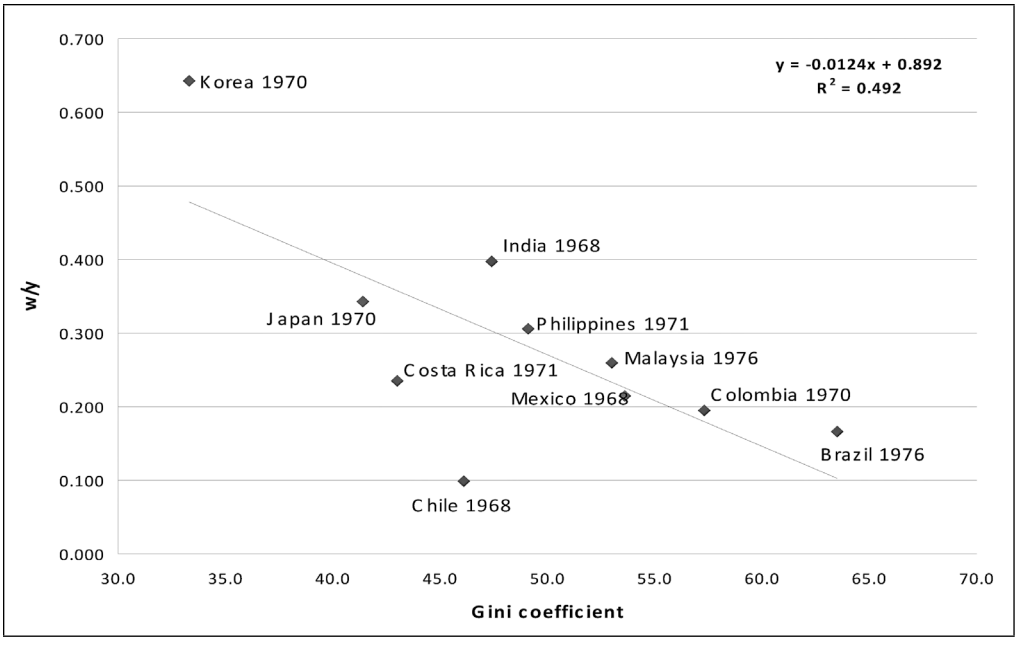

Figure 2: w/y versus Gini in a sample of Asian and Latin American countries around 1970

Sources: All unskilled (agricultural) wages are taken from the ILO *Yearbook of Labour Statistics* (various issues) and GDP and labour force estimates from Timmer and De Vries (2007), except: Brazilian unskilled wage from *Anuario Estatistico do Brasil*, GDP from the Oxford Latin American Database (OXLAD) http://oxlad.qeh.ox.ac.uk/; and Mexican unskilled wage from *Annuario Estadistico de los Estados Mexicanos*, and GDP from OXLAD. Gini coefficients from UNU/WIDER, World Income Inequality Database (WIID), May 2008, Version 2C.

Note: Gini coefficients are all based on an income concept with the household as the basic statistical unit.

For Indonesia, we took the nominal daily wages of rural plantation workers from Van Leeuwen (2007) for the period 1961–1993, extrapolated to 2003 on the basis of rural workers' annual earnings derived from the Indonesian social accounting matrices (*Statistik Indonesia*, various issues). For Brazil, we chose the official rural minimum wages series of Ceará (a federal state in the Northeastern part of Brazil), since these series corresponded best with several benchmark observations of the average national unskilled rural wage level. For Mexico, we took the average unskilled rural worker wage series from the *Annuario Estadistico de los Estados Mexicanos* for the years 1960–1991, extrapolated on the basis of the official minimum wage trend for the period 1992–2000.

Since the rural labour force in the US constitutes a relatively small group of workers, we adopted a different approach and constructed two wage series. The first

is based on the average hourly earnings of goods-producing labourers (i.e. excluding supervisors, managers and other white-collar workers) in the manufacturing sector. The second is based on the hourly wage rates of the occupational categories in the monthly BLS survey which recorded the lowest average wages. These related to various service sector jobs in retail trade, food preparation and servicing, hospitality, leisure and cleaning services. Together these series provide an unskilled labour wage range which applies to the vast majority of unskilled to semi-skilled service and production workers in the US.

The comparison of the unskilled wage/GDP per worker time series for the period 1960–2003 is presented in figure 3. It should be noted that a cross-country comparison at a fixed point in time may be affected by various country-specific short-run fluctuations which may temporarily push either the wage or GDP level, or both, away from the long-run trend. One may think of world market price shocks for key export products such as oil (Indonesia) or coffee (Brazil) affecting GDP levels, or inflationary shocks affecting nominal wages and GDP per worker levels differently. Since such shocks tend to phase out in the long run, figure 3 can best be evaluated by looking at the aggregate picture to which we will accordingly confine ourselves.

First, the graph confirms our expectation that the unskilled wage share in the US, that is, the entire range, is higher than that in Indonesia, Brazil and Mexico. The US series reveals a turning point around 1982, when a gradual but sustained decline of the wage share sets in. This observation is in line with a large body of literature studying the causes of the declining relative position of wage earners at the bottom of the wage distribution.[10] A comparable turning point can be found in the Mexican series in the year 1976. Both the Mexican and Brazilian series reveal a notable decline of the unskilled wage share towards the end of the century, with rates dropping below 10%.

The development of the unskilled wage share in Indonesia shows some similarities as well as some important differences with the three benchmark countries. On the whole, a notable decline can be observed from the early 1970s until 1998, the year of the economic crises and the stepping-down of Suharto as president of Indonesia. But the ratio does not become as low as in Mexico and Brazil, and stabilises around 20% in the aftermath of the crises. Hence Indonesian unskilled rural labourers obtained a higher relative share of total national income than their counterparts in Mexico and Brazil during most of the period 1966–1998. The unskilled wage workers in the US were relatively better off than in Indonesia during the entire period. The relative income position of unskilled workers in the US also appears to be more secure over time (despite the gradual drop after 1982), while the volatility of the Indonesian wage share trend is much greater. However, considering the entire period between 1966 and 1998, the income position of unskilled rural wage workers seemed to have hardly changed.

