

# **Indonesian Wage Structure and Trends, 1976-2000**

**By**

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## Preface

As Indonesia has struggled to recover from its dark and ugly period of devastation and repression, and from the “Asia crisis”, it has moved into an era where new institutions are taking shape.

In 2000, the ILO’s Socio-Economic Security Programme launched an ambitious project to take stock of the social and economic insecurities in the country, to assist our constituents and colleagues to devise new policies for reducing those insecurities and to promote universal social protection.

This paper is one of more than 20 that has emerged so far and focuses on wage development in the period of democratization.

Guy Standing  
Director  
Socio-Economic Security Programme





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## 1. Introduction

The structure of wages and their real trends have a profound impact on poverty, living standards, income security, income distribution and the incentive to invest in education and training. Against such a broad context, the paper sets itself four objectives.<sup>1</sup> The first objective is to review the wage patterns and wage systems in the Indonesian economy in general, and in selected sectors. The rationale is that little has been written on the wage payment system and wage structure such as the proportion of basic wage and flexible wages and employer contributions. This paper attempts to fill this gap by describing the wage payment system in selected sectors where data are readily available.

The second objective is to review trends in income, expenditure and wage distribution, and to examine the latter by gender, urban-rural location, education, formal-informal status, industry and province. Numerous studies of wage differentials in Indonesia have been undertaken covering the period 1970-1995. A limited number of studies have even documented trends in real wages going as far back as the 1950s (Papanek, 1989) and the 1920s (White, 1976). However, with the exception of Manning (1994), most of these have been partial, covering only wage differentials in particular sectors. Earlier studies of wage differentials were undertaken by Manning (1979) for the manufacturing sector by firm type and characteristics, and by the World Bank (1983) for the agricultural sector, focusing on rice and non-rice wages. This paper extends the earlier study on the manufacturing sector by re-assessing wage differentials data from ad hoc enterprise surveys undertaken in the early 1990s, and from unpublished data from the CBS annual survey of medium and large-scale manufacturing establishments available since 1971. The paper also compares wages in the relatively secure formal sector, mainly composed of incorporated enterprises, and the relatively insecure informal sector, mainly consisting of unincorporated establishments in several sectors.

A considerable part of the paper is devoted to an analysis of wage inequality by gender, urban-rural location, education, industry and province. This mainly descriptive analysis is expanded in two directions:

- ~~///~~ a decomposition analysis to determine the relative importance of between and within group inequalities, particularly in relation to gender inequality;
- ~~///~~ discussion of trends in income and expenditure inequalities, both before and after the financial crisis.

The latter is of considerable interest due to widely differing assessment on the impact of the crisis on income inequality; some arguing that inequality fell during the crisis (Frankenberg et al., 1998, World Bank 1999), while others maintaining the opposite (Daimon and Thorbecke, 1999; Skoufias, 1999; Dhanani and Islam, 2000).

The third objective of the paper is to assess trends in real wages and labour productivity over the 1976-2000 period in several key economic sectors, with particular reference to the agricultural and manufacturing sectors. In the literature on real wages in Indonesia, the agricultural sector has received the most attention on account of data availability from the large estate crop plantations since the 1950s (Papanek, 1989), and from the farmers' terms of trade survey in 14 provinces implemented by the Central Bureau of Statistics since 1976 (Papanek and Handoko, 1999; Naylor, 1990; Godfrey, 1992; Dhanani, 1992). Because different researchers have used different deflators to arrive

<sup>1</sup> The authors are grateful to Guy Standing, John Senders and Chris Manning for their comments on an earlier draft.

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at real wages, and because the inflation indicators have themselves been questioned (Naylor, 1990), there is no general agreement on real wage trends in the 1980s even when employing the same source of nominal wage data such as the farmers terms of trade survey.

Godfrey (1992) and Manning (1994) have reviewed wage trends in different sectors. Manning (1994) in particular attempted to reconcile and explain inconsistent real wage trends between different authors. While he made a commendable effort to explain the reported differences in previous studies and refute the view that real wage trends stagnated in the 1970s and 1980s, his interpretation that macroeconomic factors were responsible for diverging growth rates between agriculture and non-agriculture in different periods relies heavily on wage series which were to a certain extent administered or negotiated between employers and trade unions, not entirely immune in the medium and long-term from market wages, such as the minimum wage of textile workers and construction workers and civil service pay scales. The present study comes to a different conclusion, namely that wage rates increases were relatively uniform across sectors. This was further confirmed by trends in other available wage series.

The fourth objective of the paper is to reflect on the role of minimum wages in offering income security to Indonesian workers. The Soeharto Government stepped up the scale and scope of minimum wages policy in the 1990s, partly to respond to a growing perception that the benefits of rapid growth were not being shared by ordinary workers, and partly to co-opt the labour movement within the political milieu by offering the “carrot” of higher wages. While the political economy of minimum wages policy is outside the scope of this study, it would be fair to say that the Soeharto regime’s strategy with respect to the provision of income security to ordinary workers remains the subject of some debate. Critics typically argue that the aggressive pursuit of minimum wages policy is counter-productive because it impedes employment opportunities. This theme is still present in current policy debates.

The structure of the paper is as follows. Section 2 deals with wage structure and income security. It begins with an overview of employment structure and wage levels in 2000. It then describes wage levels and patterns in incorporated and unincorporated establishments. This is followed by a review of wage payment systems in sectors where such data are readily available (manufacturing, plantation and the civil service). Section 3 provides an overview of trends in wage distribution and income inequality followed by a decomposition analysis to determine the relative importance of between and within group inequalities, particularly in relation to gender inequality. The section concludes with a discussion of trends in income and expenditure inequalities, both before and after the financial crisis.

Section 4 turns its attention to real trends in wages, labour productivity and unit labour costs in key sectors. The description of nominal and real wage trends by gender, urban-rural location, education and industry, is followed by the identification of the sources of real wage changes. This section concludes with a more detailed assessment of wage and labour productivity trends in the manufacturing sector. Section 5 is devoted to minimum wages and their impact on employment and Section 6 offers conclusions and policy implications.

## 2. Wage structure and income security

### 2.1 An overview of employment structure and wage levels

#### Employment structure

The Indonesian workforce aged 15 and above reached 90 million people in 2000 (Table 1). Since the working age population aged 15 and above and the total population were respectively 141 and 210 million, the employment rate and the dependency ratio work out at 63 and 43 per cent in that year. There were more men than women in the workforce (62 versus 38 per cent), because a large proportion of women were engaged in house-keeping, which lies outside the labour force. Rural areas accounted for nearly two thirds of all employment, and agriculture remained the dominant activity, accounting for 45 per cent of total employment. Nevertheless, nearly half of the manufacturing and construction jobs, and nearly 40 per cent of trade, hotel and restaurant and transport jobs were also located in rural areas.

Table 1. Employment structure by sector, status, gender and location, 2000 (15+)

	Employment (million)					%					
	Total	Wage empl.	Family workers	Females	Rural	Total	Wage empl.	Family workers	Females	Rural	Registered establ. <sup>1</sup>
Agriculture	40.55	5.42	13.62	16.02	36.69	45.1	13.4	33.6	39.5	90.5	3.8
Mining and quarrying	0.45	0.19	0.05	0.08	0.26	0.5	42.6	10.9	17.6	57.8	15.0
Manufacturing	11.66	7.62	1.19	4.90	5.29	13.0	65.4	10.2	42.0	45.4	29.7
Utilities	0.07	0.06		0.01	0.02	0.1	87.3	0.0	8.4	22.7	53.6
Construction	3.54	2.88	0.04	0.14	1.69	3.9	81.3	1.2	3.9	47.7	47.7
Trade, hotel, restaurant	18.50	3.17	3.05	8.81	6.82	20.6	17.2	16.5	47.6	36.9	5.9
Transport, storage, comm.	4.55	1.51	0.04	0.19	1.79	5.1	33.2	0.8	4.3	39.4	14.9
Finance, banking	0.89	0.77	0.02	0.25	0.10	1.0	86.5	2.6	28.7	11.6	100.0
Other services	9.62	8.04	0.12	3.95	2.99	10.7	83.6	1.3	41.1	31.1	50.6
<b>Total</b>	<b>89.82</b>	<b>29.67</b>	<b>18.14</b>	<b>34.35</b>	<b>55.66</b>	<b>100.0</b>	<b>33.0</b>	<b>20.2</b>	<b>38.2</b>	<b>62.0</b>	<b>16.3</b>

Source: Labour Force Situation in Indonesia 2000 (Sakernas survey), Central Bureau of Statistics.

Note: <sup>1</sup> Employment in incorporated or registered establishments of any size in 1990 (from Dhanani, 1994a). See text.

After agriculture, the trade, hotel and restaurant, the manufacturing and the service sectors were the largest employers (21, 13 and 11 per cent respectively). Other sectors were relatively small, employing 5 per cent or less each, including the construction and transport sectors (4 and 5 per cent), and finance, mining and utilities (1, 0.5 and 0.1 per cent). There were large gender differences by sector of employment. Females accounted for 40 per cent-48 per cent in agriculture, manufacturing, trade and services, this proportion declining to less than 30 per cent in finance and less than 10 per cent in other sectors including utilities, construction and transport.

In line with the dominance of agriculture and rural employment, wage employment remained relatively small (33 per cent), while self-employment and unpaid family help dominated (47 and 20 per cent). As expected, the share of wage employment was smallest in agriculture (13 per cent), since 75 per cent of family workers are found in this sector, the majority of them being female unpaid help. Nevertheless, the share of wage employment was relatively small even in the trade and transport sectors (17 and 33 per cent), rising to

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65 per cent in manufacturing and to 80 per cent and above in construction, finance and services.

Even so, not all wage employment can be equated with jobs in registered enterprises. Employment in incorporated or registered establishments of any size formed just 16 per cent of total employment in 1990 (Dhanani, 1994a). Incorporated establishments, as defined in Indonesian statistics, consisted of the following registered entities: cooperative associations, partnerships, publicly-owned business enterprises, government-owned companies, joint-stock companies, private companies, individually-owned companies registered with a public notary, and incorporated non-profit organizations. All other enterprises were by definition unincorporated, and consisted largely of unorganized, unregistered establishments. Thus the organized part of the economy accounted for just one in six jobs, and not one three jobs as commonly assumed when all wage employment is lumped together. The unorganized or unregistered part of the economy employed the remaining five out six jobs in the economy.

A closer look at a few sectors illustrates this. In agriculture, only a quarter of all wage employment was found in large-scale plantations, while the remaining three quarters consisted of mainly landless agricultural labourers working in individually owned rice and other farms in 1990. In manufacturing, the medium and large-scale establishments (with respectively 20-99 and 100 workers and above) employed only 4 million workers or a third of the 12 million total manufacturing employment, while the low-productivity household and small-scale industries (with respectively less than five and 5-19 workers) employed the remaining two thirds. Similarly, only half of all the utilities, construction and service jobs were in registered establishments, the remaining half being engaged in small-scale, unregistered activities. Finally, most mining and quarrying jobs were in small-scale unregistered activities, the registered sector accounting for just 15 per cent of total employment in this small sector.

### **Wage levels and patterns, 1999-2000**

The average earnings of employees amounted to Rp. 430,000 or about US\$45 per month in 2000 (Table 2). The agricultural sector paid the lowest wage, just over a half of the national average (Rp. 230,000 or around US\$23 per month). The small finance sector paid the highest wage, 75 per cent above average, followed by the equally small but capital-intensive mining and utilities sectors (50 per cent above average). Women earned about two thirds of the wages of men in most sectors, except in construction, transport and finance where this difference was reduced to about 10 per cent. The gender difference was highest in agriculture, where the female wage rate was just 56 per cent of that of males, though this is in part due to men being employed in relatively heavy ploughing operations, while women were primarily engaged in weeding and harvesting operations. Differences due to educational attainment are discussed in section 3.1 below.

Wages in rural areas were also about 70 per cent of those in urban areas in most sectors. Some of these differences were no doubt due to the different types of enterprises located in rural areas (see section 2.2). Finally, wages in kind formed only 4 per cent of the total wages and salaries, though this proportion was much higher at 9 per cent in agriculture, and 6 per cent in the construction and trade, hotel and restaurant sectors.

Table 2. Monthly earnings by sector, 2000

	Rp. 000/month	Index National Average =100	Ratios (%)		
			Female/male	Rural/urban	Paid in kind
Agriculture	230	54	56	81	9
Mining and quarrying	655	152	74	42	1
Manufacturing	402	93	63	74	4
Utilities	624	145	46	64	4
Construction	423	98	95	78	6
Trade, hotels and restaurants	401	93	79	81	6
Transport, storage and comm.	547	127	92	73	4
Finance and banking	753	175	86	53	2
Other services	545	127	67	98	3
All sectors	<u>430</u>	<u>100</u>	<u>68</u>	<u>70</u>	<u>4</u>

Source: Labourer/Employee Situation in Indonesia 2000 (Sakernas Survey), table 16, CBS.

There were important differences in employee earnings between provinces and regions. Some of this was due to cost of living differences, as discussed later (section 3.1). Nevertheless, nominal earnings were below average in densely populated Java (92 per cent), with the exception of Jakarta, and were above in Sumatra, Kalimantan, Sulawesi and Maluku/Irian Jaya in 1999, the last year for which provincial data are available (112, 134, 117 and 160). Within these broad regions, there were also differences between provinces. Thus, earnings in Bengkulu and Lampung in Sumatra were below average, and so were earnings in NTB.

The female/male earnings ratio varied from 69 per cent in Java, to 75 per cent in Sumatra and 88 per cent in Sulawesi. It was about parity in Maluku and North Sulawesi in 1999. Rural-urban differences followed more or less the same pattern. Rural wages were only 65 per cent of urban wages in Java, but this differential was smaller in Sumatra, Bali/Nusa Tenggara, Kalimantan, Sulawesi and Maluku/Irian Jaya (83, 78, 72, 86 and 81 per cent). Wage differentials as well as trends over time are discussed in greater detail later (section 3).

**Table 3. Monthly earnings by province, 1999**

	Male + female	Index	Ratios (%)	
	(Rp.000/month)	Nat. Avg = 100	Female/male	Rural/urban
<u>Indonesia</u>	<u>346 950</u>	<u>100</u>	<u>70</u>	<u>72</u>
<u>Sumatra</u>	<u>390 221</u>	<u>112</u>	<u>75</u>	<u>83</u>
Aceh	478 593	138	79	92
North Sumatra	366 555	106	73	98
West Sumatra	429 590	124	79	81
Riau	553 516	160	69	59
Jambi	387 303	112	78	86
South Sumatra	330 587	95	76	85
Bengkulu	368 389	106	83	90
Lampung	328 991	95	82	92
<u>Java</u>	<u>320 475</u>	<u>92</u>	<u>69</u>	<u>65</u>
Jakarta	462 794	133	77	-
West Java	338 540	98	71	63
Central Java	262 362	76	64	84
Yogyakarta	347 992	100	84	88
East Java	289 825	84	63	69
<u>Bali and Nusa Tenggara</u>	<u>359 013</u>	<u>103</u>	<u>68</u>	<u>78</u>
Bali	383 914	111	66	73
NTB	301 917	87	60	83
NTT	391 060	113	86	100
<u>Kalimantan</u>	<u>465 678</u>	<u>134</u>	<u>67</u>	<u>72</u>
West Kalimantan	400 552	115	73	92
Central Kalimantan	486 776	140	80	77
South Kalimantan	408 431	118	67	56
East Kalimantan	555 160	160	63	77
<u>Sulawesi</u>	<u>406 229</u>	<u>117</u>	<u>88</u>	<u>86</u>
North Sulawesi	387 825	112	107	87
Central Sulawesi	359 056	103	94	79
South Sulawesi	414 516	119	82	88
Southeast Sulawesi	483 356	139	76	91
<u>Maluku and Irian Jaya</u>	<u>554 648</u>	<u>160</u>	<u>83</u>	<u>81</u>
Maluku	466 512	134	98	92
Irian Jaya	635 358	183	74	76

Source: Labourer/Employee Situation in Indonesia 2000 (Sakernas Survey) table 16, CBS.

Note: Island figures are weighed average using provincial employee totals as weights.

Earnings varied considerably between the incorporated and unincorporated sectors. As noted earlier, incorporated establishments employed 16 per cent of total employment in 1990, the only year for which such data has been systematically compiled (Table 4). This proportion rose to 42 per cent in urban areas. Over 40 per cent of all incorporated sector workers were engaged in the service sector. Even in urban areas, 35 per cent of workers in incorporated establishments were in the service sector, while manufacturing and construction respectively accounted for 30 per cent and 15 per cent of the total.

Earnings were much higher in incorporated establishments. They were twice as high in agriculture and construction, and three times as high in manufacturing, trade, hotels and restaurants and transport and communications. Though not shown here, the incorporated

segment consisted of regular workers and casual workers. Regular workers were paid far more than casual workers at least in the construction, mining and agriculture sectors for which data is available (Dhanani, 1994a, p. 23).

**Table 4. Employment and earnings in incorporated and unincorporated establishments, 1990**

Sector	Composition of incorporated employment (%)		Earnings (Rp. million/year)			Index (agriculture=1.0)	
	Total	Urban only	Incorporated	Unincorporated	Ratio	Incorporated	Not incorporated
Agriculture	12	1	0.66	0.35	1.9	1.0	1.0
Mining and quarrying	1	-	4.53	0.52	8.7	6.9	1.5
Manufacturing	21	30	1.02	0.41	2.5	1.5	1.2
Utilities	1	1	2.32	0.33	7.0	3.5	0.9
Construction	12	15	1.02	0.70	1.5	1.5	2.0
Trade, hotels and restaurants	5	8	1.62	0.52	3.1	2.5	1.5
Transport, storage and comm.	3	5	1.62	0.48	3.4	2.5	1.4
Finance and banking	3	5	4.56	-	-	6.9	-
Other services	42	35	1.59	0.51	3.1	2.4	1.5
<u>Total</u>	<u>100</u>	<u>100</u>					
% total employment	(16)	(42)					

Source: Dhanani (1994a) 'Estimating Informal Sector Employment and Incomes in Indonesia', Bulletin of Labour Statistics, 1994-1, International Labour Office: Geneva.

## 2.2 Wage payment system and structure in selected sectors

Detailed information on the wage payment system and labour cost structure is only available from the following sectors: medium and large-scale manufacturing, plantations and the civil service. These sectors are discussed in turn below.

### Medium and large-scale manufacturing sector

#### *Wage payment system*

The statistical authorities do not collect data on wage payment systems on a regular or systematic basis, and whatever information exists on the subject comes from ad-hoc surveys of manufacturing establishments. In a 1992 survey of predominantly large establishments, firms stated using four different payment systems: casual daily (15 per cent), piece rate or contract work (10 per cent), permanent daily (37 per cent), and permanent worker status (38 per cent, table 5). Of these, only the latter conferred any legally binding security of employment, including prior approval from the Ministry of Manpower and Transmigration (MOMT) for dismissal and compulsory registration in accident insurance schemes. In other words, employers preferred to recruit two-thirds of their workers on relatively insecure employment contracts, who could be laid off temporarily or permanently at short notice if factory orders and conditions so warranted.

Workers with the lowest skills were the least likely to be employed on a permanent basis. Thus, only 23 and 41 per cent of elementary workers and operators/assemblers were employed on a permanent daily basis. The most favoured arrangement for these workers was a permanent daily contract. Under this contract, even though paid their wages at the end of the month, permanent daily workers were only paid for the number of days worked, and not when sick or absent for any other reason. Surprisingly, as many as 40 per cent and

20 per cent of relatively skilled tradesmen, and supervisors and technicians did not have permanent contract, and were employed on permanent daily and other relatively insecure wage contracts.

**Table 5. Wage payment system in large manufacturing firms, 1992 (% employment)**

	<u>Elementary Operators</u>	<u>Tradesmen</u>	<u>Supervisors</u>	<u>Technicians</u>	<u>All workers<sup>1</sup></u>	
Composition (Per cent)	38	48	8	3	3	100
<u>Wage contract</u>						
Casual daily	24	12	7	2	1	15
Piece work	14	7	6	2	2	10
Permanent daily	40	39	26	17	14	37
Permanent contract	23	41	61	80	83	38
Other	1	2	1	1	2	1
<u>Total</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>

Source: Dhanani (1992), *Major Findings of 1992 East Java Enterprise Survey* and *Major Findings of 1992 West Java Enterprise Survey*, Regional Manpower Planning and Training Project, World Bank Professional Human Resource Development Loan 3134-IND, Bappenas, Jakarta.

Note: <sup>1</sup> All workers: excluding managers and professional workers (approximately 10 per cent of total employment).