Finally, imputing the Indonesian w/ỹ ratio between 1966 and 1998 in figure 2 gives us an indication of the range in which an Indonesian income Gini could have been. The underlying assumption is that Indonesia is not an outlier in this sample and that the relationship between the w/ỹ ratio and the income Gini corresponds closely to the

10 For a concise overview, see Helpman (2004: 94–105).

depicted regression line. Under this assumption, the peak of 0.323 in 1972 corresponds with a Gini of 45.9, and the dip in 1998 corresponds to a Gini of 58.8. These income Ginis are around 10 to 25 percentage points higher than the expenditure Ginis shown in figure 1. Moreover, this exercise shows not only that the average estimated Indonesian income Gini is in close proximity to Mexican levels, but also that around 1970 it is close to levels in neighbouring countries, Malaysia and the Philippines.

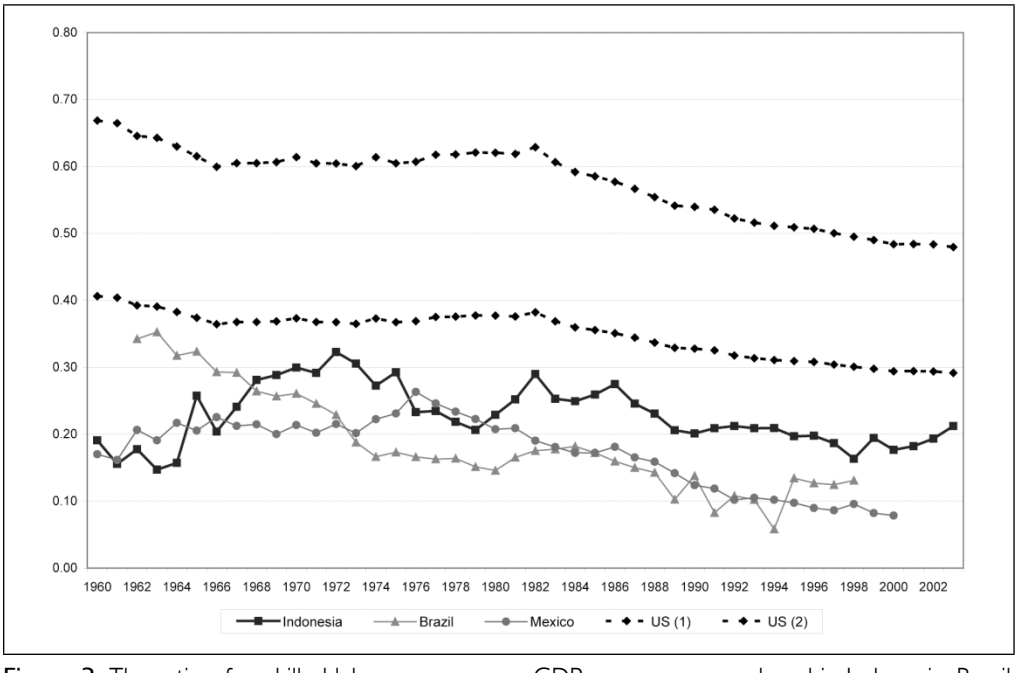

Figure 3: The ratio of unskilled labour wages over GDP per person employed in Indonesia, Brazil, Mexico and the US (lower bound and upper bound estimate), 1960–2003

Sources: Indonesian wage series from Van Leeuwen (2007: 241–242) for 1960–1993, extrapolated for the period 1994–2003 with data of paid agricultural workers from the social accounting matrices from BPS, Statistik Indonesia (various issues); Indonesian GDP series from Van der Eng (2002); Brazilian wage series from Anuario Estatistico do Brasil (various issues) and GDP series from the Oxford Latin American Database (OXLAD) http://oxlad.qeh.ox.ac.uk/; Mexican wage series from Annuario Estadistico de los Estados Mexicanos (various issues) and GDP series from OXLAD; US wage series from the Bureau of Labour Surveys Database, http://data.bls.gov and GDP series from U.S. Bureau of Economic Analysis, www.bea.gov/

Notes: The underlying figures are presented in appendix table A.1

4 INTER-INDUSTRY WAGE INEQUALITY

The manufacturing sector was the leading sector in the economic transition in Indonesia in terms of productivity levels and productivity growth. The sector's economic contribution increased from circa 10% of total value added (excluding oil and gas) in 1966 to around 31% in 1998, while its share in employment rose from circa 5 to 13%. The impact of manufacturing wage differentials in the overall distribution of income has

increased accordingly. Given the sector's large inter-industry variations in capital, skill and technology intensity, inter-industry wage differentials in the manufacturing sector tend not only to reflect the impact of skilled or unskilled-biased technological change, but also to pick up broader movements in the direction of wage disparities in the urban economy.[11] Another advantage of analysing the manufacturing wage distribution is that data are comparatively well standardised.

The International Standard of Industrial Classification (ISIC 1) provides a consistent link between wages and employment in 20 manufacturing industries, which can be traced back as far as 1955 for Indonesia. We analyse inter-industry wage inequality in a Theil index framework. The Theil index weighs the employment and income components of inter-industry income inequality (Theil 1967) and can formally be written as

$$T = \sum_i w_y^i((\log w_y^i) - (\log w_e^i)) \quad \text{or} \quad T = \sum_i w_y^i \log(w_y^i / w_e^i) \tag{1}$$

where T is the weighted sum of the difference between the log percentage share of income w_y, and the log percentage share of employment w_e over i sectors (i.e. the 20 ISIC manufacturing industries), and the weights are the percentage shares of income of each sector i in total income. If the employment share w_e is larger than the income share w_y, the sector generates less income than "expected" on the basis of its employment share. In this case the sector contribution to the Theil index becomes negative. If the income share exceeds the employment share, the contribution to inequality becomes positive. If a sector earns exactly the share of total income as expected on the basis of its employment share, the sector contribution to inequality becomes zero. The logarithmic specification of the Theil index ensures that the sum of the sector contributions to inequality is a positive number, where zero indicates perfect equality and higher numbers indicate greater inequality.[12]

The Theil coefficients of manufacturing labour income in Indonesia between 1955 and 2002 are presented in figure 4. The graph reveals that wage differentials were rather volatile during the last decades, but again a long-run upward or downward trend is hardly discernable. A more detailed analysis of the changes over time leads to some interesting observations. The steep decline during the period 1958–1963 and the continuation of low wage inequality during the 1960s corresponds with the start of a period of profound state intervention in the industrial sector. The nationalisation of

11 Williamson (1980, 1982) has argued that wage differentials parallel broader trends in income distribution and can be regarded as a simplified phenomenon of the evolution of overall inequality. Acemoglu (1997) found that wage inequality was the main component of rising income inequality in the US, and Atkinson (1997) found close similarities in the movements of household income inequality and individual labour earnings inequality over the 1970s and 1980s in the U.K. More recently, the use of wage dispersion as an alternative for the widely used Deininger and Squire database of Gini coefficients has been advocated by the University of Texas Inequality Project (UTIP) (see, for example, Conceiçao and Galbraith 2001; Galbraith and Kum 2005).

12 Conceição and Ferreira (2000) present an insightful introduction to the technical details of the Theil index. One of the main advantages of the Theil index compared with the Gini coefficient is that the former is decomposable, allowing an analysis of the underlying components of the total distribution.

key industrial sectors and the supervision of private enterprises by publicly controlled industry associations were key features of Sukarno's socialist programme of "guided democracy and guided economy" implemented during the late 1950s (Thee 2003: 9). Sukarno's idea of "*Socialism à la Indonesia"* naturally entailed a policy of wage equalisation.

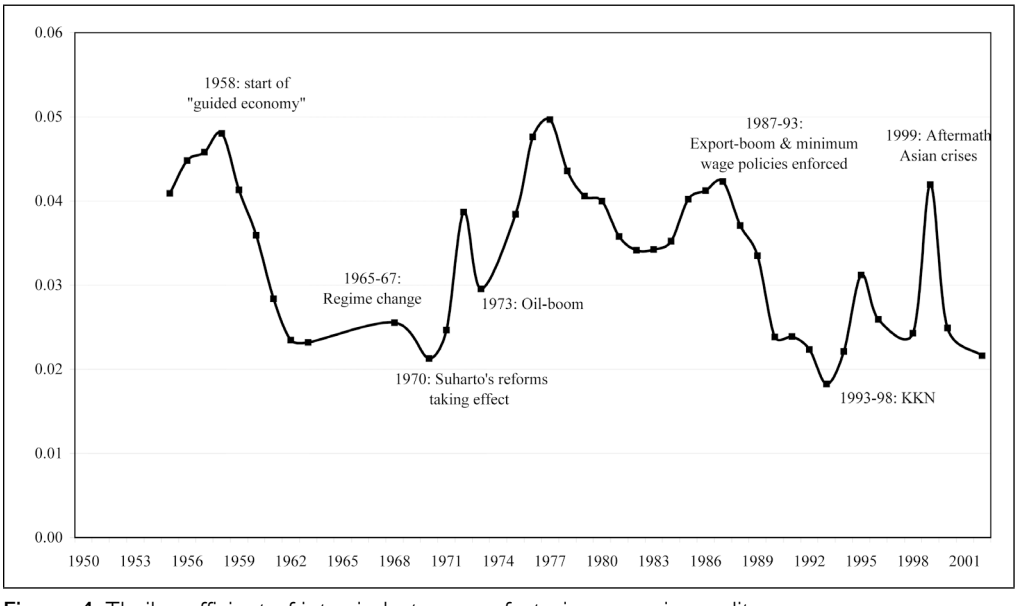

Figure 4: Theil coefficient of inter-industry manufacturing wage inequality

Source: Authors' calculations from: 1955–1962: *Statistical pocketbook of Indonesia*, various issues; 1963: Sensus Industri 1964; and 1968–2002, UNIDO Yearbook of Industrial Statistics, various issues.

As pointed out earlier, the regime change during the years 1965–1967 marked a reversal in many aspects of economic life. Suharto started to privatise the industries that were nationalised under Sukarno, and inter-industry wage differentials rose in response to the abolishment of Sukarno's guided economy programme. During the 1970s, a steep increase of the Theil index can be observed, with a peak in 1977. The oil boom in 1973 enhanced the increase of wage differentials, as the sectors benefiting from the oil boom, such as the refining and chemical industries, transferred part of their increasing revenues to their employees, while the appreciation of the rupiah as a result of the oil boom harmed the competitiveness of the non-oil export sectors. Although wage inequality declined after the peak in 1977, it remained at fairly high levels until 1987.

The steep decline from around 0.04 in 1987 to around 0.02 in 1993 corresponded with a new phase in economic policy.[13] After 1981, the rates of economic growth had been disappointing, and around the mid-1980s, a renewed sense of urgency arose to undertake a decisive reorientation of the economy. The main goal was to diminish

13 It should be noted that trends in the Theil coefficient cannot be linearly interpreted. For example, a decline from 0.04 to 0.02 does not reveal a reduction of inequality by 50%.

Indonesia's economic dependence on oil revenues. Firms exporting at least 85% of their output were exempt from all import duties and corresponding import regulations (Dick et al. 2002: 212). In addition, the government implemented exchange rate policies tailored to the non-oil export sector.[14] During the years following these reforms, the export of manufacturing products boomed (Hill 2000: 17). These impressive growth rates were accompanied by a steep decline in wage inequality in manufacturing. A combination of factors can explain this phenomenon.

The post-1987 export boom was based on an expansion of labour-intensive manufactures such as textiles, clothing, footwear and basic electronic equipment. The shift from resource-intensive to labour-intensive industries supported the convergence of unskilled and skilled labour wages. This tendency is reflected by the relative sector movements in the Theil index. A second cause of the notable decline in wage inequality after 1987 was the re-enhancement of minimum wage policies by the Suharto administration. Although already introduced in the early 1970s, it was only in the late 1980s that the government undertook serious measures to enforce the payment of minimum wages. In the first half of the 1990s, minimum wages tripled in nominal terms and more than doubled in real terms (Suryahadi et al. 2003). Minimum wage policies are likely to have supported wage convergence, especially since they pushed upward pressure on the wages in the lowest paying industries such as the textile sector.

The rise of wage inequality in the last years of the Suharto administration (1993–1998) may also be partly attributed to policies that strongly favoured the growth of large business groups (conglomerates) and prestigious industrial "high-tech" projects, owned and controlled by the President's relatives and their crony network, together with a range of restrictions (including cartels, price controls, entry and exit controls, exclusive licensing, dominance of SOEs in certain industries and ad hoc government interventions) that artificially raised the costs of doing business for small- and medium-scale enterprises (Dick et al. 2002: 214–215). These policies encouraged structural change of a kind that increased employment opportunities for more highly skilled labour at the expense of unskilled labour, thus further skewing the distribution of labour incomes.