The type of wage contract varied between industrial sub-sectors and by firm size. Labour-intensive and relatively lower-technology export-oriented sub-sectors such as textiles and furniture employed fewer workers on a permanent contract than capital-intensive sub-sectors (operators and assemblers 10-15 per cent, tradesmen 3-33 per cent, supervisors 63-68 per cent, Table 6). Firm size also mattered, with establishments employing less than 250 workers less likely to offer secure contracts than larger establishments. However, establishment ownership did not seem to matter between foreign and domestic firms, but made a difference when it came to private and public establishments. Foreign firms, like domestic firms, offered less secure contracts when producing labour-intensive exports, and more secure contracts in higher-technology products such as motor vehicles and motorcycles. State-owned establishments had a higher proportion of their operators and skilled personnel on permanent contracts than private firms.

**Table 6. Proportion of permanent workers by occupation and establishment type, large manufacturing firms, 1992 (%)**

	<u>Elementary Operators</u>	<u>Tradesmen</u>	<u>Supervisors</u>	<u>Technicians</u>	<u>All workers*</u>	
Textiles firms	3	14	3	63	50	12
Wood & furniture firms	3	11	33	68	90	14
High technology	32	49	69	87	88	45
Low technology	14	32	52	72	75	27
Exports < 30 per cent	26	46	64	81	82	40
Exports > 30 per cent	15	30	51	75	82	28
Large (>250 workers)	24	44	65	82	87	38
Small (<250 workers)	20	35	50	73	70	32
Domestic	21	36	57	79	82	33
Foreign	36	54	58	71	79	47
State-owned	7	69	74	76	75	44

Source: Dhanani (1994a) 'Estimating Informal Sector Employment and Incomes in Indonesia', Bulletin of Labour Statistics, 1994-1, International Labour Office: Geneva.

Note: \* All workers: exclude managers and professional workers (approximately 10 per cent of total employment).



## Labour cost structure

Of the total labour costs incurred by medium and large manufacturing establishments, basic wages amounted to 74 per cent of the total in 1998 (Table 7). The remaining 26 per cent of the labour costs consisted of flexible components, including overtime payments and bonus (21 per cent), and contributions to pension and social security as well as accident benefits (5 per cent). There was little difference in this respect between production and non-production workers. The composition of labour costs varied little over time, with the exception of larger overtime and bonus payments in 1996 (28 versus 25 per cent). It should be noted that many firms routinely provided transport and meal allowances to their workers. According to CBS, these were included under the basic wage heading, however no separate figures are collected on their likely magnitudes.

**Table 7. Labour cost structure in medium and large manufacturing establishments, 1996 and 1998 (% of total labour costs)**

	Production workers		Other workers		All workers			
	1996	1998	1996	1998	1985	1990	1996	1998
Basic wage	72	75	71	75		74	72	74
Flexible wage components	28	25	29	25		26	28	26
1. Overtime	11	} 20	6	} 19		9	9	} 21
2. Bonus	11		}		}		7	
3. Other							6	
4. Pension and social security contributions	4	} 5	4	} 6		4	4	} 5
5. Accident benefit	2						1	

Source: Large and Medium Manufacturing Statistics, volume I, various years, CBS.

Note: Bonus and overtime payments not available separately for 1998. Similarly, pension and social security contributions, and accident benefits not available separately in 1998.

While the composition of these labour costs did not vary much over time, they were quite different between establishments of different size, ownership and sub-sector. In general, the larger and the more capital-intensive the establishment, the higher the flexible wage component, including overtime and bonus and pension and insurance contributions, and the smaller the proportion paid out in basic wage (Table 8). The same pattern was observed in foreign and state-owned firms. Thus medium-scale establishments (20-99 workers) spent 85 per cent of their labour costs on basic wages, this proportion gradually declining to 75 per cent for larger firms (100-999 workers) and to 67 per cent for the largest firms (1,000 workers and above) in 1996.

Labour-intensive industries, such as tobacco, textiles, garments and furniture spent 83 per cent of their labour costs on basic wages, 15 per cent on overtime and bonus, and just 2 per cent on pensions and insurance contributions. On the other hand, capital-intensive industries, such as basic metals, machinery and transport equipment, relied less on the basic wage (64-75 per cent), and more on overtime and bonus (22-31 per cent) and pension and insurance contributions (3-10 per cent).

The basic wage component was also lower in foreign establishments than in domestic establishments (69 versus 76 per cent), though this was more a reflection of their larger average size. This difference disappeared between foreign and domestic firms in the largest size category. As for state-owned establishments, they relied on overtime payments and bonus to the same extent as foreign firms, and paid only 55 per cent of the labour costs on basic wages, making up the difference in higher pension and insurance payments (14 versus 4 per cent).

**Table 8. Differences in labour cost structure by type of manufacturing establishments, 1996 and 1998 (% of total labour costs)**

Establishment Type	Wages and salaries		Overtime, bonus and other		Pension and insurance contributions		Total	Labour costs per worker (Rp. mil/yr)	
	1996	1998	1996	1998	1996	1998		1996	1998
All establishments	72	74	22	21	6	5	100	3.7	5.9
<i>By size</i>									
20-99 workers	85	86	12	12	3	3	100	2.1	3.6
100-499 workers	76	78	20	16	4	6	100	3.5	5.5
500-999 workers	75	68	21	27	4	5	100	3.8	6.0
1000+ workers	67	71	24	23	8	6	100	4.4	6.8
<i>By ownership</i>									
Private domestic	76	77	19	18	5	4	100	3.2	5.1
Foreign	69	74	27	21	4	5	100	5.4	8.0
State-owned	55	51	31	37	14	12	100	6.8	8.6
<i>Firms with 1000+ workers</i>									
Private Domestic	70	73	22	23	8	4	100	3.8	6.6
Foreign	69	73	27	22	4	6	100	5.0	6.9
State-owned	54	60	30	25	16	15	100	8.2	7.7
<i>Labour-intensive industries</i>									
Tobacco	83	87	15	12	2	1	100	2.3	5.6
Textiles	83	83	14	14	3	3	100	3.0	4.1
Garments	83	82	15	16	2	3	100	2.7	3.8
Footwear	75	n.a.	23	n.a.	2	n.a.	100	3.1	n.a.
Furniture	84	84	12	14	4	2	100	2.4	4.7
<i>Capital-intensive industries</i>									
Fabricated metals	75	82	22	15	3	3	100	4.6	6.4
Non-metallic products	67	71	31	20	3	9	100	4.5	6.1
Basic metals <sup>1</sup>	61	70	24	22	16	8	100	5.7	10.9
Machinery, equipment	72	75	22	18	7	7	100	5.2	7.7
Electronics	67	76	24	17	10	8	100	5.7	9.3
Motor vehicles	n.a.	64	31	31	n.a.	4	100	6.1	10.1
Other transport equipment	64	74	31	18	4	8	100	5.9	8.0

Source: Medium and Large Industrial Statistics 1996 and 1998, Central Bureau of Statistics (tabulations produced by Data Centre, Ministry of Industry and Trade).

Note: <sup>1</sup> Basic metals: labour costs for other basic metals, excluding iron and steel, in 1996.

### *Average labour costs*

The average labour cost per worker was Rp. 3.7 million or US\$1,500 per year in 1996, but this varied from Rp. 2-3 million for medium-scale establishments and those in labour-intensive industries, to Rp. 5-6 million in capital intensive industries and foreign establishments. The state-owned firms incurred the highest labour cost per worker at Rp. 7 million per year, or over twice the industrial average. Those firms paying a smaller proportion on basic wages, and a larger proportion on flexible components including overtime, bonus, pension and insurance contributions, namely the larger, more capital-intensive and foreign and state-owned establishments, were the same ones with higher labour costs per worker.

In other words, the basic wage did not vary as much between different firms as the average labour cost per worker. Thus the basic wage per worker of all firms employing more than 100 workers was the same at Rp. 2.8 million, while the labour cost per worker in firms with 1000 workers and above was 15 per cent higher compared to smaller establishments. Similarly, state-owned and foreign establishments paid the same basic wage of Rp. 3.7 million per worker, while their average labour cost per worker was 64 per cent higher (Rp. 6.8 versus 5.4 million). And finally within labour-intensive industries, the garment and footwear industries paid the same average basic wage of Rp. 2.2-2.3 million, while the labour cost per worker in the footwear establishments was 15 per cent higher than in the garment industries (Rp. 3.1 versus 2.7 million), due to higher overtime and bonus payments in the former.

Finally, the 70 per cent difference in average labour cost per worker between foreign and domestic firms (Rp. 5.4 versus 3.2 million) in 1996 merits further comment. This differential varied by establishment size and sub-sector. For the largest size (1,000 workers and above), labour cost per worker were around 30 per cent higher in foreign firms on average, ranging from 6 per cent in food to 11 per cent in wood and basic metals, 20 per cent in textiles and fabricated metal industries (Table 9). Both foreign and domestic firms paid higher labour costs per worker in capital-intensive industries such as paper, mineral, basic metal and fabricated metal industries, so that there was virtually no difference in paper and 'other' manufacturing industries.

**Table 9. Labour cost of production workers by ownership and sub-sector, 1996 (Rp. million/year)**

Workers/ Establishment	Food 31	Textile 32	Wood 33	Paper 34	Chem. 35	Mineral 36	B.Met. 37	F.Met. 38	Other 39	All Total
<u>20-99</u>	<u>1.3</u>	<u>1.6</u>	<u>1.8</u>	<u>2.4</u>	<u>2.5</u>	<u>1.5</u>	<u>2.5</u>	<u>2.5</u>	<u>1.7</u>	<u>1.8</u>
Foreign	3.9	2.6	2.3	3.5	9.3	4.7	4.2	6.0	3.2	6.0
Domestic private	1.3	1.6	1.8	2.4	2.1	1.5	2.5	2.3	1.7	1.7
State-owned	2.6	2.1	1.5	2.5	2.5	3.2	-	3.5	-	2.6
<u>100-499</u>	<u>2.5</u>	<u>2.1</u>	<u>2.1</u>	<u>3.4</u>	<u>3.4</u>	<u>2.6</u>	<u>4.9</u>	<u>3.9</u>	<u>2.0</u>	<u>2.8</u>
Foreign	4.5	3.0	3.1	4.9	6.1	4.0	6.0	5.3	2.3	4.6
Domestic private	2.2	2.0	2.0	3.3	2.9	2.5	4.3	3.4	1.9	2.5
State-owned	3.9	2.2	3.4	5.9	4.9	3.8	11.5	4.7	-	4.3
<u>500-999</u>	<u>2.5</u>	<u>2.6</u>	<u>2.4</u>	<u>4.1</u>	<u>3.8</u>	<u>5.4</u>	<u>4.2</u>	<u>4.4</u>	<u>2.3</u>	<u>3.1</u>
Foreign	3.7	3.1	4.5	7.4	6.5	10.3	4.3	5.2	2.9	4.5
Domestic private	2.0	2.5	2.2	3.6	2.9	3.7	4.0	3.7	1.9	2.6
State-owned	4.3	2.1	2.3	5.7	4.4	12.7	6.4	8.1	-	4.5
<u>1000+</u>	<u>3.3</u>	<u>2.8</u>	<u>3.4</u>	<u>9.2</u>	<u>4.5</u>	<u>6.3</u>	<u>11.0</u>	<u>5.6</u>	<u>2.4</u>	<u>3.8</u>
Foreign	3.6	3.2	3.7	8.0	6.3	6.7	6.6	6.7	2.3	4.3
Domestic private	3.4	2.7	3.3	7.9	2.6	5.1	5.9	3.7	2.5	3.2
State-owned	2.5	2.8	-	20.3	15.1	21.3	20.0	7.5	-	8.3
<u>All Sizes</u>	<u>2.6</u>	<u>2.5</u>	<u>2.6</u>	<u>5.3</u>	<u>3.7</u>	<u>3.6</u>	<u>6.6</u>	<u>4.5</u>	<u>2.1</u>	<u>3.1</u>
Foreign	4.0	3.2	3.6	7.4	6.4	7.4	5.6	6.1	2.5	4.4
Domestic private	2.4	2.4	2.5	4.3	2.7	2.8	4.5	3.3	1.9	2.6
State-owned	3.2	2.4	3.0	15.7	9.2	14.3	18.1	7.3	-	6.6

Source: Dhanani (2000) table 5.21.

Wage differences can be partly explained by the need for foreign establishments to employ more educated workers to work with relatively more sophisticated equipment, with the exception of the labour-intensive textile sub-sector. Nevertheless, foreign establishments remunerated their workers somewhat better than domestic establishments while producing higher profits and maintaining unit labour costs at the same level as domestic establishments (Dhanani 2000).

Finally, following the onset of the crisis, labour costs differentials narrowed from 70 to 30 per cent between foreign and domestic firms, and from 100 to 50 per cent between

state-owned firms and domestic firms between 1996 and 1998. There was little difference in the average labour costs per worker for firms with more than 100 workers by 1998, while the nearly 100 per cent premium in capital-intensive establishments narrowed to around 40 per cent compared with labour-intensive industries.

### *Plantation workers*

Estate plantations employed some 400,000 workers in 1995, the latest year for which data are available (Table 10). These consisted mainly of permanent workers and some temporary workers (340,000 and 60,000), about equally divided between Java and Sumatra, at least as far as firms reporting figures are concerned. The basic wage of permanent workers amounted to 90 per cent of their earnings, the remaining 9 per cent consisting of annual and other bonuses. As in the case of the manufacturing sector, there was little difference between production and non-production workers in this respect.

**Table 10. Labour cost structure in estate plantations, 1995**

	Production workers	Non-production workers	Temporary workers <sup>2</sup>	Total
<u>Workers (000s)</u>	<u>295.8</u>	<u>47.8</u>	<u>59.6</u>	<u>403.3</u>
Java	152.8	23.5	29.3	205.5
Sumatra	139.0	24.2	30.3	193.6
Other	4.0	0.2	-	4.2
Average wages & benefits (Rp. 000 per month) <sup>1</sup>	205	350	114	191
Wage Structure (Percent)	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
1. Basic wage	91	91	100	91
2. Annual Bonus	6	7	-	6
3. Other Bonus (Lebaran)	3	2	-	3

Source: Wages Paid on Estates 1995, November 1999, CBS.  
 Note:  
<sup>1</sup> Average wage and benefits: Annual wages and benefits paid divided by average number of workers in March, June, September and December. Based on questionnaire returned from around 61 per cent of the total number of 620 estates throughout the country.  
<sup>2</sup> Temporary workers exclude labourers hired by contractors employed by the estates.

The average earnings of non-production workers were much higher than of production workers (Rp. 350,000 versus 205,000 per month). The earnings of permanent production workers were in turn twice as high as temporary workers (Rp. 114,000 per month).

### *Civil service*

Of the eight million workers employed in the service sector in 2000, four million workers or half were civil servants, making the government the largest employer in the service sector. Teachers and health personnel accounted for half of the civil service, while women accounted for 37 per cent of the total in 1999. The number of civil servants grew vary rapidly in the past 20 years, doubling from around two million to four million between 1980 and 1999 (Table 11).

The civil service compensation package consisted of a basic wage component, a rice component and a meal allowance. Due to the inclusion of other in-country expenditures and expenditures for personnel based overseas in the government budget, the respective shares of basic wage and allowance can only be approximated. The basic wage accounted for 80 per cent of the civil servants compensation, while the rice and meal allowance accounted for approximately 6 per cent each in 1997. Rice was paid in-kind to all civil servants since at least 1969, but it was substituted with its monetary equivalent in 2000.

The rice component declined in importance from almost 30 per cent of the total package in the late 1960s, to just 6 per cent in 1997.

**Table 11. Expenditure on central Government personnel, 1969 – 1999**

	1969	1980	1990	1997	1999
<u>Civil servants</u>	<u>n.a</u>	<u>1 956.9</u>	<u>3 771.3</u>	<u>4 094.3</u>	<u>4 005.8</u>
Central	n.a	1 542.5	3 291.1	3 588.7	3 519.9
Local government	n.a	414.3	480.2	505.6	485.9
% female		n.a	n.a	35	37
Expenditure on central personnel (Bill. Rp/year) <sup>1</sup>	89	1 778	7 088	21 192	33 622
Expenditure per civil servant (000 Rp./month) <sup>1</sup>	-	96	180	492	817
<u>% distribution</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Salaries and pension	54	70	79	80	n.a
Rice	28	14	9	6	n.a
Meal allowance	10	11	5	6	n.a
Other in-country expenditures	4	3	4	5	n.a
Other overseas expenditure	4	2	3	3	n.a

Source: Number of civil servants: Statistical Yearbook of Indonesia, annual publication (table 3.2.12), CBS.

Expenditure on central personnel: *Nota Keuangan 1989/99* (table II.7) and *Data Pokok Bahan Penyusunan Nota Keuangan dan RAPBN 2001*, (table II.8 and II.9), October 2000, Ministry of Finance

Note: <sup>1</sup> In nominal Rupiah. n.a - Not available.

The average expenditure per civil servants increased rapidly, almost trebling in nominal terms between 1990 and 1997 period (Rp. 492,000 versus 180,000 per month), and stood at around US\$ 200 per month in 1997 before the crisis. Trends in nominal and real wages of civil servants and other service workers are examined in greater detail later (section 4.1).

## 2.3 Income security

As the previous section has shown, very little information exists to assess the degree of income security of Indonesian workers. The little information that is available on wage contracts and wage payment systems comes from ad hoc surveys of the large-scale manufacturing sector, questionnaires submitted by plantations to CBS, and the annual government budgetary allocations for the civil service, together covering 8.5 million workers or less than 10 per cent of the total workforce of 90 million. Using indirect information of employment in registered, incorporated establishments, shown in section 2.1 above, a back-of-the-envelope estimate of permanent workers in 2000 can be provided as follows.

Registered companies in the public and private sectors, cooperative associations, partnerships and other incorporated profit and non-profit organizations employed 16 per cent of the total workforce in 1990, the last year for which the relevant data were compiled (Table 12). As a first approximation, this would be upper limit of the share of the workforce with relatively secure employment. The remaining 84 per cent of total employment were engaged in unregistered, unincorporated enterprises. These included self-employed farmers, unpaid agricultural family labour, and self-employed and wage labour in agriculture, cottage and small-scale industries, construction, trade, transport and service sectors.

Table 12. Estimates of permanent workers by sector, 2000 (million)

	Employment		Incorporated establishments		Permanent workers	
	2000	% in 1990	Employment	% of incorp. employment	Employment	% of total employment
Agriculture	40.55	3.8	1.54	85	1.31	3.2
Mining and quarrying	0.45	15.0	0.07	(100)	0.07	15.0
Manufacturing	11.66	29.7	3.46	38	1.31	11.2
Utilities	0.07	53.6	0.04	(100)	0.04	53.1
Construction	3.54	47.7	1.69	(40)	0.68	19.2
Trade, hotel, restaurant	18.50	5.9	1.09	(40)	0.44	2.4
Transport, storage, comm.	4.55	14.9	0.68	(40)	0.27	5.9
Finance, banking	0.89	100.0	0.89	(100)	0.89	100.0
Other services	9.62	50.6	4.87	(100)	4.87	50.6
<b>Total</b>	<b>89.82</b>	<b>16.3</b>	<b>14.33</b>	<b>(69)</b>	<b>9.88</b>	<b>11.0</b>

Source: Labour Force Situation in Indonesia 2000 (Sakernas survey), Central Bureau of Statistics.  
 Note: Figures in brackets are authors' estimates.

However, section 2.2 pointed out that only 40 per cent of the workers in the incorporated segment of the manufacturing, consisting of the medium and large-scale establishments, were permanent workers. The remaining 60 per cent were on a combination of permanent daily, piecework and casual daily contracts. These other forms of contract did not provide pension, social security and insurance contributions to the workers, and paid their workers only for the days worked, and not when absent due to sickness or any other reasons. Only permanent workers were registered in the compulsory accident insurance scheme, and required the authorization of the Ministry of Manpower and Transmigration before dismissal. The majority of manufacturing workers could be laid off at short notice.

In the construction sector, only half the workers were employed in incorporated establishments, while the remaining were engaged in unregistered, unincorporated establishments. Though the proportion of workers with permanent contracts in the former segment is not known, even incorporated establishments are known to make a large use of casual and temporary contracts for its wage employees. The large service sector, employing nearly 10 million people or 11 per cent of total employment, is estimated to employ about half of its workers in incorporated establishments, however the proportion of permanent workers is not known. As for other sectors, with the exception of the small finance and banking sector, which employed less than a million workers (1 per cent of total employment), the remaining sectors employed less than 15 per cent in incorporated establishments.

In sum, while 16 per cent of all workers were employed in incorporated establishments, around 70 per cent of these were probably permanent workers. These 10 million permanent workers, or 11 per cent of the workforce, included four million civil servants. Outside government therefore, only six million people were permanent workers, consisting of 1.3 million workers each in agriculture and manufacturing, 0.7 million workers in the construction, 0.9 million workers each in the finance and service sectors, and another 0.9 million in other sectors.

These estimates rely crucially on the proportion of workers employed in registered, incorporated establishments in 1990, on the employment status of manufacturing workers in surveys undertaken in the early 1990s and on assumptions regarding the status of workers in other sectors. They nevertheless provide orders of magnitude on the income

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security of workers, and suggest that very few workers enjoyed employment security outside the civil service.