Figure 5 presents the Indonesian Theil coefficient of inter-industry labour earnings inequality in a comparative perspective. Figure 5 yields two insights. First, the average levels of wage inequality in Indonesia appear to be comparable with those of Brazil and are, at any point in our time period, higher than those in Mexico and the U.S.A. Although the large volatility of the Indonesian trend makes cross-country comparisons at a specific point in time somewhat arbitrary, the average Theil coefficient for Indonesia is 0.034, which compares with 0.033 for Brazil, 0.014 for Mexico and 0.010 for the U.S.A. The major difference between Indonesia and Brazil is the fact that the latter has witnessed an almost uninterrupted increase of its Theil index since the 1950s, whereas in Indonesia the distribution of labour earnings since the late 1970s shows a long-run declining tendency. Secondly, manufacturing wage inequality in Indonesia appears to be much more volatile than in all of the three comparison countries. Similar to the

14 In September 1986, the government substantially devalued the rupiah.

trends observed in unskilled wage-GDP per worker ratios, the period 1966–1998 is characterised by large-scale volatility, but a net increase or decline in manufacturing wage inequality is hardly noticeable.

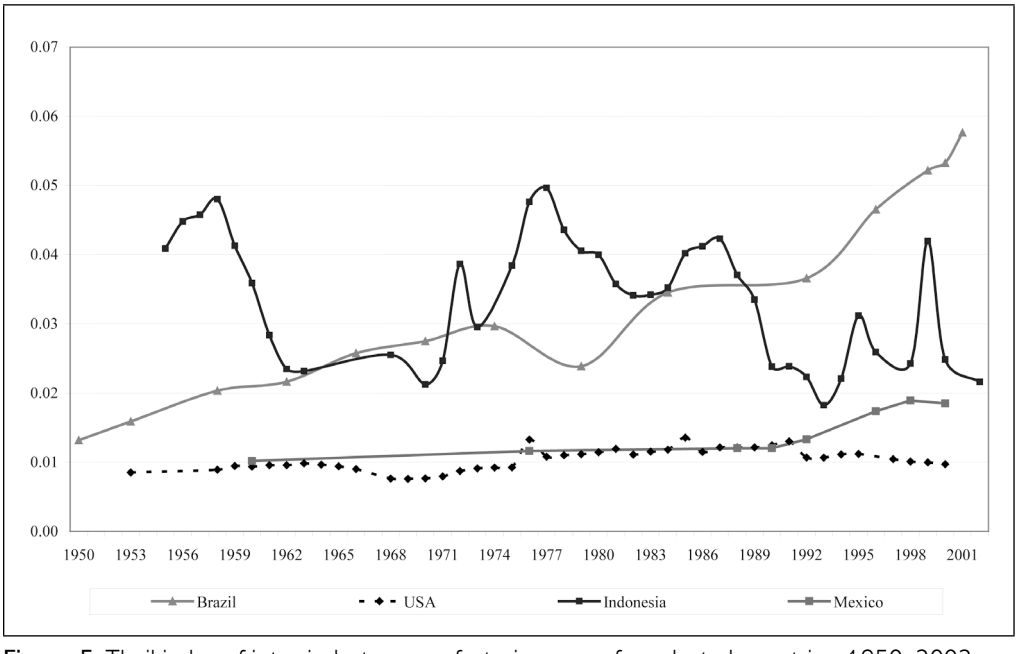

Figure 5: Theil index of inter-industry manufacturing wage for selected countries, 1950–2002

Source: For Indonesia see figure 3; for Brazil and the USA, UNIDO Yearbook of Industrial Statistics, various issues, 1950–2005. Note: the underlying data are presented in appendix table A.2

5 THE EXPANSION OF THE URBAN INFORMAL SECTOR

In the early post-war years, Indonesia underwent a period of economic stagnation and instability (1957–1963) culminating in an economic and political crisis during the last years of Sukarno's reign (1963–1967). The average annual GDP per capita growth rate was 1.4% for the years 1949–1965 against 3.6% between 1966 and 1998 (Van der Eng 2002).[15] It is safe to say that besides the start of a new political era, the New Order also marked the onset of Indonesia's economic transition. The process of economic modernisation was characterised not only by high rates of economic growth, but also by an increasing pace of industrialisation and urbanisation. The rapid widening of rural-urban productivity gaps encouraged large flows of rural-urban migration. Table 4 illustrates this process with aggregate measures of employment and productivity,

15 When interpreting early post-war growth rates in Indonesia, one should further note that the independence war with the Dutch came to an end in 1949. The initial benchmark level of GDP in 1949 was severely affected by wartime destruction. In 1966 GDP per capita levels were still estimated to be 22.5% lower than in 1941 (Van der Eng 2002).

showing that the relative decrease in agricultural employment corresponded with a considerable decline in the relative labour productivity of agriculture between 1971 and 1990.

Table 4: Share of agricultural employment in total employment and ratio of agricultural non-agricultural labour productivity

	1961	1971	1980	1990	2000
Employment share agriculture as % of total employment	0.75	0.68	0.58	0.57	0.47
Labour productivity agriculture as % of non-agriculture	0.49	0.58	0.35	0.29	0.38

Source: The employment figures are derived from the Indonesian Population Censuses of 1961, 1971, 1980, 1990 and 2000, and the sectoral value added estimates are based on the BPS data, discussed in Marks (2006).
Notes: Since a large number of agricultural households and agricultural labourers are involved in non-agricultural activities for a considerable proportion of their working time, agricultural labour productivity is often underestimated in comparison with non-agricultural labour productivity. To correct for the overstatement of the agricultural employment share, we used estimates of the percentage share of agricultural households earning their main income in non-agricultural sectors. In the year 1984 it was estimated that 3.1% of agricultural households derived their principal income from industrial activities and 13.5% from services (predominantly trade activities). In 1993 these figures were 4.1% and 16.0% respectively (Booth 2002: 184).

A substantial part of the expanding urban workforce was absorbed by the urban informal sector (Manning 1998). Indonesia's comparatively low levels of educational attainment constrained the opportunities for social mobility and aggravated the problem of underemployment that is typical for many informal sector activities (Booth 1999: 300-301). The divergence of rural-urban productivity levels and the growth of a "Lewis-type" surplus of low skilled labour in the cities suppressed the wages of urban unskilled workers and were therefore likely to promote increased urban inequality. Kuznets discussed this process in relation to his hypothesis of rising income inequality in the early stage of the economic modernisation process (Lewis 1954; Kuznets 1955).

Precise time series estimates of the size of the urban informal sector are impossible to obtain. In the first place, there is no clear-cut distinction between formal and informal economic activities as informal sector activities are highly heterogeneous. Yet, the 15th International Conference of Labour Statisticians (ICLS) adopted a resolution on the definition of informal sector workers, stating that they predominantly operate as self-employed workers or in micro-enterprises with a low level of organisation, with little division of labour and capital and with informal labour relations, based mostly on kinship, family ties or local social contacts (ILO 1993).

Although this definition fails to capture the distinction between "formal" and "informal" activities as a legal distinction, for statistical purposes it has some practical advantages. In line with the ICLS, the ILO has adopted an operational definition in which urban informal sector employment consists of a combination of self-employed and unpaid family workers (excluding administrative, professionals, technicians and superiors) and workers in micro-enterprises engaging less than five or ten employees operating on a wage or non-wage basis (ILO, Key Indicators of the Labour Market

2006 [KILM indicator 7]). Since the 1930s, the ILO *Yearbooks of Labour Statistics* have provided data on paid employees (wage earners), unpaid family workers and the self-employed (own-account workers) in the core sectors of the economy for a large number of countries. For Indonesia, these figures can be retrieved from annual issues of BPS, *Statistik Indonesia* and the ILO, *Yearbook of Labour Statistics*.

The heterogeneous category of urban self-employed and unpaid family workers for Indonesia can be refined by subtracting the share of professional self-employed such as lawyers, notaries, clergyman and employers for a few benchmark years. We find that this group constituted 1.9% of the total labour force in 1976, 3.4% in 1985 and 3.5% in 1992. Using a linear interpolation technique for the intermediate years, we constructed a time series of such a ”refined estimate” of the relative urban informal sector size.

However, the scarcity of data on professional self-employed and the large cross-country differences in the definition of unpaid family workers limit the use of this estimate for comparative purposes. A second strategy we therefore employ is to focus on the trend of the category of urban self-employed and estimate a lower-level boundary of the share of professional self-employed. Data from a selection of the world's economically most advanced countries suggest that the share of self-employed has declined markedly since the 1930s, typically to a level between 7 and 10% of the total labour force at the end of the 20th century. Table 5 illustrates this for the US, Canada, the UK, France, The Netherlands, Sweden and Japan, which shows that a figure of 7% appears to be a reasonable lower-level benchmark to evaluate the levels of and trends in the urban self-employed in developing countries. By distracting this lower boundary estimate of 7% from the total share of urban self-employed, we obtain a ”crude estimate” of the relative urban informal sector size.

Table 5: The percentage share of urban self-employed in the total labour force in a selection of economically advanced countries, 1930–1999

	US	Canada	UK	France	Netherlands	Denmark	Sweden	Japan
1930/31	0.08	0.09	0.11	0.16	0.14	0.17	0.18	0.15
1960/71	0.07	0.08	0.07	0.11	0.11	0.11	0.06	0.13
1993/99	0.07	0.08	0.10	0.08	0.09	0.07	0.08	0.07

Source: ILO, Yearbook of Labour Statistics, various issues 1936–2005.

The crude and refined estimates for the period 1965–2003 are displayed in figure 6. The correlation coefficient of the series is 0.97. The absolute levels of the refined estimate tend to be slightly higher, mainly because of the inclusion of the category of unpaid family workers. According to the refined estimate, the share of urban informal sector workers in the total labour force almost doubled between 1965 and 1999, from slightly less than 14% at the start of Suharto's reign, to slightly over 25% in the wake of the Asian crisis. The overall trend is very much in line with the literature stating that the urban informal sector has expanded considerably in Indonesia since the 1960s (Thorbecke 1991: 1596; Manning 1998: 103; Booth 2000: 81; Butzer et al. 2003). Considering the long-run trend in more detail, it would appear that during the phases

of economic hardship in the early 1980s and the final years of Suharto's presidency (1992–1998) in particular, the urban informal sector expanded. After 1999, the share declined to 22% in 2003.

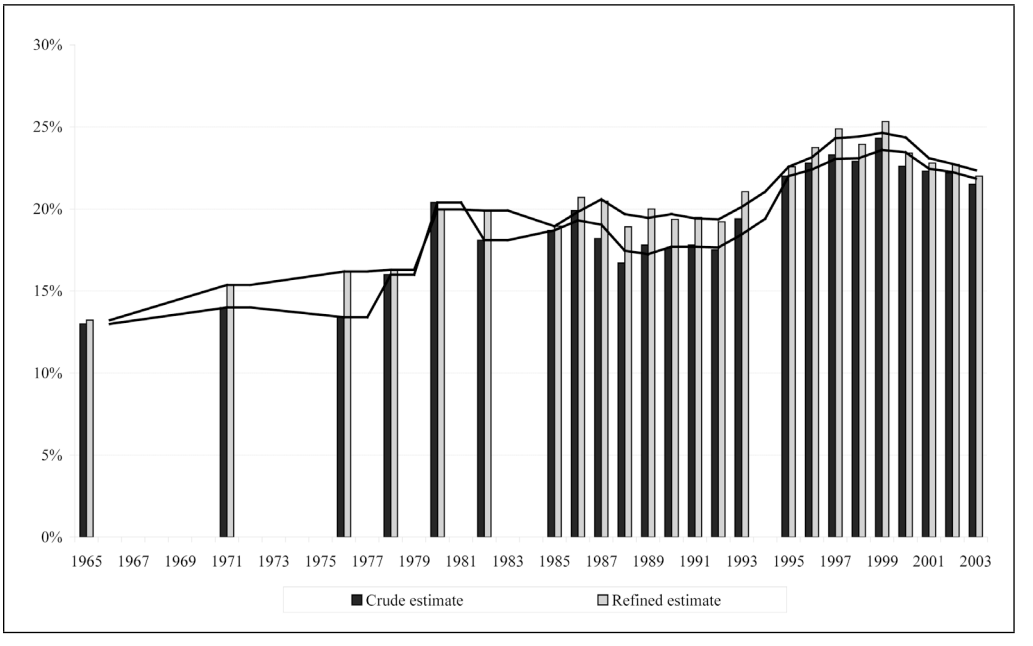

Figure 6: Share of urban self-employed in total labour force in Indonesia 1965–2003

Sources: BPS, Statistical Yearbook of Indonesia (Statistik Indonesia), various issues 1975–2003; and ILO, Yearbook of Labour Statistics, various issues 1966–1995.