Finally, wage security can be examined from the point of view of fixed and guaranteed as opposed to the flexible component of worker wages. In the case of the permanent manufacturing workers, basic wages amounted to 75 per cent of the total labour costs incurred by the employers, while 20 per cent consisted of overtime and bonus payment, and the remaining 5 per cent consisted of pension, accident insurance and social security contributions. The flexibility provided by such a payment system was illustrated following onset of the crisis, when overtime and bonus payments were reduced by a third to a half in capital-intensive industries between 1996 and 1998. In contrast, 91 per cent of the wages of estate workers consisted of basic wages, while the flexible component amounted to just 9 per cent of the total. As for civil servants, even though the basic wage amounted to 80 per cent of the total payment, the remaining 20 per cent paid in rice and meal allowances were fixed as well. There is no information on other sectors.

### **3. Trends in wage distribution and inequality**

Wage differentials underpinned by productivity differentials provide appropriate incentives for investing in education and training. This in turn means that wage differentials may serve as an important vehicle for human capital formation. Unfortunately, it is often the case that observed wage gaps cannot be fully justified by productivity gaps across individuals and groups. A conspicuous case is gender disparities in the labour market. Studies typically demonstrate that, even after adjusting for similar characteristics (such as age and education), females typically tend to get paid less than males. The resulting wage inequality can thus impair the formation of social capital – the attributes of trust, cooperation and a sense of fairness that form the basis of social cohesion.

Studies have also shown that the issue of wage inequality is not merely a case of delineating wage gaps across groups (such as males and females). A significant component of wage inequality stems from disparities within broadly similar groups. Hence, the issue of intra-group inequality deserves as much, if not more, attention than the issue of inter-group inequality.

It is with these concerns in mind that the section in this paper approaches the issue of wage inequality in Indonesia. A major objective of this section is to identify the importance of gender disparities in the labour market. The analysis goes beyond simple measures of gender disparities in terms of the male-female wage ratio by seeking to adjust this ratio for other group-specific characteristics, such as education and age. This endeavour is complemented by “decomposition analysis” in which total wage inequality is disaggregated into two distinct components: “within-group” and “between-group” inequality. This particular procedure is applied to gender dimensions of wage inequality.

#### **3.1 Wage differentials: An overview**

By gender and urban-rural location

Table 13 depicts earnings differentials by gender and rural-urban location. As can be seen, such differentials narrowed in the first half of the 1980s, before widening again until 1990. Since then, wage differentials have steadily narrowed, recovering their mid-1980s levels by 1993, before narrowing further until the onset of the 1997 financial crisis. Wage differentials were stable in the 1997-2000 period, females and rural workers earning around 70 per cent of the male and urban earnings respectively. Females in rural areas continued to receive the lowest earnings, at just 64 per cent of their male counterparts.

The narrowing wage differentials in the first half of the 1980s suggest tighter labour market conditions in a period otherwise known for stagnating overall GDP growth due to the collapse of oil prices and ensuing curtailment of government development expenditures. This period was nevertheless characterized by good agricultural growth. The second half of this decade saw rapid overall growth and economic liberalization, but also witnessed two severe drought years in 1997 and 1999 and poor agricultural growth. These and other factors responsible for the moderate tightening of the labour market, and the resulting rise in real wage and narrowing earnings differentials, are explored in greater detail in section 4.2 below.

**Table 13. Gender and urban-rural earnings differentials, 1982-2000 (%)**

	1982	1986	1990	1996	2000
Female/male	54	61	56	67	68
Rural/urban	58	67	57	65	70
Urban female/male	60	61	61	67	69
Rural female/male	51	64	58	62	64

Source: Labourer/Employees Situation in Indonesia, Labour Force Survey Sakernas (table 16), annual publications, Central Bureau of Statistics: Jakarta.

### *By sector*

Wage differentials by sector narrowed over the last 25 years. Agricultural earnings increased from below 50 per cent to around 55 per cent of the average, while manufacturing earnings rose from 89 per cent to 100 per cent of the average, at least until 1990 (Table 14). Similarly, earnings in high paying sectors such as mining and quarrying, utilities, finance and banking and other services, declined from 200 per cent-300 per cent of the average wage to 50 per cent-75 per cent above average during this period.

Female earnings improved relative to those of males in all sectors, particularly after 1990. Thus their relative earnings increased from about 51 per cent to 56 per cent in agriculture, and from 47-50 to 63 per cent in manufacturing by 2000. The gender gap varied by sector requiring more skills and education. It narrowed from 56 per cent in agriculture, to 63 per cent in manufacturing, 67 per cent in services, 79 per cent in trade, restaurant and hotels and 86 per cent in finance and banking.

**Table 14. Earnings differentials by sector, 1976 - 2000 (%)**

	1976	1982	1986	1990	1996	2000
All sectors	100	100	100	100	100	100
Agriculture	52	48	47	48	51	54
Mining and quarrying	298	174	n.a	188	143	152
Manufacturing	89	95	93	100	93	93
Utilities	222	154	n.a	157	145	145
Construction	132	118	n.a	109	101	98
Trade, hotels and restaurants	136	113	103	111	101	93
Transport, storage and comm.	153	132	n.a	136	127	127
Finance and banking	321	231	n.a	225	208	175
Other services	151	143	119	115	115	127
<u>Female/male ratio (%)</u>	<u>n.a</u>	<u>54</u>	<u>61</u>	<u>56</u>	<u>67</u>	<u>68</u>
Agriculture	n.a	48	54	51	53	56
Manufacturing	n.a	41	47	47	60	63
Trade, hotels and restaurants	n.a	64	61	63	73	79
Finance and banking	n.a	88	n.a	77	92	86
Other services	n.a	61	64	64	71	67

Source: Labourer/Employees Situation in Indonesia, Labour Force Survey Sakernas (table 16), annual publications, Central Bureau of Statistics: Jakarta.



*By education level*

In line with the rising educational attainment of the general population, earnings differentials by education narrowed considerably over the last 25 years. The wage gap for junior secondary school leavers declined from 82-12 per cent relative to the Indonesian average, while that of secondary school leavers declined from 153 per cent to just 19 per cent between 1976 and 2000 (Table 15). The steepest decline was observed for university graduates, whose earnings were almost five times the average wage in 1976, but were just twice the average by 2000. Similarly, a primary school leaver earned the average wage in 1976, while a senior secondary school certificate was required to earn this average wage in 2000.

In general, the gender gap declined at all educational levels with the exception of those without schooling between 1982 and 2000. The wage gap was widest at lower educational levels and progressively narrowed with more education. At the primary school level and below, females earned only about half the male wage, this difference narrowing to about 20 per cent at the senior secondary school level and diploma level. Interestingly, female university graduates earned only 70 per cent of the male wage throughout 1982-2000, because many chose to work in the relatively secure civil service and as teachers (Dhanani, 1995). The wage gap narrowed to just 12 per cent for vocational secondary school leavers.

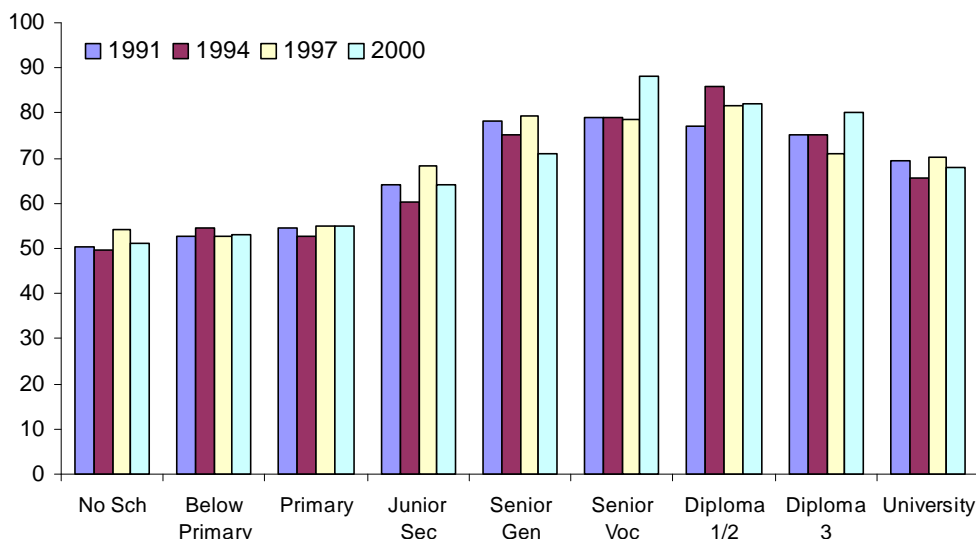
**Table 15. Wage differentials by education, 1976 - 2000 (%)**

	1976	1982	1986	1990	1996	2000
All levels	100	100	100	100	100	100
No schooling	n.a	n.a	n.a	47	44	48
Did not complete primary	61	60	56	57	59	54
Primary school	103	93	81	72	70	67
Junior secondary school	182	151	123	119	90	82
Senior secondary, general	253	202	156	145	124	119
Senior secondary, vocational	202	174	148	136	127	131
Diploma I and II	n.a	n.a	167	160	161	157
Diploma III	n.a	n.a	n.a	250	202	191
University	466	304	241	281	235	217
<u>Female/male ratio (%)</u>	n.a	54	61	56	67	68
No schooling				50	53	51
Did not complete primary		46	51	49	52	53
Primary school		45	51	52	55	55
Junior secondary school		66	61	51	65	64
Senior secondary, general		72	69	68	75	71
Senior secondary, vocational				77	84	88
Diploma I and II				75	78	82
Diploma III				69	70	80
University		67	70	69	67	68

Source: Labourer/Employees Situation in Indonesia, Labour Force Survey Sakernas, annual publications (table 19).

A more effective way of depicting the significance of adjusting the aggregate male-female wage gap, between 1991 and 1999, is shown in figure 1. The pattern is clear: gender disparities behave in an “inverted U” fashion, with the male-female wage gap narrowing as educational attainment went up, reached a plateau at the “post-secondary level” and then tapered off.

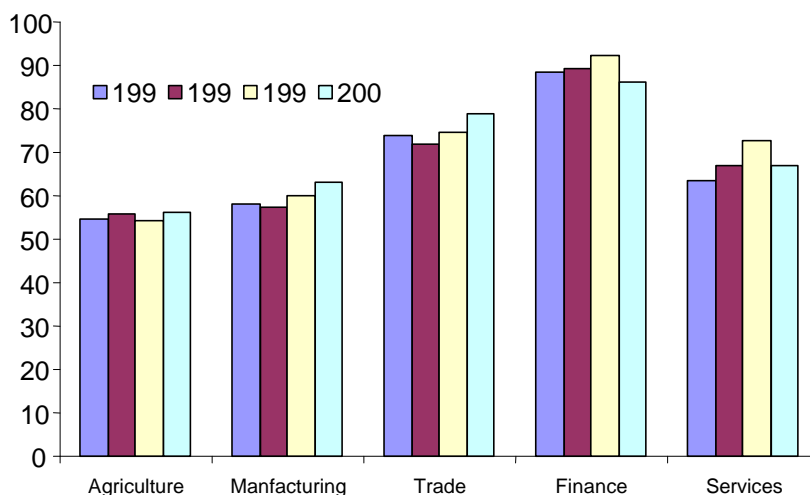
Figure 1. Gender wage gap by education, 1991-99 (%)



Source: Labourer/Employees Situation in Indonesia, Labour Force Survey Sakernas, annual publications (table 19).

Figures 2 and 3 repeat the above procedure of adjusting the overall male-female wage gap by standardising for group-specific attributes. Thus, figure 2 depicts the gender wage ratio by adjusting for industrial affiliation, while figure 3 adjusts the gender wage disparities by standardising for age. In both cases, the data represents annual observations for 1991 to 1999. It is clear from figure 2 that the wage gap narrowed as one moved from agriculture, to manufacturing, trade, services and finance, progressively requiring higher skills and education. However, almost parity prevailed, at least for some years, in mining, utilities, construction and transport. This is no coincidence, since these are sectors employing very few females from 4 per cent in construction and transport, to 8 per cent in utilities and 18 per cent in mining (see Table 1). Furthermore, most of these are likely to be employed in administrative and professional occupations requiring skills and education.

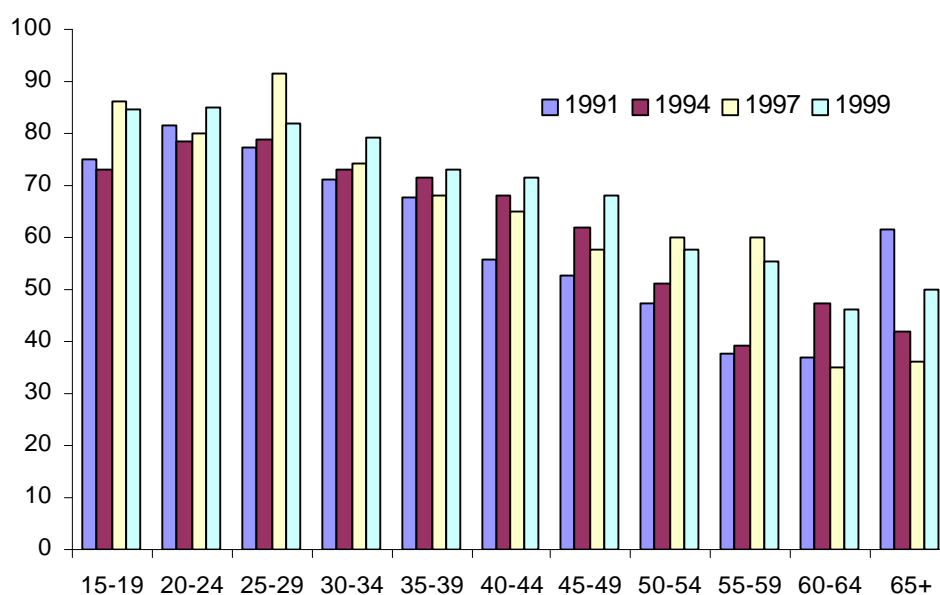
Figure 2. Gender wage gap in selected industries, 1991-99 (%)



Source: Labourer/Employees Situation in Indonesia, Labour Force Survey Sakernas, annual publications (table 19).

The pattern revealed in figure 3 is worth emphasising. It appears that the male-female wage gap widened significantly as females became older. Thus, gender disparities are compounded by age discrimination.

Figure 3. Gender wage gap by age, 1991-99 (%)



Source: Labourer/Employees Situation in Indonesia, Labour Force Survey Sakernas, annual publications (table 19).

It would be useful at this juncture to summarize the findings so far. Aggregate measures of gender wage gaps may overstate the extent of gender discrimination in the labour market. There is some evidence that as the educational attainment of female workers rose – but by no means achieved parity – with their male counterparts. This laudable development, however, did not carry over to university level education. At this juncture, women still earn about 30 per cent less than men. The typical profile of the gender wage gap seems to be an “inverted U”, peaking at pre-university level. At least one can infer that one effective way of resolving gender discrimination in the labour market is to enhance the educational endowment of females. The analysis also suggests that the industrial affiliation of female workers matter.

Finally, older female workers appear to be at a particular disadvantage: the male-female wage gap worsened with age. It is possible that cumulative differences in the amount of work experience achieved by females compared with males – as a result of periods of female non-participation in employment due to child birth and child care – account for the widening of the male-female wage gap as females get older. Also older women probably had fewer educational opportunities than older men. So one way of addressing gender discrimination in the Indonesian labour market is to simultaneously tackle age discrimination, but this is by no means the most important of only factor.<sup>2</sup>

### *Regional differences*

Regional earnings differentials, though still significant between islands, narrowed over the last 25 years, probably as a result of increased labour mobility and migration from labour-surplus to labour-scarce areas. Though there were cost of living differences between regions, particularly in the more remote provinces of Kalimantan and Irian Jaya,

<sup>2</sup> The authors are grateful to John Senders for the points contained in this paragraph.

nominal wages were some 30 per cent-40 per cent higher in Sulawesi and Sumatra, and 90 per cent-100 per cent higher in Kalimantan, Maluku and Irian Jaya, while they were 10 per cent lower in Bali-Nusa Tenggara in 1976 (Table 16). These differentials narrowed to about 20 per cent in most regions by 2000, while they were close the country average in Bali-Nusa Tenggara, with the exception of Maluku and Irian Jaya, where nominal earnings remained respectively 34 per cent and 83 per cent higher than the Indonesian average, mostly due to its higher the cost of living.

**Table 16. Nominal earnings index by region, 1976 - 2000 (Indonesia=100)**

	1976	1982	1986	1990	1996	2000
<u>Indonesia</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Sumatra	136	128	124	113	104	117
Bali and Nusa Tenggara	93	101	98	103	97	98 <sup>1</sup>
Kalimantan	186	159	145	140	130	123
Sulawesi	128	122	128	114	100	117
Maluku	212	164	145	126	121	134*
Irian Jaya	228	224	183	177	183	183*
<u>Java</u>	<u>97</u>	<u>95</u>	<u>92</u>	<u>94</u>	<u>97</u>	<u>94</u>
Jakarta	244	193	160	168	161	145
West Java	88	92	96	97	106	101
Central Java	73	74	75	71	76	74
East Java	72	75	75	80	80	82

Source: Labourer/Employees Situation in Indonesia, Labour Force Survey Sakernas (table 16), annual publications, Central Bureau of Statistics: Jakarta.

Note: \* Figures are for 1999. Provincial figures for 2000 not available.

On the island of Java, both West Java and East Java improved their ranking respectively from 88 per cent to 101 per cent of the national average, and from 72 per cent to 82 per cent of the national average, on account of their favoured destination for industrial and financial investment. On the other hand, Central Java remained at the bottom at just 74 per cent of the national average, while the Jakarta premium fell from 144 per cent to just 45 per cent.

Adjusting for cost of living differences, the wage gap fell to respectively 20 per cent, 19 per cent and 36 per cent for Maluku and Irian Jaya that of Kalimantan relative to the average in 1999 (Table 17), while there was no difference in general for Sumatra, Java and Sulawesi. In contrast, the earnings in Bali were 10 per cent higher than without adjustment. As for Java, the 33 per cent gap for Jakarta all but disappeared on account of its higher cost of living, while 24 per cent gap in Central Java was reduced to 14 per cent on account of its lower cost of living. The two measures used here to adjust for the cost of living, the minimum physical requirements for a single worker of the Ministry of Manpower and the poverty line index of the World Bank, give comparable results in general, with the exception of a few provinces such as Jambi, Bengkulu, Bali, NTT, most of Kalimantan except East Kalimantan, and Maluku).

**Table 17. Nominal provincial earnings adjusted for cost of living differentials, 1999**

	Nominal earnings per employee, 1999		Minimum living requirement, 1999 (Single wkr, KHM)		Ratio of earnings/ KHM	World Bank 1990 poverty line (PVL) (Per capita)		Nominal earnings index adjusted for:	
	Rp./month	Index	Rp./month	Index		Rp./month	Index	KHM	PVL
<u>Indonesia</u>	<u>346 950</u>	<u>100</u>	<u>263 787</u>	<u>100</u>	<u>132</u>	<u>16 726</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>Sumatra</u>	<u>389 096</u>	<u>112</u>	<u>256 307</u>	<u>97</u>	<u>152</u>	<u>16 807</u>	<u>100</u>	<u>115</u>	<u>112</u>
Aceh	478 593	138	307 603	117	156	16 131	96	118	143
North Sumatra	366 555	106	261 000	99	140	16 160	97	107	109
West Sumatra	429 590	124	251 712	95	171	16 908	101	130	122
Riau	553 516	160	303 258	115	183	20 541	123	139	130
Jambi	387 303	112	215 463	82	180	17 461	104	137	107
South Sumatra	330 587	95	251 575	95	131	16 219	97	100	98
Bengkulu	368 389	106	210 162	80	175	19 453	116	133	91
Lampung	328 991	95	220 500	84	149	15 995	96	113	99
<u>Java</u>	<u>320 628</u>	<u>92</u>	<u>265 959</u>	<u>101</u>	<u>121</u>	<u>16 693</u>	<u>100</u>	<u>92</u>	<u>93</u>
Jakarta	462 794	133	351 263	133	132	22 000	132	100	101
West java	338 540	98	298 165	113	114	17 246	103	86	95
Central java	262 362	76	235 750	89	111	14 774	88	85	86
Yogyakarta	347 992	100	227 064	86	153	15 053	90	117	111
East java	289 925	84	225 240	85	129	15 703	94	98	89
<u>Bali, Nusa Tenggara</u>	<u>340 895</u>	<u>98</u>	<u>251 592</u>	<u>95</u>	<u>135</u>	<u>14 928</u>	<u>89</u>	<u>103</u>	<u>110</u>
Bali	383 914	111	279 750	106	137	16 303	97	104	114
NTB	301 917	87	257 150	97	117	14 535	87	89	100
NTT	391 060	113	237 425	90	165	16 060	96	125	117
<u>Kalimantan</u>	<u>465 439</u>	<u>134</u>	<u>281 384</u>	<u>107</u>	<u>165</u>	<u>18 878</u>	<u>113</u>	<u>126</u>	<u>119</u>
West Kalimantan	400 552	115	255 707	97	157	20 010	120	119	97
Central Kalimantan	486 776	140	335 442	127	145	18 943	113	110	124
South Kalimantan	408 431	118	233 721	89	175	16 343	98	133	120
East Kalimantan	555 160	160	317 704	120	175	19 548	117	133	137
<u>Sulawesi</u>	<u>405 679</u>	<u>117</u>	<u>252 295</u>	<u>96</u>	<u>161</u>	<u>15 748</u>	<u>94</u>	<u>122</u>	<u>124</u>
North Sulawesi	387 825	112	248 706	94	156	16 023	96	119	117
Central Sulawesi	359 056	103	240 000	91	150	15 865	95	114	109
South Sulawesi	414 516	119	257 035	97	161	15 772	94	123	127
Southeast Sulawesi	483 356	139	254 250	96	190	14 665	88	145	159
<u>Maluku, Irian Jaya</u>	<u>544 230</u>	<u>157</u>	<u>273 500</u>	<u>104</u>	<u>199</u>	<u>20 543</u>	<u>123</u>	<u>151</u>	<u>128</u>
Maluku	466 512	134	223 968	85	208	18 817	113	158	120
Irian Jaya	635 358	183	331 579	126	192	22 567	135	146	136

Source:

Earnings: Same as Table 13. Minimum living requirement (KHM): *Indikator Tingkat Hidup Pekerja 2000* [Indicator of Workers' Living Standards], CBS. Provincial poverty line: World Bank 1993 (table 2, Annex 1.2, page 116).

Note: Earnings, KHM and Poverty Lines at island level are weighed averages using provincial number of employees as weights.

### 3.2 Wage inequality: A decomposition analysis

So far, the focus of the analysis has been on wage differentials across groups. However, there is another important dimension of wage inequality, namely, intra-group inequality. Box 1 summarises how this issue can be tackled using the procedure of decomposition and the results are shown in tables 18 and 19.

### Box 1. Decomposing inequality

If one employs an additively decomposable measure of inequality, it is then possible to write total inequality as the sum of the within-group and between-group inequality. Let  $I$  = total inequality;  $I_w$  = weighted average of within-group inequality and  $I_b$  = between-group inequality. Then, in the case of an additively decomposable measure, one can write:

$$I = I_w + I_b.$$

It follows that:

$$(I_w/I) \times 100 = \text{per cent contribution of } I_w \text{ to total inequality}$$

$$(I_b/I) \times 100 = \text{per cent contribution of } I_b \text{ to total inequality.}$$

The pure theory of inequality measurement maintains that the L-index is an additively decomposable measure – see Hughes and Islam (1981) for a review and applications to Indonesian data. The L-index – which is the sum of the ratio of average income/expenditure of the population as a whole to the average income/expenditure of the  $i$ th unit (measured on natural log scale) - satisfies all the properties that a desirable inequality measure should have. It takes a minimum value of zero (perfect equality) and is unbounded above (that is, it can exceed unity). It follows that higher levels of inequality are associated with higher values of the L-index.

Before the crisis, overall wage inequality gradually declined from 0.30 to 0.24 over the 1991-1997 period (Table 18). This reduction however only occurred in urban areas and not in rural areas, and wage inequality remained higher for females than for males (0.32 versus 0.19 in 1997). Differences due to urban-rural location and gender narrowed the most, and were of the order of just 5-6 per cent by 1997-1999. Inequality due to wage differences by educational level, age and sector also generally declined over this period, but were still of the order of 10 per cent-15 per cent for education and age, and 20 per cent by sector. Following the onset of the crisis, wage gaps due to urban-rural location and gender remained stable, while inequality due to education, age and sector rose in 1998 and 1999.

Table 18. Decomposition of wage inequality: Location, education, age, sector and gender

	L-index			Per cent contribution of between group inequality to total inequality					
	Urban	Rural	All	Rural-urban	Education	Age	Sector	Gender	
								Urban	Rural
1991	0.28	0.27	0.30	9	15	12	21	8	10
1992	0.26	0.28	0.30	10	16	13	25	8	11
1993	0.28	0.32	0.33	9	17	12	23	7	9
1994	0.25	0.29	0.29	8	13	12	19	7	9
1996	0.20	0.27	0.25	7	13	11	22	6	8
1997	0.18	0.27	0.24	6	13	10	21	5	7
1998	0.24	0.29	0.28	5	16	10	21	5	8
1999	0.20	0.17	0.20	5	17	13	25	4	6

Source: Labourer/Employees Situation in Indonesia, Labour Force Survey Sakernas (table 16), annual publications, Central Bureau of Statistics: Jakarta.

Wage inequality varied by education level, sector of work and age (Table 19). In any particular year, wage inequality fell with increasing education, being highest for those without any school or below primary school level, and lowest for university graduates (0.28 versus 0.15 in 1998). In addition, the gender contribution to wage inequality for persons with the same educational level also varied by level, being more important at lower than higher levels (18 per cent to 3 per cent in 1998). That just 3 per cent of wage inequality in university graduates was due to gender emphasized the point that 97 per cent of wage inequality at this educational level was due to within-group inequality, i.e., non-gender related factors.

Table 19. Gender dimensions of wage inequality, 1998

	Education			Sector			Age	
	L-Index	% due to gender		L-Index	% due to gender		L-Index	% due to gender
No schooling	0.28	18	Agriculture	0.28	16	15-19	0.19	4
Below primary	0.25	17	Mining, quarrying	0.26	0	20-24	0.18	1
Primary school	0.21	16	Manufacturing	0.22	11	25-29	0.22	2
Jun. secondary	0.20	9	Utilities	0.19	2	30-34	0.23	3
Sen. secondary	0.18	3	Construction	0.16	0	35-39	0.24	4
Diploma I/II	0.12	7	Trade, hotel, rest.	0.20	4	40-44	0.27	5
Diploma III	0.15	4	Transport, comm.	0.17	0	45-49	0.29	6
University	0.15	3	Finance, banking	0.19	1	50-54	0.37	7
			Other services	0.26	5	55-59	0.39	7
All levels	[0.28]	[6]	All sectors	[0.28]	[6]		[0.28]	[6]

Source: Labourer/Employees Situation in Indonesia, Labour Force Survey Sakernas (table 16), Annual publications, Central Bureau of Statistics: Jakarta.

Inequality by sector was highest in agriculture, mining and other services, and lowest in utilities, construction, transport and finance. The gender contribution to inequality was highest in agriculture and manufacturing (16 per cent and 11 per cent), and negligible in most other sectors. Finally, wage inequality increased with age, being lowest at youth and highest older persons (0.19 versus 0.39). Inequality due to gender within particular age groups were small, but nevertheless was highest in older age groups (1 to 7 per cent).<sup>3</sup>

It would be useful to summarize the results so far by referring to figures 4 to 8. Figure 4 shows the trends in overall wage inequality. As can be seen, overall wage inequality generally declined during most of the 1990s, rose during the crisis and then fell again. Figure 5 reconfirms that wage gaps by sector represent a more significant component of overall inequality (21 to 25 per cent) than wage gaps due to education (15 to 17 per cent), age (10 to 13 per cent) and rural-urban location (5 to 9 per cent). The figure also shows that between-group inequality due to education declined before the crisis, and then widened in the first two years of the crisis, and so did inequality by age in the second year of the crisis.

Figures 6 to 8 focus more fully on the significance of the gender wage gap as a proportion of total inequality. Once again, the figures confirm the importance of taking into account the different dimensions of gender disparities. Thus, in figure 6, the significance of the male-female wage gap as a proportion of total inequality fell sharply as the educational attainment of workers rose. On the other hand, in figure 7 the significance of the male-female wage gap rose as workers grew older. In figure 8, the significance of the gender wage-gap varied widely from industry to industry.

<sup>3</sup> These findings are consistent with the results obtained by Skoufias and Suryahadi (1999).

Figure 4. Trends in wage inequality by urban-rural location, 1991-1999 (L-index in vertical axis)

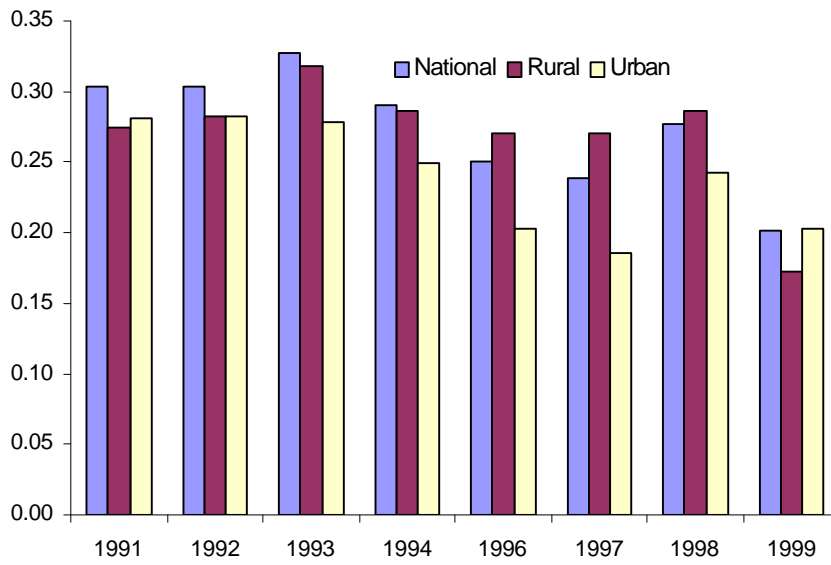


Figure 5. Trend in between-group inequality, 1991-1999 (%)

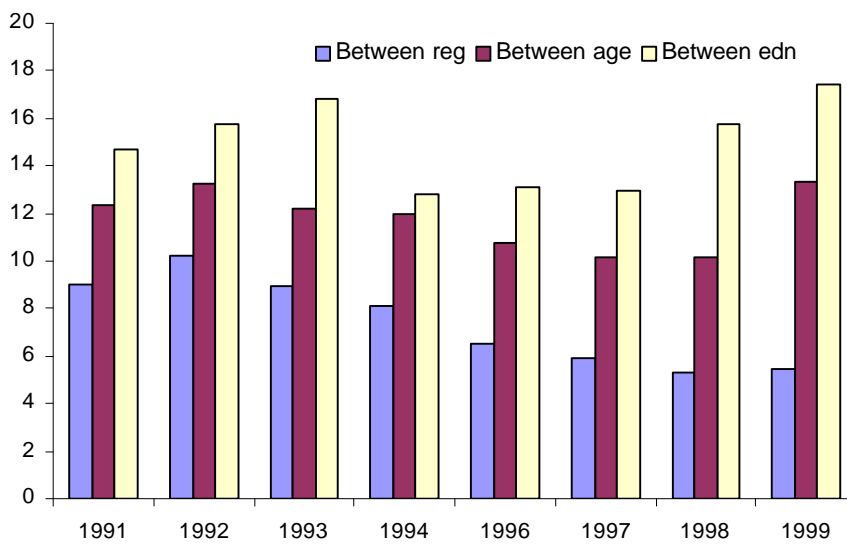




Figure 6. Gender wage gap as % of total inequality by education, 1991-1999

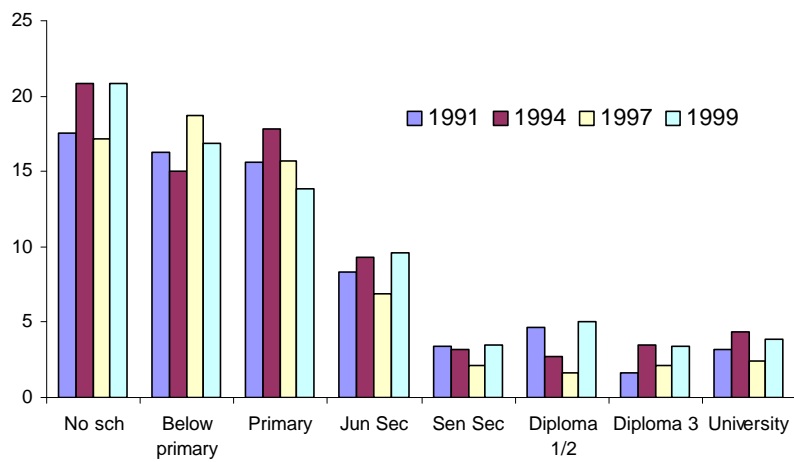


Figure 7. Gender wage gap as % of total inequality by age, 1991-1999

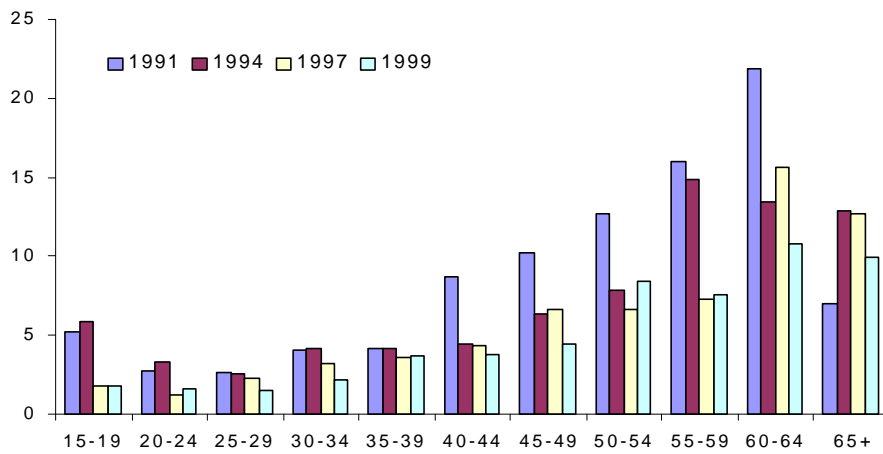
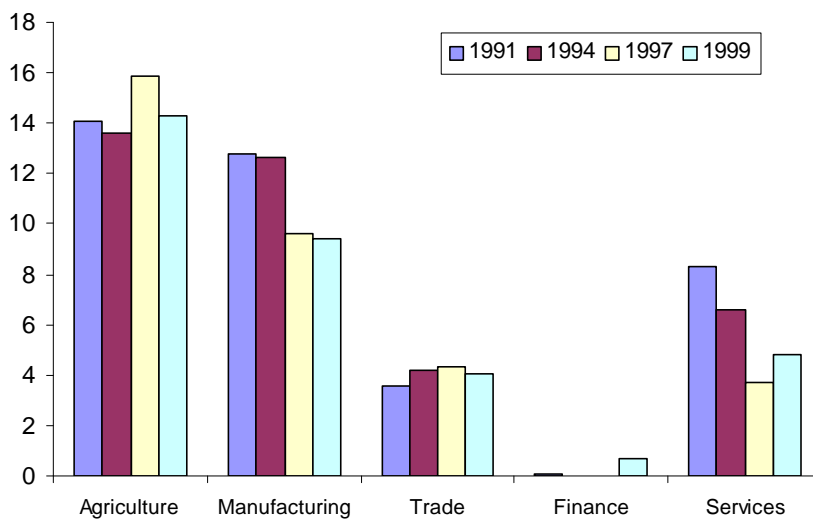


Figure 8. Gender wage gap as % of total inequality, 1991-1999



What are the implications of the findings? They corroborate the point that aggregate measures of gender wage gaps may overstate the degree of gender discrimination in the labour market. Although females earned about 30 per cent less than men, the importance of this statistic in overall wage inequality was more modest and depended significantly on educational level, industrial affiliation and age. Hence, any attempt to deal with gender disparities will require a much greater attention to these issues. Furthermore, even if it were possible to bring complete parity in terms of pay between men and women, a very significant component of wage inequality (amounting to 80 per cent in most cases) stemming from intra-group inequality (that is, among females and males) will remain unresolved.

### 3.3 Income inequality

#### *Functional distribution of income*

Wages and salaries accounted for just 30 per cent of the country's gross value added in 1971 and 1995, though this proportion declined to as low as 24 per cent in 1980, according to the input-output tables produced every five years by CBS (Table 20). The remaining 70 per cent were returns to capital, and consisted of operating profit (57 per cent), depreciation (8 per cent) and indirect tax (5 per cent). The movement in the share of wages and salaries followed that of real wages, declining during 1971-75, stagnating during the 1975-1980 and 1985-90, and rising in first half of the 1980s and 1990s.

Table 20. Functional distribution of income, 1971 – 1995 (%)

	1971	1975	1980	1985	1990	1995
Wages and salaries	29.2	24.9	24.1	27.7	27.4	30.5
<u>Gross operating surplus</u>	<u>70.8</u>	<u>75.1</u>	<u>75.9</u>	<u>72.3</u>	<u>72.6</u>	<u>69.5</u>
Operating surplus	62.4	68.1	71.2	63.8	60.7	56.8
Depreciation	5.3	5.0	5.4	6.4	7.4	8.1
Indirect tax	3.1	2.0	2.3	2.9	5.0	4.6
Subsidy	0.0	0.0	-3.1	-0.8	-0.6	0.0
<u>Gross Value-Added</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
<u>Billion Rupiah (current)</u>	<u>4 270</u>	<u>13 694</u>	<u>48 330</u>	<u>97 644</u>	<u>207 801</u>	<u>535 565</u>

Source: Input-output tables, 19 sectors, various years, Central Bureau of Statistics.

#### *Inequality before the crisis*

The discussion focuses on expenditure and income inequality and not on other dimensions of inequality, such as disparities in asset ownership. A further limitation is that the data on income inequality, as opposed to expenditure inequality, has only been published for 1984. The full extent of inequality cannot be adequately measured by the expenditure component of national socio-economic surveys such as *Susen*s because expenditure is generally not as unequally distributed as income and assets, and because this type of survey focuses on the consumption of basic necessities at the expense of expenditures on the purchase of land, property, vehicles and other durable consumption goods, and on luxury items such as foreign travel.

Before examining trends over time, it may be useful to note the difference between income and expenditure inequality for 1984, the only year for both measures were

published<sup>4</sup>. The gini coefficient for income inequality on a household basis was 0.42, while the gini coefficient on a per capita basis was much lower at 0.32 (Table 21). The latter was similar to the gini coefficient for expenditure, on a per capita basis, of 0.33. The 10 per cent richest households accounted for 34 per cent of total income in that year.

**Table 21. Comparison between expenditure and income inequality, 1984**

	Urban		Rural		Urban and rural	
	Expenditure	Income	Expenditure	Income	Expenditure	Income
Gini Coefficient						
Per capita	0.32	0.30	0.28	0.27	0.33	0.32
Per household	n.a.	0.41	n.a.	0.38	n.a.	0.42
Share of top 10%	n.a.	33	n.a.	30	n.a.	34

Source: Tingkat dan Perkembangan Distribusi Pendapatan Rumah tangga 1978-1984, CBS (1987); Socio-economic Survey Susenas 1984.

Expenditure inequality stagnated in the 1970s, declined in the 1980s, and rose again in the 1990s. The gini coefficient remained at 0.34-0.35 during most of the 1970s, before declining gradually to 0.32 in 1990. It then rose again to 0.34 in 1993 and 0.36 in 1996 – quite a discernible jump.

**Table 22. Change in inequality between the pre- and post-crisis periods, 1996–1999**

	Urban			Rural			Urban and rural		
	Theil index	L-index	Gini ratio	Theil index	L-index	Gini ratio	Theil index	L-index	Gini ratio
1969/70									0.35
1976			0.35			0.31			0.34
1978			0.38			0.34			0.38
1980			0.36			0.31			0.34
1981			0.33			0.29			0.33
1984			0.32			0.28			0.33
1987			0.32			0.26			0.32
1990			0.34			0.25			0.32
1993			0.33			0.28			0.34
1996	0.26	0.22	0.36	0.15	0.13	0.27	0.26	0.22	0.36
1998	0.22	0.18	0.33	0.13	0.11	0.26	0.20	0.17	0.32
1999	0.23	0.20	0.34	0.14	0.13	0.26	0.23	0.19	0.33

Source: Statistical Yearbook, various issues, CBS. Irawan and Romdiati (1999, table 10) for Theil index and L-index.  
Note: The various measures and their properties are discussed in detail in Hughes and Islam (1981).

### *Inequality and the Indonesian crisis*<sup>5</sup>

It is necessary to establish the trend in inequality until 1998 and its likely behaviour beyond that. The presumption seems to be that inequality improved in 1998 because of large relative price shifts favouring the rural vis-à-vis the urban economy.

First, consider the popular view that inequality fell during the crisis. As Frankenberg et al. observe: “There has been a significant decline in the level of inequality as measured by the logarithm of (per capita expenditure)...” (1998, p. 9). The World Bank reinforces

<sup>4</sup> Wage inequality data from the labour force surveys of 1977 and 1978 were published but relate to the income of wage employees only.