Latin American countries such as Brazil and Mexico are notorious for the magnitude of their urban informal sectors (PREALC 1982; World Bank 2004). Ample literature has established a direct relationship between the high levels of asset and income inequality and the mere explosion of the urban informal sectors in the second half of the 20th century (Cardoso and Helwege 1992; Thorp 1998; Birdsall et al. 1997; De Soto 2000; Morley 2001; Frankema 2009). Figure 7 compares the share of urban self-employed in Indonesia with that in Brazil, Mexico and the US. For Brazil, the various changes in the statistical conceptualisation of employment status made it impossible to construct a consistent series for the post-1990 years.[16]

Figure 7 shows that the share of urban self-employed in Indonesia after the early 1960s compares quite well with the developments in Brazil and Mexico. It started out at a slightly lower level than Mexico during the 1970s then rapidly caught up, fell behind after the early 1980s and caught up again after 1992. In 2003, the shares were 22% for Indonesia and in 2001, 23.5% for Mexico. These levels clearly deviated from present OECD countries as exemplified by the US.

16 One of the main problems in assessing Latin American countries relates to the fact that labour force surveys were often confined to urban areas in the 1990s.

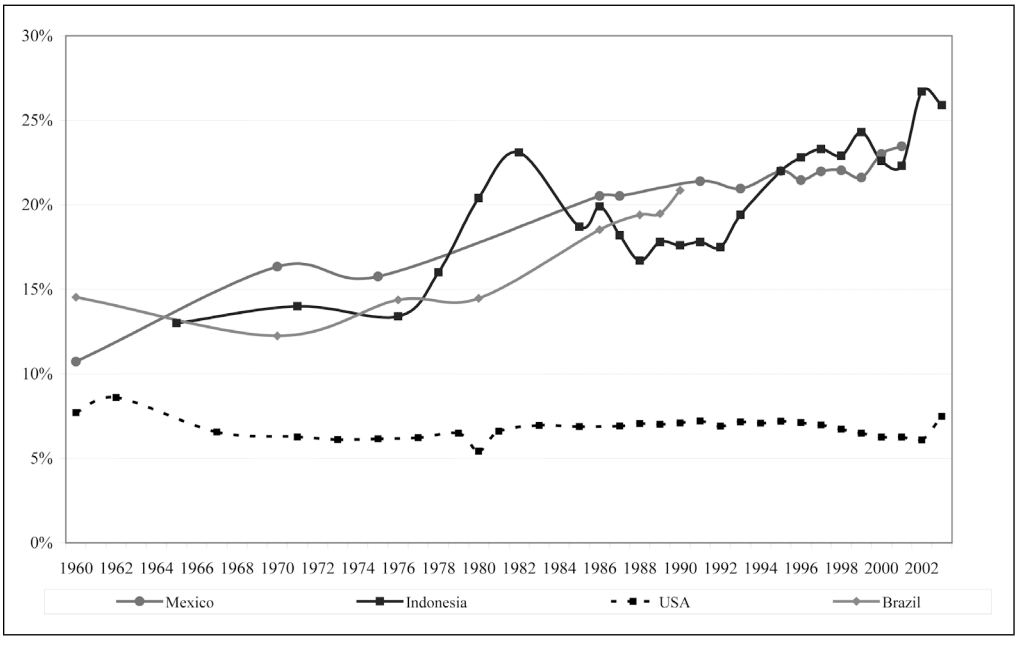

Figure 7: Urban self-employed as a share of total labour force (%)

Source: For Indonesia BPS, Statistical Yearbook of Indonesia (Statistik Indonesia), various issues (1975–2003) and ILO, Yearbook of Labour Statistics, various issues (1966–2005). Note: the underlying data are presented in appendix table A.3

In Mulder's (1999) study of the service industries development in Brazil and Mexico, it is argued that the rise in the urban informal sector coincided with a marked decline in the relative productivity performance of the trade and commerce sector. After a gradual increase, the ratio of relative productivity levels in Brazilian trade versus the US dropped sharply, from a peak of 34% in 1975 to 13% in 1995 (the end year of Mulder's analysis). The Mexico-US ratio dropped after a peak of 25% in 1982 to 12% in 1995 (Mulder 1999: 152). Mulder attributes the sharp turn in the mid-1970s (Brazil) and early 1980s (Mexico) to the swelling numbers of petty traders in the urban areas. This explanation is supported by ILO labour survey data (ILO, *Yearbook of Labour Statistics* 1993–1995) showing that the lion's share of the urban self-employed in LACs is registered in the trade and commerce sector. In the majority of LACs, the share of self-employed (including unpaid family workers) accounted of more than half of total employment in the trade sector in the early 1990s. By comparison, in Canada and the US, this share did not exceed 10%. Indeed, the Latin American trade sector functioned as an important safety net for growing surpluses of low skilled urban labour. These labourers did not benefit from the social benefits and wage increases demanded by labour unions representing formal sector workers.

In the case of Indonesia, Manning (1998: 96) also argues that employment growth of non-wage earners was especially rapid in petty trade. The literature thus suggests that there have been comparable processes of structural change in Latin America and

Indonesia (see also Portes and Benton 1984; Tokman 1984). This would imply that relative levels of productivity in the Indonesian trade sector, as opposed to other service sectors, would show a tendency to decline as well.

Figure 8 presents estimates of average labour productivity in various services sectors, while total service sector labour productivity is held constant (set at 1.00). The figure shows that in the US, productivity levels in the trade sector gradually increased in comparison with other service industries, such as transport and communication, financial services, personal and social services and government services. A notable decline can be observed in Brazil, Mexico and Indonesia. Hence the development of the urban informal sector in Indonesia displays some remarkable similarities with development in Brazil and Mexico during the period 1950–2005.

There remains a crucial difference, however, between Indonesia and the two Latin countries in the relative development of rural sector wages. Since rural-urban migration generally puts upward pressure on rural wages, the expansion of the urban informal sector in Indonesia was accompanied by (from a long-run perspective) a slight net increase of the relative rural unskilled wage, whereas in Brazil and Mexico, rural-urban migration did not prevent a further deterioration of the rural worker's income position.

6 CONCLUSION

For over three decades (1966–1998), socioeconomic policies in Indonesia were based on Suharto's development trilogy "growth, stability and equity". This paper raised the question whether the period of economic transition under Suharto can really be regarded as a period of "growth *with* equity". We have argued, as many scholars before us have done, that the conventional statistical sources used to assess this question have to be interpreted with great caution. In particular, the Gini coefficients of household consumption expenditure do not give us a reliable indication of how the level and trend of income inequality in Indonesia compared with other countries – since there are no detailed surveys of household income, comprehensive inequality estimates are almost impossible to obtain for the second half of the 20th century. Hence we deliberately chose to trade off comprehensive inequality measures for internationally comparable indicators.