<sup>5</sup> This sub-section draws from Dhanani and Islam (2000), section 4 (pp. 19-20).

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this finding by noting: “There is no necessary link between crises and rising inequality; in past Latin American crises inequality often rose; in Indonesia inequality appears to have actually fallen with a collapse in incomes of the top half of the distribution”.<sup>6</sup>

Analysis of the distribution of expenditure generated by the *mini-Susenas* of December 1998 also reveals a similar trend. Inequality fell in terms of a series of robust indices (the Gini ratio, the Theil index and the L-index, Table 22), particularly in urban areas.

There are two interpretations of the observed trends in inequality; one is positive, while the other is tinged with scepticism. First, one could argue that the fall in inequality mitigated the rise in poverty. Second, contrary to this optimistic notion, some observers do not see much value in such evidence. While a decline in inequality in a growing economy can be seen to be welfare improving, the interpretation is rather pessimistic in a deep recession. Commenting on the shift in inequality derived by Frankenberg et al. (1998), Daimon and Thorbecke (1999, p. 5) note:

These results would be inconsistent with the worsening of poverty incidence unless (1) there was a significant increase in the variance of the income distributions of the lowest...quartiles following the crisis, or (2) there was a severe measurement problem. In general, measuring welfare based on expenditure data may not be a good predictor, when these data are subject to large fluctuations due to hyperinflation during the crisis... (L)ower income households may have to increase their expenditure for basic needs such as nutrition when prices have risen, even if they make some adjustment through ‘consumption smoothing by, for instance, selling assets... Once these assets are sold... the poor have exhausted whatever safety valve they had and further ‘consumption smoothing’ becomes impossible. In other words, the impact of the crisis might have been attenuated in 1998 by these distress sales and might hit much more severely in 1999 and subsequently.

More recent evidence suggests that the finding of a decline in inequality during the crisis fails to distinguish between nominal inequality and changes in the distribution of income adjusted for the differential impact of inflation on poor and non-poor households. Drawing on the work of Skoufias et al. (1999), the World Bank – in an update on the Indonesian economy issued on September 20, 1999 - now concedes that inflation-adjusted inequality went up in rural areas. It observes:<sup>7</sup>

...(T)he nominal Gini coefficient ...does not take account of the effect of relative price changes on inequality. The latter is important because the poor have faced higher inflation than the rich...and net producers have faced more favourable relative price changes than net consumers... Applying the Gini coefficient to household incomes deflated to reflect actual consumption patterns, urban inequality has decreased from 0.299 to 0.289, whilst rural inequality has increased from .265 to .289... The rise in rural inequality is found to be due to increasing inequality in the bottom tail of the distribution (the poorest)... This is consistent with trends in the severity of poverty, which increased substantially for rural households between 1997 and 1998.

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<sup>6</sup> This is a website-based document of the World Bank entitled “Trends in Poverty” downloaded on May 20, 1999 ([www.worldbank.org/poverty/data/newtrends.pdf](http://www.worldbank.org/poverty/data/newtrends.pdf)). The quote is from page 7 of the document.

<sup>7</sup> This is also a website-based document of the World Bank entitled “Indonesia”. It can be downloaded from [www.worldbank.org](http://www.worldbank.org). The quote is taken – and adapted from – pages 10-11 of the document.

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These observations are significant because they contradict prevailing convictions – to which the World Bank publicly subscribed in previous publications – that the rural economy fared better than the urban economy in bearing the brunt of the Indonesian crisis.<sup>8</sup>

In sum, the conventional view that inequality declined during the crisis is highly questionable. While it may have done so in nominal terms, the evidence is quite different for rural areas when judged in inflation-adjusted terms and is consistent with increases in the severity of poverty discussed in the previous section. In any case, the most recent data for mid-1999 show that the decline in inequality during the crisis has apparently been reversed (see Table 22).

## **4. Trends in wages and labour productivity**

### **4.1 Trends in nominal and real wages**

#### *Overall trends, 1976-2000*

Nominal earnings of wage employees increased by 15 per cent per annum on average in the 1976-1997 period before the crisis, according to the national labour force surveys (Table 23). Earnings did not grow evenly during this period however, slowing down to respectively 10 per cent and 7 per cent per annum during 1976-78 and 1987-89. During this 21-year period, consumer prices rose by an average of 10 per cent per annum, resulting in real growth in earnings of 5 per cent per annum. During the two lower nominal growth periods, real earnings stagnated in 1976-78, while declining by 2 per cent per year during 1986-89 (Figure 9).

The East Asian financial crisis, which began in Indonesia in mid-1997, had a major impact on real earnings. In the first year, consumer prices rose by 100 per cent, while nominal earnings grew by 20 per cent, causing real earnings to decline by over 40 per cent. In the following two years, nominal earnings continue to grow by 20 per cent annually while inflation was brought under control, rising by just 5-10 per cent per annum. Real earnings began to climb slowly again to around 90 per cent of their pre-crisis level by 2000.

Published earnings data from the labour force surveys by gender and urban-rural location are available only since 1982. The real earnings of females grew faster than for males in the 1982-97 period before the crisis (6 vs. 4 per cent annually). This acceleration took place during 1982-86 and 1989-97. Rural real earnings also grew faster than urban earnings during this period (4 vs. 3 per cent annually), particularly during the earlier 1982-86 period. These differential growth rates led to the narrowing of gender and urban-rural earnings, suggesting tighter labour market conditions during these two periods of relatively rapid wage growth.

The trends depicted above concur with the significant decline in national poverty incidence registered before the crisis, especially during the sub-periods identified above. Overall poverty incidence declined from 33 per cent to 11 per cent between 1978 and 1996, falling by 7 per cent, 10 per cent and 4 per cent during respectively the 1976-1978, 1982-86 and 1990-96 periods. The decline from 40 per cent to 33 per cent in earlier 1976-78 period of just two years appears implausibly large, and may have been the result of methodological changes in computing poverty lines (Dhanani, 1994b). Additional changes

<sup>8</sup> See, for example, World Bank (1999a: 2).

in methodology between 1987 and 1990 may also have been responsible for the official drop in poverty incidence during this period. Alternative estimates using a consistent methodology suggest a possible stagnation during this period, particularly in rural areas (Dhanani, 1994b, p.4).

**Table 23. Trends in nominal and real earnings and poverty incidence, 1976-2000**

	Index (1997 = 100)							Average annual growth rate <sup>1</sup> (%)							
	76	78	82	86	89	97	2000	76-78	78-82	82-86	86-89	89-97	97-2000	Pre-crisis	
														82-97	76-97
Nominal earnings															
<u>Indonesia</u>	<u>5</u>	<u>6</u>	<u>16</u>	<u>26</u>	<u>32</u>	<u>100</u>	<u>179</u>	<u>10</u>	<u>27</u>	<u>13</u>	<u>7</u>	<u>15</u>	<u>21</u>	<u>13</u>	<u>15</u>
Male	n.a.		17	27	33	100	180	n.a.	n.a.	13	7	15	22	13	
Female	n.a.		12	22	28	100	178	n.a.	n.a.	16	8	17	21	15	
Urban	n.a.		20	31	34	100	170	n.a.	n.a.	12	-	15	19	12	
Rural	n.a.		18	32	33	100	183	n.a.	n.a.	16	-	15	22	13	
Urban CPI	14	17	30	41	53	100	203 <sup>2</sup>	10	16	8	9	8	27 <sup>2</sup>	8	10
Real earnings (1997=100)															
<u>Indonesia</u>	<u>37</u>	<u>37</u>	<u>53</u>	<u>64</u>	<u>61</u>	<u>100</u>	<u>88</u>	<u>0</u>	<u>9</u>	<u>5</u>	<u>-2</u>	<u>7</u>	<u>-4</u>	<u>4</u>	<u>5</u>
Male	n.a.		55	67	63	100	89	n.a.	n.a.	5	-2	6	-4	4	
Female	n.a.		40	54	53	100	88	n.a.	n.a.	8	-1	8	-4	6	
Urban	n.a.		65	74	63	100	84	n.a.	n.a.	3	-	6	-6	3	
Rural	n.a.		58	77	63	100	90	n.a.	n.a.	7	-	6	-4	4	
Poverty Incidence (% of population) <sup>b</sup>															
<u>Indonesia</u>	<u>40</u>	<u>33</u>	<u>27</u>	<u>17</u>	<u>15</u>	<u>11</u>	<u>24<sup>c</sup></u>	<u>-7</u>	<u>-6</u>	<u>-10</u>	<u>-2</u>	<u>-4</u>	<u>+6</u>	<u>12</u>	<u>29</u>
Urban	39	31	28	20	17	10	20 <sup>c</sup>	-8	-3	-8	-3	-7	+6	11	29
Rural	40	33	26	16	14	12	26 <sup>c</sup>	-7	-7	-10	-2	-2	+6	12	26

Source: Earnings: Labourer/Employee Situation in Indonesia (National labour force survey Sakernas), annual publication for 1990-2000, CBS. *Indikator Tingkat Hidup Perkerja* [Living standards Indicator], and *Indikator Sosial Wanita* [Women's social indicators], various years, for 1976-1989, CBS. Special tabulations from raw data produced by CBS for 1982 and 1986-89.

Consumer prices: weighed average consumer price index of 43 cities (27 cities before 1994), annual average indices, Monthly Bulletin, CBS.

Poverty incidence: Statistics Indonesia 2000 (table 12.1.A), CBS.

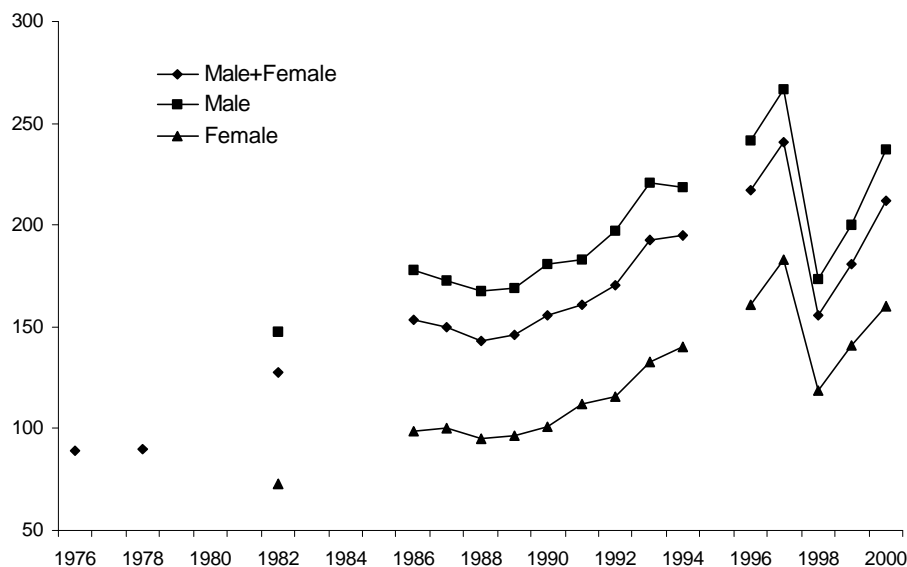
Note:

<sup>a</sup> Growth rates for 1976-78, 1982-86 and 1998-00 are point-to-point compound growth rates. Growth rates for 1986-89 and 1989-97 are average annual growth rates.

<sup>b</sup> Poverty incidence figures only available for every three years as follows: 1981 instead of 1982, 1987 instead of 1986, 1996 instead of 1997, and 1999 instead of 2000.

<sup>c</sup> 1999: Figures based on revised poverty line. Comparable figures for 1996 as follows: 18 per cent (total), 14 per cent (urban) and 20 per cent (urban).

Figure 9. Trends in real earnings by gender, 1976-2000 (Rp.000/month, 1997 prices, deflated by urban consumer price index)



Source: Earnings: Labourer/Employee Situation in Indonesia (National labour force survey Sakernas), annual publication for 1990-2000, CBS. *Indikator Tingkat Hidup Perkerja* [Living standards Indicator], and *Indikator Sosial Wanita* [Women's social indicators], various years, for 1976-1989, CBS. Special tabulations from raw data produced by CBS for 1982 and 1986-89.

Consumer prices: weighed average consumer price index of 43 cities (27 cities before 1994), annual average indices, Monthly Bulletin, CBS. Poverty incidence: Statistics Indonesia 2000 (table 12.1.A), CBS.

### Real wage trends by sector

Real earnings of employees grew more rapidly in agriculture and manufacturing than in other sectors before the crisis. They grew by 5 per cent annually in these two sectors compared with 4 per cent p.a. in utilities, construction and transport and services, 3 per cent annually in trade and just 2 per cent in mining and finance between 1976 and 1997 (Table 24 and Figure 10). Since earnings in the agricultural and manufacturing sectors were lower than average, while those in mining and finance were higher than average, these differential growth rates lead to the narrowing of earnings differentials observed in the previous section.

In general, real earnings moved in the same direction across sectors, though at different rates, during the sub-periods of rapid growth of 1978-82, 1982-86 and 1989-97. Similarly, the overall decline observed during 1996-89 was shared by most sectors. The exception was the earlier 1976-78 period, which registered real earnings increases in some sectors such as manufacturing, transport, and services, and declines in others such as agriculture and trade.

**Table 24. Real earnings by sector, 1976-2000 (annual average growth rate, deflated by urban consumer price index)**

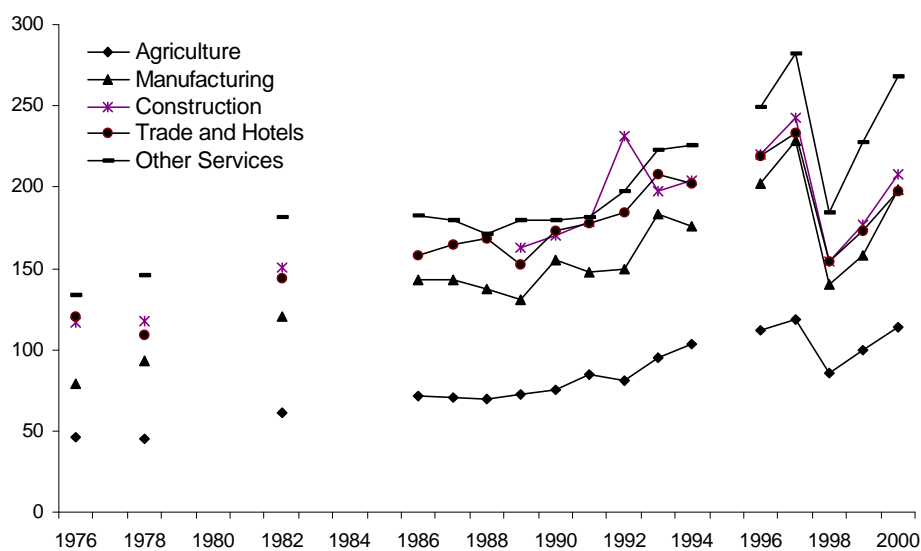
	1976-1978	1978-1982	1982-1986	1986-1989	1989-1997	1997-2000	Pre-crisis 1976-1997
Agriculture	-1	8	4	0	7	-4	5
Mining, quarrying	-19	6	n.a	n.a	4	-3	2
Manufacturing	8	7	4	-3	8	-7	5
Utilities	-14	8	n.a	n.a	8	-11	4
Construction	0	6	n.a	n.a	6	-7	4
Trade, hotel, restaurant	-5	7	2	-1	6	-7	3
Transport	4	4	n.a	n.a	5	-5	4
Finance and banking	2	0	n.a	n.a	6	-6	2
Services	5	6	0	0	6	-4	4
Other *	n.a	n.a	n.a	-3	n.a	n.a	n.a
<b>All sectors</b>	<b>0</b>	<b>9</b>	<b>5</b>	<b>-2</b>	<b>7</b>	<b>-6</b>	<b>5</b>

Source: Earnings: Labourer/Employee Situation in Indonesia (National labour force survey Sakernas), annual publication for 1990-2000, CBS. *Indikator Tingkat Hidup Perkerja* [Living standards Indicator], and *Indikator Sosial Wanita* [Women's social indicators], various years, for 1976-1989, CBS. Special tabulations from raw data produced by CBS for 1982 and 1986-89.

Consumer prices: weighed average consumer price index of 43 cities (27 cities before 1994), annual average indices, Monthly Bulletin, CBS. Poverty incidence: Statistics Indonesia 2000 (table 12.1.A), CBS.

Note: \*Other included mining, construction, transport and finance sectors in one category in the 1986-88 questionnaires. Growth rate is point-to-point compound growth rate.

**Figure 10. Trends in real earnings in selected sectors, 1976-2000 (Rp.000/month, 1997 prices, deflated by urban consumer price index)**



Source: Earnings: Labourer/Employee Situation in Indonesia (National labour force survey Sakernas), annual publication for 1990-2000, CBS. *Indikator Tingkat Hidup Perkerja* [Living standards Indicator], and *Indikator Sosial Wanita* [Women's social indicators], various years, for 1976-1989, CBS. Special tabulations from raw data produced by CBS for 1982 and 1986-89. Consumer prices: weighed average consumer price index of 43 cities (27 cities before 1994), annual average indices, Monthly Bulletin, CBS. Poverty incidence: Statistics Indonesia 2000 (table 12.1.A), CBS.

The more rapid growth in female earnings noted above was repeated in most sectors, including agriculture, manufacturing, trade and services (Table 25 and Figure 11). In the 1997-2000 period following the onset of the financial crisis, real wages declined the least in agriculture, mining and services (3-4 per cent annually), while declining rapidly in the manufacturing, construction, trade and finance sectors (6-7 per cent annually).



**Table 25. Real earnings by sector and gender, 1986-2000 (% per year, deflated by urban consumer price index)**

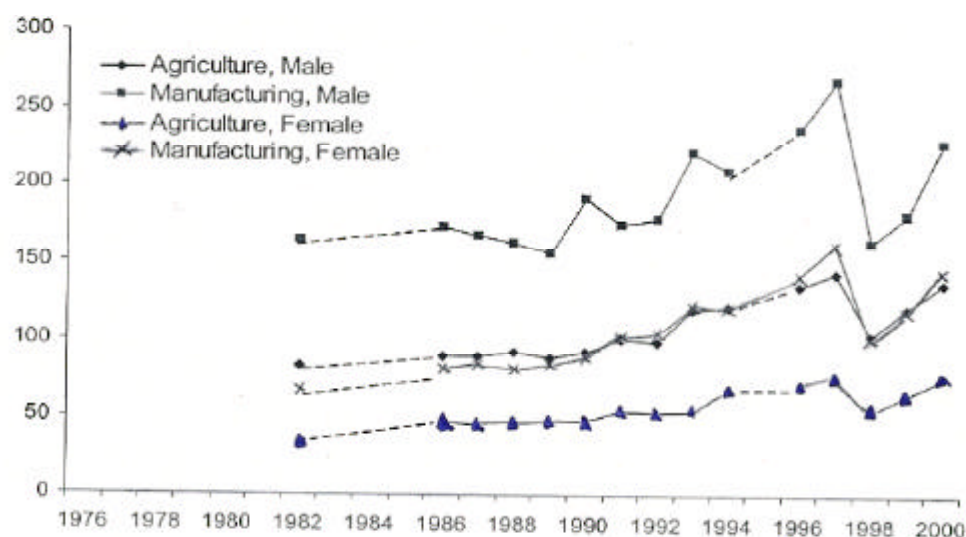
	Male				Female			
	1986-1989	1989-1997	1997-2000	Pre-crisis 1986-1997	1986-1989	1989-1997	1997-2000	Pre-crisis 1986-1997
Agriculture	0	6	-4	5	0	7	-3	5
Manufacturing	-3	8	-7	5	1	9	-5	7
Trade, hotel, restaurant	-1	5	-8	3	2	7	-6	6
Services	1	6	-2	4	0	7	-5	5
Other <sup>1</sup>	-5	n.a	n.a	n.a	-4	n.a	n.a	n.a
<b>All sectors</b>	<b>-2</b>	<b>6</b>	<b>-6</b>	<b>4</b>	<b>-1</b>	<b>8</b>	<b>-6</b>	<b>6</b>

Source: Earnings: Labourer/Employee Situation in Indonesia (National labour force survey Sakernas), annual publication for 1990-2000, CBS. *Indikator Tingkat Hidup Perkerja* [Living standards Indicator], and *Indikator Social Wanita* [Women's social indicators], various years, for 1976-1989, CBS. Special tabulations from raw data produced by CBS for 1982 and 1986-89. Consumer prices: weighed average consumer price index of 43 cities (27 cities before 1994), annual average indices, Monthly Bulletin, CBS. Poverty incidence: Statistics Indonesia 2000 (table 12.1.A), CBS.

Note: Point to point compound growth rates for 1986-89 and 1997-2000. Average annual growth rate for 1989-1997.

<sup>1</sup> Other: 1986-88 instead of 1986-89, and incorporated mining, construction, transport and finance sectors in a single category in 1986-88 questionnaires.

**Figure 11. Real earnings in agriculture and manufacturing by gender, 1976-2000 (Rp. 000/month, deflated by urban consumer price index)**



Source: Earnings: Labourer/Employee Situation in Indonesia (National labour force survey Sakernas), annual publication for 1990-2000, CBS. *Indikator Tingkat Hidup Perkerja* [Living standards Indicator], and *Indikator Social Wanita* [Women's social indicators], various years, for 1976-1989, CBS. Special tabulations from raw data produced by CBS for 1982 and 1986-89. Consumer prices: weighed average consumer price index of 43 cities (27 cities before 1994), annual average indices, Monthly Bulletin, CBS. Poverty incidence: Statistics Indonesia 2000 (table 12.1.A), CBS.

So far, the discussion of sectoral wage trends has relied on the national labour force survey earnings data for wage employees. However, there are other sources of wage data in four sectors in particular, namely agriculture, manufacturing, construction and government. These are compared with the labour force data below, together with findings of other studies on wage trends.

### Agriculture

Real wage trends in the agricultural sector have received the most attention in the literature. However different researchers have reached different conclusions regarding real trends, particularly in the second half of the 1980s, mainly because they have used

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different price deflators. So the discussion below starts with a review of trends in nominal wages, before comparing the results of the present study with those of other researchers.

Two agricultural wage series are available from CBS, the farmers' terms of trade survey (since 1976) and the average wages paid on estates (since 1951). Though their crop and geographical coverage, and definitions and data collection methods varied, there is generally reasonable agreement between their nominal wage movements and the nominal earnings of the labour force surveys in the various sub-periods identified above. For the 1976-97 period as whole, nominal wages grew by 15 per cent in both the labour force survey and the estate survey, while they grew by 13 per cent p.a. in the farmers terms of trade survey (Table 26).

The lower growth rate of nominal wages in the farmers' terms of trade survey as due to slower growth in two periods, 1978-82 and 1989-97, particularly in Sumatra and other islands relative to Java. On the other hand, wages grew more rapidly in this survey during 1982-86 and 1986-89 relative to the other two surveys. Since wage levels were higher in Sumatra before the mid-1990s, this led to the narrowing of wages between Sumatra and Java in estates and the reversal of ranking between Java and Sumatra in food crop wages. Finally, there were only minor differences by farm operations (hoeing, planting and weeding) and gender.

As for real wage trends, agricultural earnings stagnated during 1986-89 in both the labour force and the farmers' terms of trade surveys. This is because the higher nominal wage rate increase in the farmers terms of trade survey (10 versus 8 per cent) was more or less nullified by the higher consumer price level rise in the same survey (10 versus 9 per cent) as shown in the appendix. However, nominal wages in estates grew more slowly at just 6-7 per cent per annum, resulting in their decline of 2-3 per cent per annum during this period.

How do these findings compare with other studies? Before the 1980s, real wages in estates declined in the 1950s, due to high inflation, and in the early 1960s, due to hyperinflation. This was followed by an increase of over 80 per cent between 1964 and 1970 when inflation came under control, followed by relative stability until 1978 (Papanek, 1980; Papanek and Handoko, 1999, p. 11). In rice agriculture, a review of agricultural survey data concluded "Per capita income for hired labour in rice agriculture most probably stagnated for much of the 1970s" (Papanek, 1985, p. 48). Thus, in a period of otherwise rapid economic growth, the labour market failed to tighten at least until 1978. Two other studies using farmers' terms of trade survey confirm stagnating real rice wages in Java between 1976-77 and 1980-81 (Manning, 1994, p. 84; Godfrey, 1992, p. 11). Finally, analysis of village survey data in West Java found that real wage rates declined by 3-4 per cent, depending on the deflator used, between 1977 and 1979 (Mazumdar and Sawit, 1986, p.101).

In the first half of the 1980s, most studies confirm rising real wages noted in the labour force survey data. In the village survey of West Java, real wages grew by 2 to 9 per cent depending on the price deflator, either the nine-commodity index or the rice price index (Mazumdar and Sawit, 1986, p. 101). The real rice wages in Java in the farmers' terms of trade survey rose by nearly 2 per cent between 1980-81 and 1986/87 using the nine-commodity price index, and more rapidly when using the national CPI, while agricultural earnings from the labour force data rose by 4 per cent between 1977 and 1982 (Manning, 1994, pp. 98-100). The rice wage rate series, deflated by the survey's food price and producer price indices, show an increase starting in 1980-81 (but starting in 1983 for West Java), of up to 10 per cent per annum between 1983 and 1985 (Godfrey, 1992, p. 15). The timing and magnitude of real wage rises was shown to differ between provinces even in Java, being quite rapid in East Java, and closing the previous gap with West Java, and somewhat delayed and more modest in Central and West Java (Naylor, 1990, p.149).

Finally, the real estate wage rate rose by 7 per cent per annum between 1979 and 1986, though most of this increase took place before 1982, and rates declined in 1983-85 before rising again in 1985 (Manning, 1994, Figure 1).

**Table 26. Nominal agricultural earnings from selected sources, 1971-2000**

	Level (Rp 000/month)			Average annual growth rate						
	1995/6	1997	2000	1976-1978	1978-1982	1982-1986	1986-1989 <sup>1</sup>	1989-1997 <sup>2</sup>	1998-2000	Pre-crisis 1976-1997 <sup>3</sup>
<u>Labour force survey</u>	<u>3 551</u>	<u>3 959</u>	<u>7 677</u>	<u>8</u>	<u>25</u>	<u>12</u>	<u>8</u>	<u>15</u>	<u>25</u>	<u>15</u>
Male	4 278	4 763	9 233	-	-	-	8	15	25	12
Female	2 270	2 592	5 176	-	-	-	8	15	26	14
<u>Farmers' TOT survey</u>	<u>2 369</u>	<u>2 950</u>	<u>5 878</u>	<u>9<sup>4</sup></u>	<u>19</u>	<u>13</u>	<u>10</u>	<u>13</u>	<u>29</u>	<u>13</u>
Hoeing (male)	2 835	3 565	6 970	10 <sup>4</sup>	18	13	10	13	29	13
Planting	2 062	2 543	5 297	9 <sup>4</sup>	19	12	10	13	28	13
Weeding (female)	2 210	2 743	5 368	9 <sup>4</sup>	19	13	10	13	28	13
Sumatra	2 219	2 630	-	-	14	6	12	9	31	9
Java	2 365	2 963	5 878	9	19	15	10	14	27	14
Other Islands	2 675	3 402	-	-	22	10	11	12	40	13
<u>Estate survey<sup>5</sup></u>	<u>4 750</u>	<u>-</u>	<u>-</u>	<u>13</u>	<u>29</u>	<u>11</u>	<u>6</u>	<u>15</u>	<u>-</u>	<u>15</u>
Male	4 991	-	-	12	30	11	6	14	-	15
Female	4 233	-	-	17	29	10	5	17	-	16
Sumatra	5 313	-	-	12	24	11	5	12	-	13
Java	4 514	-	-	11	33	11	7	16	-	16
Kalimantan	4 813	-	-	19	4	21	7	17	-	14

Source: National Labour Force Survey Sakernas, Farmers Terms of Trade Survey in Monthly Bulletin of Statistics, and Average Wages Paid on Estates 1995, all from CBS.

Note: Labour force survey: monthly total earnings of employees divided by 30 days. *Farmers' terms of trade survey*: wage rate per half-day, mostly in rice farming. Available for 14 provinces only. *Islands*: weighed average of provinces, using total number of agricultural employees as weights. *Indonesia*: weighed average of Java (60%), Sumatra (20%) and other islands (20%). Simple average of hoeing, planting and weeding rates. *Estate workers*: average annual wages plus benefit per worker divided by 12 months and 30 days. In earlier 1971-75 period, earnings increased by 20 per cent per annum (Sumatra 23%, Java 20% and Kalimantan 22%).

<sup>1</sup> 1985-90 for farmers' terms of trade.

<sup>2</sup> 1989-95 for estates.

<sup>3</sup> 1982-97 only for male and female in labour force survey (corresponding figure for male plus female is 13%). 1976-95 for estate survey.

<sup>4</sup> Java only for farmers terms of trade 1976-79. <sup>5</sup> Estate survey permanent workers. Temporary workers wages: Rp. 3,804 (Sumatra Rp. 4,471, Java Rp. 3,115).

In contrast, one study of rice wages using the farmers' terms of trade survey and its associated consumer price index, reported stagnant real wages for most of this period for West Java and East Java, and a steep decline in Central Java starting in 1982, following a rise in the two previous years (Papanek and Handoko, 1999). The sensitivity of the results to the choice of price deflator was dramatically illustrated by comparing the use of the published food price deflator of the farmers' terms of trade survey, which replicated the above results, and the same food price deflator corrected for the implausibly steep rise in the price of chillies, which, with the exception of hoeing wages in West Java, was transformed into significant real wages rises between the beginning and the end of this period, though with declines in some intervening years (Naylor, 1999, p.138).

In the second half of 1980s, most studies indicate stagnating real wages in both the rice sector, even declining in some years during 1986-88 (Manning, 1994, p. 85; Godfrey, 1992, p. 11; Naylor, 1990, p. 149) and a steep decline in estate wages from their peak in 1985 to 1988, followed by stagnation (Manning, 1994, p. 85). The modest rise of real rice wages in West Java in one study brought back their levels to what they were in 1976, and lower in the first half of the 1980s, unlike in Central and East Java, where their mid-1980s levels were much higher than their mid-1970s levels (Naylor, 1990, p. 149). The sensitivity of these results was tested using different deflators. While the national CPI showed rising real wages, and the nine-commodity price index indicated the opposite, the study observed

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that the nine-commodity price index probably overstated the decline in agricultural wages, due to the weight in this index of rice, whose price declined rapidly in Java during 1986-89 (Manning, 1994, p. 102).

For the 1990s, the available two studies show substantial and sustained improvement in real rice wage rises in Java, of the order of 5 per cent per annum between 1986-87 and 1993 (Manning, 1994, p. 84) and between 1989 and 1997 (Papanek, 1990, Graph 1). In the first year of the crisis, real wages fell by 40-45 per cent in Java between the first quarters of 1997 and 1998, with West Java being relatively more affected, and by 30 per cent in Sumatra (Papanek, 1990, p. 1).

In sum, nominal wage increases in agriculture were closely matched between the three available sources of data, namely the labour force survey, the farmers' terms of trade survey and the estate survey, particularly in Java, for the period 1976-97 as a whole. In addition, all three sources displayed the same alternating pattern of slower and rapid growth in nominal wages between different sub-periods, though the levels differed somewhat. As for real wage trends, the present findings were in reasonable agreement with those of other studies, taking into account the choice of price deflators and time periods of analysis.

### *Manufacturing*

There are two alternative source of earnings data in this sector besides the household-based annual labour force survey earnings of manufacturing employees, both establishment-based. The first one is a quarterly survey of wages of production workers below supervisory level in a panel of establishments (*Survey Upah*) undertaken since 1979-80, and revised in 1993, and the second is labour cost data of the CBS annual survey of medium and large-scale manufacturing industries in place since 1971, but with a gap of two years between 1973 and 1975. Researchers have rarely used the first source due to comparability problems and reliability (Manning, 1994, p. 78).

Over the 1976-97 period as a whole, both nominal earnings in labour force survey and labour costs per worker grew at the same rate of 16 per cent annually (Table 27). The labour costs per worker varied within a narrow range of 15 per cent-18 per cent per annum between sub-sectors. The main difference between the two sources was a marked slow-down in the labour force survey data during the 1986-89 period (11 versus 5 per cent), although female earnings in the labour force survey continued to grow at 10 per cent per annum during this period. Otherwise, the nominal wage movements in both sources were similar, i.e., rapid increases of 19-20 per cent, 24 and 12 per cent per annum during respectively 1976-78, 1978-82 and 1972-86, slow-down in the intervening 1986-89 period, and resumption of rapid growth of 15-17 per cent p.a. during 1989-97.

Godfrey (1992, p. 17) confirms the different pattern of real earnings in labour force data between male and female workers. Male real earnings hardly grew in the 1982-86 period before declining in the subsequent period 1986-90, while female earnings grew substantially in the earlier period, before stagnating in the latter, using the same source and national CPI. Different time periods, and using the earnings of primary school graduates only but the same deflator, produced an 8 per cent annual growth rate in real manufacturing earnings between 1977 and 1982, followed by stagnation in the subsequent 1982-87 period (Manning, 1994, p. 98). The divergent pattern in the establishment-based labour cost data, namely the continuous improvement in earnings even during the stagnation of earnings in the second half of the 1980s, has been ascribed to the growing employment in large capital-intensive production facilities even in textiles and garments, their employment of more stable and more educated workers as well as more skilled occupations for which average wage rates are likely to be significantly higher than in the past (Manning, 1994, p. 95; Hill, 1990).

Table 27. Nominal manufacturing earnings from selected sources, 1971-2000

	Level (Rp.000/mth)				Annual average growth rate							Pre-crisis 76-97
	1996		1998		71-73	76-78	78-82	82-86	86-89	89-97	98-2000	
	All	Md <sup>1</sup>	All	Md								
<u>Labour Force Survey</u>	193	-	253	-	-	19	24	12	5	17	21	16
Male	227	-	296	-	-	-	-	-	5	17	20	12 <sup>2</sup>
Female	135	-	183	-	-	-	-	-	10	18	22	15 <sup>2</sup>
<u>Medium and large manufacturing survey</u>	311	173	492	300	29	20	24	12	11	15	-	16
Food	251	128	423	236	28	21	26	11	15	13	-	16
Textiles	244	143	326	206	27	17	22	12	11	17	-	16
Wood	245	159	555	224	28	13	26	12	10	16	-	16
Paper	501	240	494	298	21	45	20	17	12	12	-	17
Chemicals	408	285	637	281	-	14	23	11	11	17	-	16
Mineral products	378	138	506	178	21	18	25	7	4	21	-	17
Basic metals	662	260	1 269	682	-	-	29	29	17	10	-	-
Fabricated metals	459	247	536	397	22	15	18	15	9	15	-	15
Other manufacturing	203	156	392	-	-	22	20	-	15	12	-	-

Source: *Labourers/Employees Situation in Indonesia* table 16 (Sakernas survey) and *Large and Medium Industrial Statistics* (special tabulations by Data Centre, Ministry of Industry and Trade), CBS.

Note:  
Medium and large manufacturing survey: annual labour costs per worker divided by 12 months.  
<sup>1</sup> Md.: medium-scale establishments (20-99 workers).  
<sup>2</sup> 1982-97 instead of 1976-97 (comparable figure for 1982-97 for male plus female is 13 per cent).

One study reported a different pattern for the real minimum wage of textile workers in Bandung, growing at over 12 per cent per annum almost throughout the 1970s, declining in the first half of the 1980s, and growing again in the early 1990s (Manning, 1994, p. 85). However, it drew attention to the influence of periodic civil service pay revisions on the annual minimum wage setting process between the Bandung employers association and textile unions. Both series were closely correlated, rising steeply in 1975-77 and 1979-81 (Manning, 1994, p. 91).

### Construction

Two series are available for the construction sector. CBS collects wage data in all provincial capitals, as part of its programme for monitoring construction sector prices (Manning, 1994, p. 79), while the Building Information Centre (BIC), Ministry of Public Works, collects minimum wage rates in provincial capitals. The CBS series is available for the 1979-94 period, while the BIC data goes as far back as 1971 for Jakarta. Comparison over time between these two sources and the labour force data is hampered by the omission of the construction and other smaller sectors in the labour force survey questionnaires of 1986 until 1988, and by many gaps in the two other series compiled by CBS. Both wage rate series show periodic hikes, suggesting that wage movements are not always recorded on time.

A direct comparison can only be made for the 1990s, where the movement in nominal trends are quite similar, 14 per cent in the labour force data and 15 per cent per annum in the CBS average wage rates for bricklayers and carpenters (Table 28). Nevertheless the period of relatively slow wage growth during 1986-89, when nominal earnings grew by just 7 per cent per annum for all sectors, is close to the 9 per cent p.a. growth in nominal wage rates of skilled construction workers in the CBS data. Similarly the rapid growth of 14 per cent per annum during 1982-86 corresponds to the rapid growth in overall earnings of the labour force data of 13 per cent per annum.

Godfrey (1992, p. 15), using the mean of CBS and BIC data deflated by the national consumer price, confirms the stagnation of real construction wages during the second half of the 1980s, after rising earlier during 1983-85 in five cities in Java, namely Jakarta, Bandung, Semarang, Yogyakarta and Surabaya. The BIC minimum wage data for Jakarta rose slowly at first in the second half of the 1970s and then rose rapidly until 1981 before stagnating until 1986. Following a hike in 1987, it fell sharply until 1992. The movements in the series, diverged from the above series and in agriculture and manufacturing, was shown to correspond to those of government salaries, as in the case of the textile workers (Manning, 1994, p. 90), and showed no sign of tightening in the second half of the 1980s when Jakarta experienced a construction boom related to the growth of banking, business and hotel sectors.

**Table 28. Nominal construction wages from selected sources, 1971-2000**

	Level (Rp /day)			Average annual growth rate						
	90	94	2000	76-78	79-82	82-86	86-89	89-97	98-2000	Pre-crisis 79-94
Labour Force Survey	3 262	5 494	14 086	10	n.a.	n.a.	n.a.	14	20	n.a.
Skilled construction workers	4 117	6 953	n.a.		16	14	9	15	n.a.	14
Sumatra	4 799	6 809	n.a.		12	13	8	9	n.a.	10
Java	4 023	7 077	n.a.		17	16	9	15	n.a.	14
Other islands	3 900	6 435	n.a.		21	9	8	14	n.a.	13

Source: Labourers/Employees Situation in Indonesia table 16 (Sakernas survey). Wholesale Price Indices, various years, CBS.  
Note: Labour force survey monthly earnings divided by 30 days. Skilled workers: average wages rate of carpenters and bricklayers for period 1979-86.

### Service sector

The wage data in the labour force survey does not distinguish between public and private sector service employees. The only other data on service sector wages comes from the government. The latter publishes its annual budget for expenditure on personnel covered by the central budget, while the Ministry of Finance sets the basic monthly salaries of civil servants for different grades in preparation for the annual government budget.

While the government pay scale is normally revised every year, this was not the case in 1976, and during 1986-88, when they were frozen after large hikes, more than doubling in 1975, and rising by 20 per cent in 1985. In general however, the movement in service sector wages were similar between three sources. They grew by about 20 per cent p.a. in the 1978-82 periods, before slowing down to 8-9 per cent per annum in the 1982-86 period (Table 29). This slow growth continued in the second half of the 1980s, while the basic wages of civil servants were even frozen during most of this period as just noted. Nominal wage growth increased once again in the 1990s by about 15 per cent per annum.

**Table 29. Nominal wages in service sector, 1976 - 2000**

	Level (000 Rp /month)				Average annual growth rate						
	90	94	97	2000	76-78	78-82	82-86	86-89	89-97	98-2000	Pre-crisis 76-97
<u>Labour force survey</u>	<u>103</u>	<u>183</u>	<u>282</u>	<u>545</u>	<u>15</u>	<u>23</u>	<u>8</u>	<u>8</u>	<u>15</u>	<u>25</u>	<u>13</u>
Male	118	208	314	631	-	-	-	9	14	26	-
Female	76	139	228	422	-	-	-	9	16	23	-
<i>Female as % of male</i>	<i>61</i>	<i>64</i>	<i>69</i>	<i>68</i>							
<u>Civil servants</u>											
Grade Ib, level 9	74	-	-	-	60	20	9	3	12 <sup>1</sup>	-	-
Personnel budget						25	17	12	17	27	15
Central staff (m)	3.29	3.47	3.59	3.43		6	8	5	2	-1	4
Cost per employee	180	302	492	817	-	17	8	7	15	31 <sup>2</sup>	11

*Source:* Labour Force Survey *Sakernas*. Grade Ib, level 9: Manning (1994, appendix table 1). Personnel Expenditure budget and civil service employees: Statistical Yearbooks, CBS.

*Note:* Service sector excludes finance, banking and insurance. Cost of employee: annual budget divided by 12 months.

<sup>1</sup> Grade Ib, level 9: until 1991; 1975-78 instead of 76-78. <sup>2</sup> Cost per employee: 98-99 only. " - ": not available.

### Trends by education

The labour force survey data is the only source of information on wages by education level. This data show that the real earnings of employees with primary school education and below rose relatively more rapidly than those with junior and senior secondary education (3 per cent versus 1 per cent and 2 per cent respectively), leading to the narrowing of wage differentials by educational level before the crisis noted in the previous section (Table 30). Their real wages also fell less rapidly during the crisis period 1998-2000. At higher education levels however, the real earnings of diploma and university graduates rose in line with the average during periods of rapid growth, while continuing to grow in the periods of constant overall earnings. This general pattern held for both males and females, although the growth rates for females of all education levels were slightly higher than for males (Table 31).