The economic transition that was started and continued during Suharto's presidency yielded fundamental shifts in the functional distribution of income. The share of rural income in national income declined substantially and an increasing part of urban income growth was captured by informal sector activities. Besides, the expansion of Indonesia's export economy generated large amounts of jobs in the manufacturing sector. There is little doubt that these structural changes have affected the functional distribution of income – but to what extent did they affect the personal distribution of income?

The main conclusion of this study is that Indonesian income distribution reveals more similarities with either Brazil or Mexico than any of the former three countries with the US. The relative income position of unskilled wage workers is substantially lower in Indonesia than in the US, but higher than in Brazil and Mexico, especially at

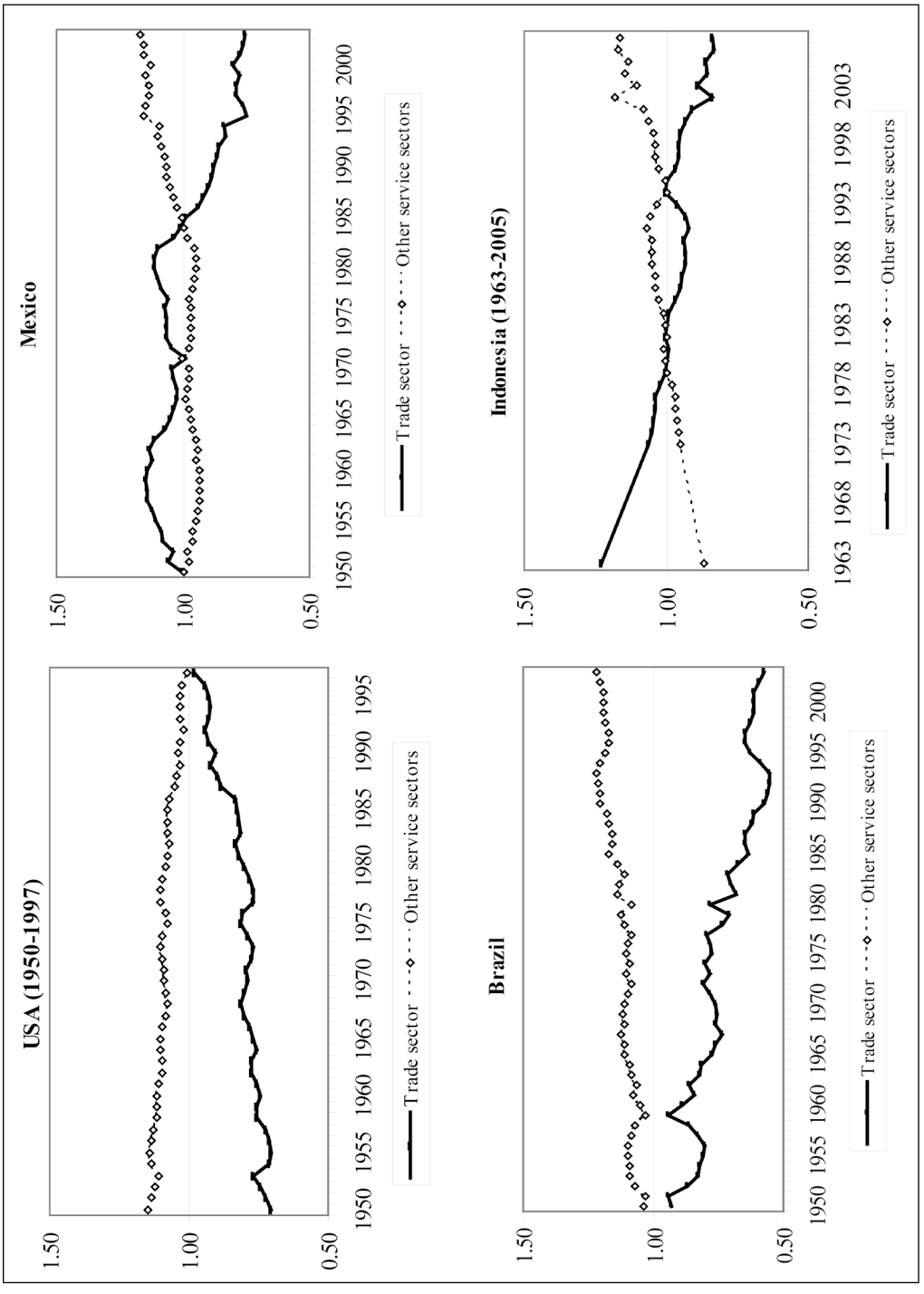

Figure 8: Relative levels of labour productivity, trade sector versus other service sectors, US, Brazil, Mexico and Indonesia, 1950–2005

Source: Authors' calculations based on Timmer and De Vries (2007).

the end of the 1966–1998 period. The finding that the large category of rural workers is relatively better off in Indonesia suggests that Indonesian inequality levels are somewhat lower than in the two Latin American countries. Yet inter-industry wage inequality levels in Indonesia were found to be comparable with Brazilian levels and substantially higher than those in the US or Mexico. And our estimate of the relative size of the urban informal sector has shown that the process of structural change, and rural-urban migration in particular, is very much in line with that in post-war Brazil and Mexico.

A second outcome concerns the relatively large volatility in the unskilled wage share and manufacturing wage inequality, which is much larger than could be expected on the basis of the long-run trends of the expenditure Gini. After all, this may not come as a great surprise. Indonesian structural change has been extremely rapid since the early 1970s, and has been accompanied by severe economic shocks, mainly as a result of the oil crisis in the late 1970s, the ensuing economic policy reforms during the 1980s and the economic crisis in the late 1990s. All these shocks are absorbed by the indicators we studied.

However, conclusions regarding the overall trend in income inequality can, at best, be tentative conjectures. When decomposing the 1966–1998 era, there appear to have been two periods with simultaneously, rising inter-industry wage gaps, accelerating urban informal sector employment shares and a declining ratio of unskilled wages to GDP per worker, that is, between 1973 and 1977, and between 1993 and 1998. The reverse, that is, a simultaneous increase in the ratio of unskilled wages to GDP per worker, a decline of inter-industry wage inequality and a decline of the urban informal sector share could not be observed during the 32 years of Suharto's rule.

Was it really "growth with equity" under Suharto? This study has not yielded a definite answer, partly because we failed to observe developments in other areas of the functional income distribution that may have counterbalanced the trends observed. The most crucial unobserved factor concerns changes in capital income distribution. Nevertheless, this paper shows that an international comparative perspective can shed new light on some key features of Indonesian income distribution, implying that there is still much to gain from a reassessment of Indonesian inequality if we are willing to adopt alternative approaches.

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APPENDIX

Table A.1: Nominal annual unskilled wage levels as percentage share of nominal GDP per worker, Indonesia, Brazil, Mexico and the US, 1960–2003

	Indonesia	Brazil	Mexico	US (1)	US (2)
1960	0.191		0.170	0.668	0.406
1961	0.155		0.161	0.665	0.404
1962	0.178	0.342	0.206	0.646	0.392
1963	0.147	0.353	0.191	0.643	0.391
1964	0.157	0.318	0.217	0.630	0.383
1965	0.257	0.323	0.205	0.615	0.374
1966	0.204	0.293	0.225	0.599	0.364
1967	0.241	0.292	0.212	0.605	0.368
1968	0.281	0.264	0.215	0.605	0.368
1969	0.288	0.257	0.200	0.606	0.369
1970	0.299	0.261	0.214	0.614	0.373
1971	0.291	0.246	0.202	0.605	0.367
1972	0.323	0.229	0.215	0.605	0.367

	Indonesia	Brazil	Mexico	US (1)	US (2)
1973	0.306	0.188	0.202	0.600	0.365
1974	0.273	0.166	0.222	0.614	0.373
1975	0.292	0.173	0.231	0.605	0.367
1976	0.233	0.166	0.263	0.607	0.369
1977	0.235	0.163	0.246	0.617	0.375
1978	0.218	0.164	0.233	0.618	0.376
1979	0.206	0.151	0.222	0.621	0.377
1980	0.229	0.146	0.207	0.620	0.377
1981	0.252	0.165	0.209	0.619	0.376
1982	0.290	0.175	0.190	0.629	0.382
1983	0.253	0.178	0.181	0.607	0.369
1984	0.249	0.182	0.172	0.592	0.360
1985	0.259	0.172	0.172	0.585	0.356
1986	0.275	0.160	0.181	0.577	0.351
1987	0.246	0.150	0.165	0.567	0.344
1988	0.231	0.143	0.159	0.554	0.337
1989	0.206	0.103	0.142	0.541	0.329
1990	0.201	0.138	0.124	0.540	0.328
1991	0.209	0.083	0.119	0.535	0.325
1992	0.212	0.108	0.102	0.522	0.317
1993	0.209	0.102	0.105	0.516	0.314
1994	0.209	0.058	0.102	0.511	0.311
1995	0.197	0.134	0.097	0.509	0.309
1996	0.198	0.127	0.090	0.507	0.308
1997	0.187	0.124	0.086	0.500	0.304
1998	0.163	0.131	0.096	0.495	0.301
1999	0.194		0.082	0.490	0.298
2000	0.177		0.078	0.484	0.294
2001	0.182			0.484	0.294
2002	0.193			0.483	0.294
2003	0.212			0.480	0.291

Table A.2: Theil coefficient of inter-industry manufacturing labour earning inequality, Indonesia, Brazil, Mexico and the US, 1950–2002

	Indonesia	Brazil	Mexico	US
1950		0.0132		
1951				

	Indonesia	Brazil	Mexico	US
1952				
1953		0.0159		0.009
1954				
1955	0.041			
1956	0.045			
1957	0.046			
1958	0.048	0.0204		0.009
1959	0.041			0.009
1960	0.036		0.0102	0.009
1961	0.028			0.010
1962	0.023	0.0216		0.010
1963	0.023			0.010
1964				0.010
1965				0.009
1966		0.0257		0.009
1967				
1968	0.026			0.008
1969				0.008
1970	0.021	0.0275		0.008
1971	0.025			0.008
1972	0.039			0.009
1973	0.030			0.009
1974		0.0297		0.009
1975	0.038			0.009
1976	0.048		0.0116	0.013
1977	0.050			0.011
1978	0.044			0.011
1979	0.041	0.0239		0.011
1980	0.040			0.011
1981	0.036			0.012
1982	0.034			0.011
1983	0.034			0.012
1984	0.035	0.0345		0.012
1985	0.040			0.014
1986	0.041			0.011
1987	0.042			0.012
1988	0.037		0.0120	0.012

	Indonesia	Brazil	Mexico	US
1989	0.033			0.012
1990	0.024		0.0120	0.012
1991	0.024			0.013
1992	0.022	0.0366	0.0133	0.011
1993	0.018			0.011
1994	0.022			0.011
1995	0.031			0.011
1996	0.026	0.0466	0.0174	
1997				0.010
1998	0.024		0.0189	0.010
1999	0.042	0.0522		0.010
2000	0.025	0.0533	0.0185	0.010
2001		0.0576		
2002	0.022			
Average	0.034	0.033	0.014	0.010

Table A.3: The share of urban self-employed workers in the total labour force, Indonesia, Brazil, Mexico and the US, 1960–2003

	Indonesia	Brazil	Mexico	US
1960		0.15	0.107	0.077
1961				
1962				0.086
1963				
1964				
1965	0.13			
1966				
1967				0.066
1968				
1969				
1970		0.12	0.163	
1971	0.14			0.063
1972				
1973				0.061
1974				
1975			0.158	0.061
1976	0.134	0.14		
1977				0.062

	Indonesia	Brazil	Mexico	US
1978	0.16			
1979				0.065
1980	0.204	0.14		0.054
1981				0.066
1982	0.231			
1983				0.069
1984				
1985	0.187			0.069
1986	0.199	0.19	0.205	
1987	0.182		0.205	0.069
1988	0.167	0.19		0.071
1989	0.178	0.19		0.070
1990	0.176	0.21		0.071
1991	0.178		0.214	0.072
1992	0.175			0.069
1993	0.194		0.210	0.071
1994				0.071
1995	0.22		0.220	0.072
1996	0.228		0.215	0.071
1997	0.233		0.220	0.070
1998	0.229		0.220	0.067
1999	0.243		0.216	0.065
2000	0.226		0.230	0.063
2001	0.223		0.235	0.063
2002	0.267			0.061
2003	0.259			0.075