**Table 30. Real earnings by education level, 1976-2000 (% change per annum)**

	1976-1978	1978-1982	1982-1986	1986-1989	1989-1997	1997-2000	Pre-crisis 1976-1997
No schooling	n.a.	n.a.	n.a.	n.a.	5	-2	n.a.
Did not complete primary <sup>1</sup>	-2	10	3	1	6	-7	5
Primary school	5	4	1	-3	6	-9	3
Junior secondary school	4	2	-1	-5	4	-8	2
Senior secondary, general	8	-1	-2	-4	5	-8	2
Senior secondary, vocational	7	2	1	-2	5	-6	3
Diploma I and II	n.a.		n.a.	1	4	-5	n.a.
Diploma III	n.a.		n.a.	n.a.	5	-7	n.a.
University	7 <sup>3</sup>	-5 <sup>3</sup>	-1 <sup>3</sup>	3	4	-7	2
<u>All levels</u>	<u>0</u>	<u>9</u>	<u>5</u>	<u>-2</u>	<u>7</u>	<u>-6</u>	<u>5</u>

*Source:* Earnings: Labourer/Employee Situation in Indonesia (National labour force survey *Sakernas*), annual publication for 1990-2000, CBS. Indikator Tingkat Hidup Perkerja [Living standards Indicator], and Indikator Sosial Wanita [Women's social indicators], various years, for 1976-1989, CBS. Special tabulations from raw data produced by CBS for 1982 and 1986-89.

Consumer prices: weighed average consumer price index of 43 cities (27 cities before 1994), annual average indices, Monthly Bulletin, CBS.

Poverty incidence: Statistics Indonesia 2000 (table 12.1.A), CBS.

*Note:* <sup>1</sup> No schooling and did not complete primary school together until 1989. <sup>2</sup> Senior secondary general and vocational together. <sup>3</sup> Diploma and university graduates together.

**Table 31. Real earnings by education and gender, 1986-2000 (% per annum)**

	Male				Female			
	86-89	89-97	97-2000	Pre-crisis 86-97	86-89	89-97	97-2000	Pre-crisis 86-97
No schooling	n.a.	4	-1	n.a.	n.a.	5	-3	n.a.
Did not complete primary	0	6	-6	4	-1	6	-6	4
Primary school	-2	6	-8	3	-2	7	-8	4
Junior secondary school	0	4	-7	3	-4	5	-9	3
Senior secondary, general	-1 <sup>1</sup>	5	-7	3	-1 <sup>1</sup>	6	-10	4
Senior secondary, vocational	n.a.	5	-7	3	n.a.	5	-3	4
Diploma I and II	n.a.	4	-5	3	n.a.	6	-5	5
Diploma III	n.a.	5	-8	4	n.a.	6	-4	4
University	4 <sup>2</sup>	5	-7	4	3 <sup>2</sup>	5	-8	4
<b>All sectors</b>	<b>-2</b>	<b>6</b>	<b>-6</b>	<b>4</b>	<b>-1</b>	<b>8</b>	<b>-6</b>	<b>6</b>

Source: Earnings: Labourer/Employee Situation in Indonesia (National labour force survey Sakernas), annual publication for 1990-2000, CBS. Indikator Tingkat Hidup Perkerja [Living standards Indicator], and Indikator Social Wanita [Women's social indicators], various years, for 1976-1989, CBS. Special tabulations from raw data produced by CBS for 1982 and 1986-89.

Consumer prices: weighed average consumer price index of 43 cities (27 cities before 1994), annual average indices, Monthly Bulletin, CBS.

Poverty incidence: Statistics Indonesia 2000 (table 12.1.A), CBS.

Note: Point to point compound growth rates for 1986-89 and 1997-2000. Average annual growth rate for 1989-1997.

<sup>1</sup> Senior secondary general and vocational school leavers together. <sup>2</sup> Diploma and university graduates together.

## Summary

The long-term trends in real wages in the second half of the 20<sup>th</sup> century can be summarized as follows. Real wages declined in the 1950s due to rapid inflation and in the first half of the 1960s due to hyperinflation. After inflation came under control during the first five years of the Soeharto regime, real wages regained their late 1950s level by 1970. Following a period of relative wage stagnation during most of the 1970s, which was otherwise a period of rapid economic growth, real wages grew by 5 per cent per annum on average during the 20-year period between 1978 and 1997, and were equally shared by the agricultural and non-agricultural sectors. Real wage improvements took place in all years except the mid-1980s, paradoxically also otherwise known as a period of rapid economic growth. The financial crisis of 1997-98 had a major impact on real earnings. Real wages declined by 40 per cent in the first year, remained at 10 per cent below their pre-crisis level three years later in 2000.

Before the crisis, females and rural areas improved their wages relative to males and urban areas. Workers in the agricultural and manufacturing sectors, where wages were lower than in other sectors, improved their position relative to workers in other sectors. Workers with less than primary education improved their position relative to those with junior and secondary school education, and workers in Java and other islands their position relative to those in Sumatra. This led to the narrowing of wage differentials between genders, urban-rural areas, education levels and regions, and reduction in wage inequality noted in section 3. Wage differentials were unaffected by the crisis.

The review of wage trends by sector from different data sources show reasonable agreement with the national labour force data, at least as far as the agricultural, manufacturing, construction and service sector wages are concerned. When results from other researchers have differed from those reported here, they have done so from chiefly two reasons, namely using different time periods, and using different price deflators.



## 4.2 Sources of real wage changes

This section attempts to address two main questions. How did a labour surplus economy such as Indonesia, whose population continued to expand, sustain average real wages increases of 5 per cent per annum during the last quarter of the 20<sup>th</sup> century? Second, what caused real wages to stagnate in the oil boom period of the second half of the 1970s, and the financial liberalization and non-oil export boom period of the second half of the 1980s, despite rapid economic growth in these two periods?

### Overall labour supply and demand conditions

Although changes in definitions, questionnaires and coverage over such a long time frame introduce many comparability problems in employment data from different time periods, a careful assessment of the labour force survey data does suggest that the demand for labour grew somewhat more rapidly than its supply to produce the observed real wage increases during most of this period. While the available evidence is reviewed below, the key factors responsible for the moderate tightening of the labour market, including the prominent role of the government in slowing down the growth of the labour force and increasing the demand for unskilled labour, may be summarized as follows.

On the supply side, two important measures were undertaken. First, the nationwide family planning programme launched in the early 1970s succeeded in slowing down the growth of the working age population, from around 4.0 per cent to 2.6 per cent per year between the late 1970s and the late 1990s (Table 32).

Table 32. Working age population and employment in labour force surveys, 1976–2000 (15 years and above, annual average growth rates)

	76-78	78-82	82-86	86-89	89-97 <sup>1</sup>	97-2000	Pre- crisis 78-97
<u>Working age population</u>	<u>3.1</u>	<u>4.0</u>	<u>3.8</u>	<u>2.8</u>	<u>2.6</u>	<u>1.5</u>	<u>2.8</u>
Male	2.8	4.2	4.0	2.9	2.6	1.8	2.9
Female	3.3	3.7	3.7	2.6	2.6	1.2	2.6
<u>Attending school</u>	<u>7.5</u>	<u>14.4</u>	<u>8.2</u>	<u>5.3</u>	<u>0.1</u>	<u>-0.2</u>	<u>5.7</u>
Male	7.0	12.8	6.5	4.8	0.1	-0.3	4.9
Female	18.4	16.8	10.5	5.9	0.1	0	6.7
<u>Labour force</u>	<u>4.7</u>	<u>3.6</u>	<u>3.6</u>	<u>2.6</u>	<u>2.1</u>	<u>2.2</u>	<u>2.4</u>
Male	3.0	4.0	2.0	2.2	2.3	2.1	2.2
Female	8.0	3.0	6.4	3.1	1.8	2.4	2.8
<u>Total employment</u>	<u>4.6</u>	<u>3.5</u>	<u>3.7</u>	<u>2.5</u>	<u>2.2</u>	<u>1.7</u>	<u>2.5</u>
Male	2.9	4.0	2.0	2.2	2.4	1.5	2.3
Female	7.9	2.6	6.6	3.1	2.0	2.0	2.9
<u>Urban employment</u>	<u>5.5</u>	<u>8.9</u>	<u>6.3</u>	<u>6.4</u>	<u>7.2</u>	<u>5.2</u>	<u>6.2</u>
Male	3.3	9.0	5.7	5.7	7.1	5.2	6.0
Female	10.8	8.6	7.5	7.8	7.4	5.1	6.6
<u>Rural employment</u>	<u>4.4</u>	<u>2.5</u>	<u>3.1</u>	<u>1.5</u>	<u>0.3</u>	<u>-0.2</u>	<u>1.4</u>
Male	2.8	3.0	1.0	1.1	0.5	-0.6	1.1
Female	7.4	1.6	6.4	2.1	0.1	0.5	1.9
Family workers	-7.7	5.0	10.5 <sup>2</sup>	2.7	-2.8	2.2	2.5
Employed less family workers	3.8	2.2	2.2	2.3	3.8	0.8	2.9
<u>Wage employment</u>	<u>15.5</u>	<u>-0.9</u>	<u>-2.1</u>	<u>4.0</u>	<u>5.6</u>	<u>-1.4</u>	<u>2.9</u>
Male	8.5	1.6	-3.0	3.2	5.7	-2.3	2.8
Female	31.1	-6.2	0.1	5.8	5.3	0.6	3.1

Source: Labour Force Surveys Sakernas, annual publication, CBS

Note: <sup>1</sup>1990-97 for employment and labour force. Labour force excludes growth during 1993-94 due to change in definition of unemployment. <sup>2</sup> Family workers not directly comparable for 1982-86 due to change in survey methods. <sup>3</sup> Family workers and wage employment: mixture of 10+, 15 per cent. [Explain...](#)

Second, the large-scale school building programme and education campaign led to increased enrolment at double the rate of the working age population. Enrolments were particularly rapid in the late 1970s and first half of the 1980s, averaging respectively 14 per cent and 8 per cent per annum, and at a higher rate for female youth. At its peak, the population attending school increased by 0.7 million children and teenagers per annum during 1978-82, and by 0.5-0.6 million per annum in the 1980s (Table 33). This resulted in the slower growth rate of the labour force relative to the working age population over this whole period (2.4 versus 2.8 per cent per annum).

**Table 33. Annual net changes in school attendance (million)**

	1976-	1978-	1982-	1986-	1989-	1997-	1976-97	
	1978	1982	1986	1989	1997	2000	Million	%
<u>Attending school</u>	0.3	0.7	0.6	0.5	*	*	0.4	100
Male	0.2	0.4	0.3	0.2	*	*	0.2	50
Female	0.1	0.3	0.3	0.3	*	*	0.2	50

Source: National Labour Force Survey Sakernas, annual publications, CBS.  
Note: \* less than 0.05 million

On the demand side, strong and sustained economic growth in labour-intensive sectors, particularly manufacturing and construction, led to a corresponding demand for labour. Non-oil GDP growth averaged 8 per cent per year in this 21-year period, led by the manufacturing and construction sectors, which grew at respectively 13 per cent and 10 per cent per annum (Table 34). Most other sectors grew by 7-10 per cent per annum, with the exception of the agricultural sector, which averaged just over 3 per cent per year.

The windfall revenues from the first and second oil booms of the mid-1970s and late 1970s were ploughed back into an ambitious public infrastructure programme which included the rehabilitation and construction of new irrigation canals, and the construction of school buildings, roads and health centres, thereby creating substantial demand for construction labour. Agricultural production grew as a direct result of improved rural infrastructure and investment in disseminating the green revolution package of IRRI rice varieties and fertilizer, providing ample demand for rural labour. In addition, strong, sustained and broad-based economic growth, particularly of relatively labour-intensive sectors such as manufacturing, construction and transport, created additional demand for unskilled labour in both urban and rural areas.

Real wages first increased in the late 1970s, when agricultural production grew faster than in earlier periods. This coincided with rapid expansion of the construction sector when some wage employees were drawn away from agriculture, even though the end of the oil boom in 1981-82 led to a sharp drop in construction labour thereafter. After momentarily stagnating due to the further contraction of construction labour in the second half of the 1980s, the demand for wage labour once again picked up in the construction sector which, coupled with continued strong demand for unskilled wage labour in the manufacturing and other sectors, allowed the agricultural sector to gradually reduce its work force during most of the 1990s, leading to sustained real wage increases.

Agricultural and non-agricultural wages moved together, because wage movements in different sectors reinforced each other due to a high degree of labour mobility and integration between sectors. The moderate tightening of the labour market led to narrower wage differentials by gender and education attainment, and between urban and rural areas.

**Table 34. GDP, real wages and labour productivity growth in selected sectors 1976 - 2000 (annual average growth rates)**

	1976- 1978 <sup>1</sup>	1978- 1982	1982- 1986	1986- 1989	1989- 1997	1997- 2000	Pre- crisis 1976-1997
<u>All sectors (non-oil)</u>							
GDP	8.4	8.5	5.6	7.2	8.0	-3.6	7.6
Employment	4.6	3.5	3.7	2.5	2.2	1.7	2.7
GDP/worker	3.8	5.0	1.9	4.7	5.8	-4.3	4.9
Real earnings	0.7	9.1	4.8	-1.7	6.6	-6.1	5.0
<u>Agriculture</u>							
GDP	3.2	5.0	3.3	3.5	2.6	1.1	3.4
Employment	4.1	0.0	4.5	3.1	-1.7	4.4	1.1
Employment less family workers	8.6	-1.5	1.1	2.6	0.2	4.5	1.2
GDP/worker	-0.9	4.9	-1.2	0.3	4.4	-2.8	2.4
GDP/worker less family workers	-4.9	6.6	2.1	0.8	2.5	-3.0	2.3
Real earnings	-1.0	7.9	4.0	0.0	6.6	-3.9	4.7
<u>Manufacturing (non-oil)</u>							
GDP	15.3	13.7	11.3	11.9	13.1	-4.3	12.9
Employment	-1.2	11.8	-1.8	9.7	5.7	1.9	5.3
GDP/worker	17.3	1.6	13.3	2.7	7.5	-6.0	7.7
Real earnings	8.5	6.8	4.4	-3.1	7.7	-11.1	3.5
<u>Construction</u>							
GDP	17.3	11.2	1.2	8.5	11.8	-9.9	9.7
Employment	-0.5	27.7	n.a.	n.a.	11.2	-5.2	8.7
GDP/worker	18.0	-13.1	n.a.	n.a.	1.0	-6.0	7.6
Real earnings	0.1	6.5	n.a.	-2 <sup>2</sup>	5.7	-6.9	?
<u>Trade</u>							
GDP	6.4	9.1	3.7	9.0	7.3	-4.2	7.1
Total employment	6.6	2.6	3.3	3.8	5.9	2.5	4.6
GDP/worker	0.3	6.2	0.3	5.1	1.3	-6.7	2.5
Real earnings	-4.8	7.1	2.3	-0.9	5.6	-7.3	3.3
<u>Services (excluding finance)</u>							
GDP	8.3	8.6	5.6	6.3	4.0	-2.3	5.0
Total employment	13.2	2.7	8.9	-2.9	4.5	-8.3	4.8
GDP/worker	-3.1	5.7	-3.0	12.0	-0.5	-1.1	1.7
Real earnings	4.5	5.6	0.0	-0.4	5.9	-3.6	3.7

Source: National Accounts and Labour Force Survey Sakernas, CBS (see data appendix).

Note: Worker by sector: total employment minus family workers.

<sup>1</sup> 1977-1978 for all sectors except agriculture. <sup>2</sup> Construction earnings for 1987-89 not available from labour force survey.

Wages of skilled workers used (see table 34). All sectors employment: 15+. Other sectors, 10+ until 97, 15+ after.

The data indicate that the overall GDP growth alone may not be a reliable guide to real wage improvements. Rather, the sectoral composition of economic growth determines whether this translates into higher real wages. Thus the rapid growth of the second half of the 1980s had only a moderate impact on the demand for unskilled labour because the absorption of labour in non-oil export industries was still moderate at this stage in relation to the total demand for labour. In contrast, the relatively slower 1982-86 period nevertheless provided ample employment opportunities in agriculture and other sectors for unskilled labour even though the construction sector contracted. Institutional factors were also responsible for raising the real wages of particular segments of the labour market, especially the large civil service and the state-dominated estate sector. Labour market developments in different time periods are discussed in turn below.

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## 1954-1978

During most of the second half of the 1950s, inflation remained high, turning into hyperinflation during the first half of the 1960s, reaching annual rates of 600 per cent and peaking at 1,000 per cent (Papanek, 1999, p. 11). The economy probably stagnated, creating little demand for unskilled labour while the labour force continued to grow, and resulting the decline of real wages during this period.

Starting in 1966 with the new order of President Soeharto, inflation was brought under control, slowing down to 10-20 per cent per annum by the end of the decade, while nominal wage continued to rise in response to earlier inflation. The demand for labour picked up for the rehabilitation, reconstruction and expansion of public infrastructure launched by the new government using oil revenues and the resumption of aid funds. Real wages increased sharply until 1970. For the remainder of this decade however, real wages stagnated.

During 1976-78, total employment grew by 2.1 million persons per year, about equally divided between males and females (Table 35). The manufacturing, construction and transport sectors did not employ additional labour. Even the medium and large-scale manufacturing establishments only employed an additional 50,000 workers per year. So surplus labour turned to agriculture mainly (1.1 million), and to trade and services (0.4 and 0.7 million respectively). Unpaid family help did not rise in this period, also indicative of general labour availability in the agricultural and non-agricultural sectors.

On the demand side, the *wereng* pest crisis in 1976-77 caused rice production to stagnate (Manning, 1994, p. 92). The demand for agricultural wage labour was further affected by technological changes, such as the replacement of the hand knife by the sickle, and of hand threshing by mechanical threshers in rice agriculture (Papanek, 1980).

As a result of the large influx of additional workers in agriculture, trade and services, overall real earnings stagnated in this period, while declining by 1 per cent and 5 per cent per annum respectively in agriculture and trade (see table 33). Real earnings did however rise in the manufacturing, transport, finance and services sectors for reasons which remain unclear. The increase in the manufacturing sector of 8 per cent per year as a whole was matched by a similar increase in real labour costs per worker in the medium and large-scale industries.

## 1978-1986

Employment data in this period of rising real wages are incomplete, consisting of just two *Sakernas* labour force surveys undertaken in 1978 and 1986, and one *Susenas* socio-economic survey for 1982. A labour force survey was conducted in 1979, but only preliminary and incomplete data, excluding wage data, were published. Although these surveys record employment increases of respectively 1.6 and 2.5 million p.a. during 1978-79 and 1982-86, the faster increase in the second half of this period was probably due to the more complete enumeration of unpaid female family workers in agriculture in the 1986 *Sakernas* survey compared to the 1982 *Susenas* survey (Korns, 1987; Dhanani, 1991, p. 34). In the absence of labour force surveys in the intervening years, employment can be assumed to have grown somewhat evenly at two million workers per annum on average during this period, a little more slowly than the 2.1 million annual increase recorded for 1976-78.

**Table 35. Annual net changes in sectoral employment (million)**

	1976-1978	1978-1982	1982-1986	1986-1989	1989-1997	1997-2000	1976-97	
							Million	%
Total employment	2.1	1.6 (-0.2)	2.5	1.7 (0.7)	1.8 (1.3)	1.5 (-0.4)	1.9	100
Agriculture	1.1	0.1 (-0.8)	1.4	1.1 (0.4)	-0.5 (*)	2.0 (0.2)	0.3	18
Manufacturing	-0.1	0.5 (0.3)	-0.1	0.6 (0.3)	0.5 (0.3)	0.2 (0.2)	0.3	18
Construction	*	0.3 (0.3)	n.a.	n.a.	0.3 (0.2)	-0.2 (-0.2)	0.2	8
Trade, hotels, restaurant	0.4	0.2 (*)	0.3	0.4 (0.1)	0.8 (0.2)	0.5 (0.1)	0.5	26
Transport, storage	*	0.1 (*)	n.a.	n.a.	0.2 (0.1)	0.1 (*)	0.1	7
Services	0.7	0.2 (*)	0.8	-0.4 (-0.1)	0.5 (0.4)	-1.0 (-0.7)	0.4	19
Others	*	0.1 (*)	0.1	*	0.1 (*)	-0.2 (*)	0.1	4
Male	0.9	1.1 (0.2)	1.0	0.9 (0.4)	1.3 (0.9)	0.8 (-0.5)	1.1	100
Agriculture	0.6	- (-0.3)	0.5	0.6 (0.2)	-0.2 (*)	1.1 (0.1)	0.1	12
Manufacturing	-0.1	0.3 (0.2)	-	0.3 (0.2)	0.3 (0.2)	0.2 (0.2)	0.2	18
Construction	*	0.3 (0.3)	n.a.	n.a.	0.3 (0.2)	-0.2 (-0.2)	0.2	14
Trade, hotels, restaurant	*	0.2 (*)	0.1	0.1 (*)	0.4 (0.1)	0.5 (0.1)	0.2	20
Transport, storage	*	0.1 (*)	n.a.	n.a.	0.2 (0.1)	0.1 (*)	0.1	12
Services	0.4	0.1 (*)	0.6	-0.5 (-0.3)	0.3 (0.2)	-0.8 (-0.5)	0.2	19
Others	*	0.1 (*)	-0.2	0.4 (0.2)	*	-0.1 (0.1)	0.1	5
Female	1.2	0.5 (-0.4)	1.4	0.8 (0.3)	0.5 (0.4)	0.7 (0.1)	0.8	100
Agriculture	0.5	0.1 (-0.4)	0.9	0.5 (0.1)	-0.3 (*)	0.9 (0.1)	0.2	25
Manufacturing	-	0.2 (0.1)	-0.1	0.3 (0.1)	0.2 (0.1)	*	0.1	19
Construction	*	*	*	*	*	*	*	0
Trade, hotels, rest.	0.4	0.1 (*)	0.2	0.2 (*)	0.4 (0.1)	*	0.3	33
Transport, storage	*	*	n.a.	n.a.	*	*	*	0
Services	0.3	0.1 (*)	0.1	0.2 (0.2)	0.2 (0.1)	-0.2 (-0.1)	0.2	19
Others	*	*	0.3	-0.4 (-0.1)	*	*	*	4
Family workers	-0.9	0.6	1.6 <sup>1</sup>	1.0 <sup>2</sup>	-0.6	0.4	0.2	100
Agriculture	-0.8	0.3	1.3	1.0	-0.7	0.5	0.1	50
Manufacturing	*	0.1	0.1	*	*	-0.1	*	*
Trade	-0.1	0.1	0.2	0.2	0.1	*	0.1	50
Others	*	0.1	3	-0.1	*	3	*	*
Attending school	0.3	0.7	0.6	0.5	*	*	0.4	100
Male	0.2	0.4	0.3	0.2	*	*	0.2	50
Female	0.1	0.3	0.3	0.3	*	*	0.2	50

Source: National Labour Force Survey Sakernas, annual publications, CBS.

Note: figures in brackets are wage employment.

1982 was Susenas year. Family workers may have been underestimated in agriculture.

Employment status: Definitions and questionnaire changed in the course of this period. Data shows orders of magnitude and directions of change only.

Above table shows net changes, i.e., movement of existing workers (both in and out of labour market) as well as of new entrants in labour market.

Others include construction, transport, mining and finance in years 1986 to 1988.

\* – less than 0.05 million

1 explain why estimated at zero in agriculture (assume same as previous period). 2/ using 86-88 due to change in format after and before.

Wage employment: not comparable in period 1976-78 and 1982-86 due to changes in definitions, questionnaire and coverage.

In contrast to the previous period of stagnant employment, the manufacturing, construction and transport sectors increased their labour by respectively 0.5, 0.3 and 0.2 million persons in the 1978-82 period, while employment in the trade and service sectors continued to grow by 0.2 million each (Table 32, second column). While overall agricultural employment remained stable, the new wage employment opportunities for both men and women in manufacturing, and for men in construction, pulled some 0.3 million male and 0.1 million female wage employees away from agriculture. Overall female wage employment also declined by 0.4 million, almost all in agriculture, due partly to increased school enrolment, to be mainly compensated by additional unpaid family labour. The tighter labour market in this period, and consequent real wage rises of 9 per cent per annum, is further indicated by the employment of additional unpaid family labour in manufacturing and trade.

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With respect to additional manufacturing employment, agricultural labour probably joined non-farm household and small-scale industries rather than large-scale establishments, which are responsible for nearly 80 per cent of industrial output. Household and small-scale industries, which include handicraft, post-harvest food processing and textile industries mainly, employ two-thirds of what is considered manufacturing employment in Indonesian labour force statistics, and most, three quarters of all manufacturing employment, is located in rural areas. So it is not suggested that agriculture was a major source of labour for the modern industrial sector in Indonesia. Employment in the latter probably consisted predominantly of new labour force entrants with secondary school education.

Thanks to the oil boom in the mid-1970s, the government began a large public investment programme in irrigation. This was supported by agricultural research and extension associated with the green revolution, spearheaded by the introduction of IRRI rice varieties and the promotion of fertilizers. Agricultural production accelerated to 5 per cent per annum on average during this period compared with 3 per cent per annum in the previous period, and reached nearly 7 per cent in 1979 and 1980, allowing the country to achieve self-sufficiency in rice for the first time in the mid-1980s. Other large public investment programmes were launched including the nationwide construction of primary schools and primary health clinics in remote areas, all absorbing much unskilled labour. So in addition to the higher demand for agricultural labour, the manufacturing and construction sectors also witnessed rapid growth of 11-14 per cent per annum during this period.

The greatly enhanced oil revenues also allowed the government to increase government salaries, which had remained stagnant for many years. The nominal wages in the estates, most of them in government hands at the time, followed suit. Wage-setting mechanisms also took cue from the rise in public sector salaries to hike the minimum wages for textile workers and construction workers to name just two (Manning, 1994).

In the subsequent 1982-1986 period, the sectoral composition of net employment creation changed. Although overall employment probably continued to grow by 2 million workers per annum, manufacturing employment stagnated, while construction employment probably also stagnated. Since manufacturing employment in the medium and large-scale segment grew by over 100,000 persons or 7 per cent per year, it must have declined in the household and small-scale industries. Employment increased in agriculture by about a million, equally shared by men and women, and by 0.3 and 0.8 million in the trade and service sectors.

Overall non-oil GDP grew more slowly at 5.6 per cent per annum, much lower than in the previous year, due to the drastic slow-down in the construction sector which grew by just over 1 per cent per year. Public construction activities stagnated as the result of the suspension of public investment programme following the end of the oil boom. However, most other sectors continued to perform well during this period. The agricultural sector continued to grow at 3 per cent per year, while the manufacturing grew at 11 per cent per annum. The trade and service sectors grew by respectively 4 and 6 per cent per annum. The demand for labour in other sectors was sufficiently strong to allow real wages to rise by 5 per cent per annum during this period.

#### 1986-1989

In the second half of the 1980s, total employment growth slowed down further to 1.7 million workers per year. The manufacturing sector continued to provide 0.6 million jobs, about equally divided between males and females, though only half of this was wage employment, and only 0.2 million jobs were in the medium and large-scale segment. This period saw the start of large-scale employment of female wage workers in labour-intensive industries. Though their numbers increased by just over 0.13 million per year, this

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nevertheless added 0.4 million to the existing 1.0 million existing female wage employees, a 40 per cent increase over this period.

Employment in the construction sector continued to stagnate, affecting men in particular. Also total employment in the service sector declined for the first time by 0.4 million per year, affecting 0.5 million men, mostly of primary school education and below, 0.3 million of whom were wage employees. However, this sector employed 0.2 million more women, all in wage employment. The agricultural and trade sectors had to absorb the remaining 1.1 and 0.4 million jobs, of which 0.4 million and 0.1 million jobs were wage employees, creating strong downward pressure on real wages.

Overall GDP continued to show strong growth, but with the agricultural and construction sectors performing relatively weakly. GDP grew by 7 per cent per annum on average, led by the manufacturing sector, which grew by 11 per cent per year. The trade and service sectors continued to grow by 9 per cent and 6 per cent respectively. Even the construction sector grew by 8 per cent per year, but most of this was concentrated in the later two years, growing by just 2 per cent in 1986 and 4 per cent in 1987. Agricultural growth was similarly uneven, averaging 3 per cent growth per annum, but growing by just half as much in 1986 and 1987 compared with the previous two years (2.6-21 per cent versus 5 per cent), caused in part by the severe drought of 1987. Agricultural growth resumed in 1988, but not before causing a sharp decline in real female agricultural wages of 7 per cent in 1987.

Having achieved the cherished aim of rice self-sufficiency, the government turned its attention from agriculture to the manufacturing sector and, in particular, the promotion of labour-intensive exports. As a result, Indonesia soon began to purchase rice on the world market again, where it was the world's largest buyer before the mid-1980s, to compensate for domestic production shortfalls. In contrast to the preceding rapid agricultural growth period of the first half of the 1980s, when nominal earnings of women and rural workers rose relatively faster, this time around rural workers fared worse than urban workers.

The end of the oil boom caused a drastic reduction in public sector investment in infrastructure, including irrigation, school buildings and other social infrastructure. The rapid growth of banking and financial services, and hotels, particularly after 1987 nevertheless provided a much needed boost to the construction sector in large cities in the late 1980s. That construction wages failed to respond to this demand indicates the extent of labour market integration between the agricultural, service and construction sectors, and the strong downward pressure of stagnating agricultural wages on wages in most other sectors.

## 1989-1997

In the 1989-97 period, employment continued to grow by 1.8 million people per year, but total female employment grew much more slowly than that of men (0.5 versus 1.3 million), and also much more slowly than in the previous period (0.8 vs. 0.5 million), while the opposite occurred for men (0.9 versus 1.3 million). This was due to the reversal in the pattern of employment of family labour, mostly female. Their numbers grew by 1.0 million in the previous period, but now declined by some 0.6 million per year, or by 3 per cent per annum. In contrast, wage employment of women increased rapidly, and at nearly the same rate as for men (5.3 versus 5.7 per cent per year).

On the demand side, most non-agricultural sectors absorbed employment during this period of sustained and broad-based growth, totalling 2.3 million persons per year, half of whom were wage employees. The manufacturing sector continued to employ an additional 0.5 million workers, both male and female, while the construction and transport sectors employed 0.3 and 0.2 million more workers per year. The trade, restaurant and hotel sector was the largest employer of additional labour, recruiting 0.8 million people annually, males

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and females in equal numbers. Finally the service sector employed 0.5 million more workers per year, consisting of 0.3 million males and 0.2 million females. As a result, employment in the agricultural sector declined by 0.5 million persons a year (0.3 and 0.2 females and males respectively), but the number of wage employees in agriculture remained stable.

The strong demand for wage employment in manufacturing, construction and transport lead to the observed real wage rises of nearly 7 per cent per annum. Non-oil GDP grew by 8 per cent per annum during this period, led by the manufacturing and construction sectors, which grew by respectively 13 per cent and 12 per cent per year. The trade, transport and finance sectors grew by 7 per cent-9 per cent per annum. However, the agricultural sector only grew by 2.5 per cent per annum, partly as a result of continued government neglect of this sector, and its unremitting focus on non-oil manufacturing exports.

#### 1997-2000

The East Asian financial crisis, which erupted in Indonesia in mid-1997, had a profound impact on employment and wage trends. Total employment grew by 1.5 million persons per year during this period, but agricultural employment grew by 4.6 million persons in the first year, while declining by over 2.3 million in other sectors. Agricultural employment remained at this level for the next two years, while growing at 1.0 million in other sectors. Female employment increased by 2.0 million during this period, mainly due to the reappearance of unpaid family labour and additional self-employment in agriculture. Female wage employment increased by just 0.1 million persons.

Overall wage employment declined for the first time by an average of 0.4 million persons per year, though not in all sectors. It declined by 0.2 million in construction and 0.7 million in services, but rose in agriculture and manufacturing by 0.2 million each, and by 0.1 million in trade. Almost all the recorded movements in wage employment affected men only, while the increase in female employment consisted almost entirely of non-wage employment in agriculture of 0.9 million persons, and a decline of 0.2 million persons in services.

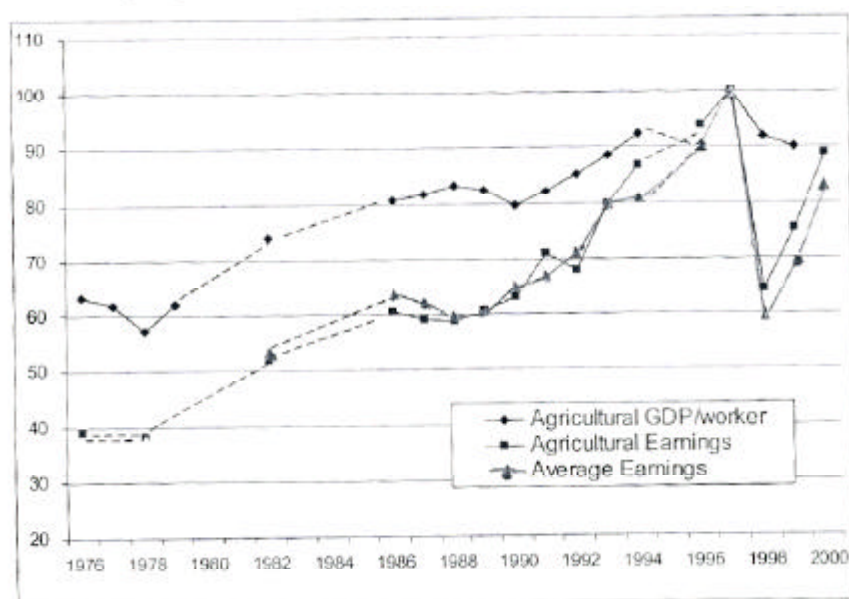
Non-oil GDP fell by 16.5 per cent in 1998, the first full year of the crisis, and stagnated in 1999, before growing again at 4.8 per cent in 2000. The labour-intensive manufacturing and construction sectors were hardest hit, declining by respectively 23 per cent and 36 per cent in 1998. The El Nino induced drought of late 1997 caused agricultural GDP to grow by just 1 per cent in 1997, before declining by 1 per cent in 1998. The trade, transport and service sectors also declined by 16-18 per cent in the first year. The resumption of GDP growth in 2000 was led by manufacturing and construction, which both grew once again at 7 per cent, and by agriculture which grew at 2 per cent.

### 4.3 Agricultural productivity growth

Agricultural productivity grew by 2.3 per cent per annum on average between 1976 and 1997. This growth was caused not so much by increased agricultural production, which was stable at 3-4 per cent per annum, with the exception of the 1978-82 period when it grew at 5 per cent p.a., as by the slower increase in agricultural employment of 1 per cent per annum during this whole period. Agricultural employment growth declined from 4 per cent in the early 1980s to 3 per cent in the mid-1980s, followed by an absolute decline in the 1990s (see Table 34). This was in turn the consequence of strong labour demand in non-agricultural sectors, particularly during the rapid growth of manufacturing and construction labour in the second half of the 1980s, and economy-wide growth during the 1990s.



Figure 12. Index of agricultural productivity and real earnings, 1976-2000 (1997=100)



Source: National Labour Force Survey Sakernas, Farmers Terms of Trade Survey in Monthly Bulletin of Statistics, and Average Wages Paid on Estates 1995, all from CBS.

Agricultural productivity growth was uneven during this period, stagnating or declining during 1976-78 and 1986-89, the periods of stagnating real wage growth, and rising during 1982-86 and 1989-97, the periods of rapid wage growth. The periods of stagnating agricultural wages and agricultural productivity coincided and were caused by the periods of labour surplus conditions in agriculture. That agricultural production not only did not decline but continued to rise in the 1978-82 period of stable employment, and in the 1989-97 period of declining employment may be an indication of the Lewisian labour surplus condition in this sector.

The rapid growth of non-agricultural sectors during the first half of the 1980s and most of the 1990s clearly played a major role in drawing labour away from the agricultural sector, resulting in rapid real wages in these periods, though unusually high agricultural production in the early 1980s probably also contributed to real wage rises in this period.

#### 4.4 Wages and productivity in medium and large-scale manufacturing

##### Labour productivity

Labour productivity in the medium and large-scale manufacturing sector increased by 5 per cent per annum while manufacturing employment grew steadily at an average rate of 7 per cent p.a. during the 1976-1997 period, absorbing an average of 150,000 additional workers every year (Table 36). Manufacturing value-added grew by 15 per cent per annum in most years except during 1978-82 and 1982-86, when it slowed down to 6 per cent and 12 per cent per annum respectively, causing labour productivity to decline by 1 per cent in the first of these periods and to slow down to 4 per cent in the second period. The labour costs per worker similarly grew by 5 per cent per annum during the whole period on average, varying from just 1-2 per cent in the 1980s to 5 per cent p.a. in the late 1970s and 8 per cent per annum during 1976-78 and 1989-97.

**Table 36. Employment, value-added, productivity and earnings growth in medium and large-scale manufacturing (1993 prices, deflated by Wholesale Price Index)**

	1976- 1978	1978- 1982	1982- 1986	1986- 1989	1989- 1997	1997- 1998	Pre-crisis 1976-1997
Employment growth (mill./year)	0.06	0.09	0.12	0.22	0.18	-0.05	0.15
<u>Annual average growth rate</u>							
Value-added	15.0	6.1	11.7	15.5	14.5	-7.3	12.3
Employment	7.1	7.2	7.0	9.9	5.7	-1.3	6.7
Value-added/worker	9.1	-1.0	4.4	5.2	8.4	-6.1	5.3
Average labour costs/worker	7.6	4.9	1.7	0.7	7.7	n.a.	5.1

Source: Large and Medium Industrial Statistics, annual publication, CBS (back-cast series for employment and value-added, published series for average labour costs per worker).

### Labour productivity differences by size<sup>9</sup>

Labour productivity varied substantially according to the size of the manufacturing units. The smallest of these were the household or cottage industries (one to four workers) employing two workers on average. Though they accounted for nearly 44 per cent of the manufacturing sector's employment, they produced merely 6 per cent of the total sectoral output. Next, the small-scale industries (five to 19 workers) and medium-scale establishments (20-99 workers) each accounted for about 6 per cent of total manufacturing output, but employed respectively 17 per cent and 6 per cent of the total manufacturing workforce. At the other extreme, large-scale establishments (100 workers and above) employed 33 per cent of total employment, but accounted for 83 per cent of total manufacturing value-added.

Nearly 30 per cent of those working in small-scale establishments were non-wage employees made up on average of about two family members in addition to the owner-operator. Household establishments basically comprised of the owner-operator and one additional worker, usually a family member. Only one in seven workers was a paid employee. Nevertheless, it is important to note that while small and medium-scale industries (SMIs) accounted for just 23 per cent of employment and 11 per cent of total manufacturing value-added, they displayed considerable dynamism, both in increasing their initial size and graduating into larger size categories, and in creating new establishments, thus fully sharing and contributing to manufacturing growth. The common impression that large establishments have been the most dynamic turns out to be erroneous when the data is examined in terms of their initial size. Unfortunately there is no similar data to assess the dynamism of household and cottage establishments.

All size categories shared in the rapid growth of employment and value-added in the manufacturing sector in the 1986-1996 period. Employment grew by respectively 6 per cent, 9 per cent and 8 per cent per annum in household (one to four workers), small (five to 19 workers), and medium and large-scale establishments (20+ workers) between 1986 and 1996. Corresponding figures for real value-added growth were 8, 13 and 16 per cent per annum. During the 1990-96 period, employment and value-added grew at similar rates in establishments with 20-99, 100-499 and 500+ workers, thus maintaining their relative shares in employment and value-added.

Much of the apparent increase in the share of very large establishments before 1990 was in fact attributable to the successful growth of smaller establishments into larger categories (Jammal and Steel, 1993). In the conventional approach, which classifies

<sup>9</sup> This section draws from Dhanani (2000).

establishments in the year of observation establishments employing 500 workers and above accounted for 56 per cent of total employment and 68 per cent of value-added in 1990. When classified by their original size, this size category accounted for a far smaller proportion of growth (33 per cent of employment, 52 per cent of value-added). The data does not support the view that the small and medium establishments have been held back relative to large enterprises. On the contrary, it suggests substantial dynamism at all levels.

### Labour productivity differences by ownership

Employment in foreign manufacturing establishments grew by 20 per cent per annum, from 0.2 to 0.7 million between 1990 and 1996 (Table 37). Their share increased from 9 per cent to 16 per cent of the total during this period. Domestic firms employed just under 80 per cent of the total, while public firms employed the remaining 6 per cent of total employment in 1996. The average foreign establishment and public sector establishment employed about 600 workers, or four times as many workers as the average 150 workers per establishment in domestic firms in 1996-98. Their labour productivity, as measured by value-added per worker, was double that of domestic establishments, partly because of economies of scale and division of labour, and partly because many of them were in capital-intensive industries. Controlling for size, this labour productivity differential declined to 20 per cent, and to nil in large textile firms (Table 38).

The ratio of value-added per worker between foreign and domestic firms declined from 6.9, to 2.5-2.8 and 1.2 in establishments employing respectively 20-99, 100-1000 and 1000 and above workers. As for sub-sectors, the labour productivity ratio ranged from 4.0 to 1.3 and 1.2 in the chemical, textile and fabricated metal sub-sectors. Controlling for both size and industry, there was no difference in labour productivity in very large textile firms, while labour productivity was higher in very large domestic firms in several sub-sectors such as food, non-metallic minerals and fabricated metals. Thus, higher average labour productivity in foreign and public establishments in the manufacturing sector as a whole cannot be necessarily equated with higher efficiency of labour.

**Table 37. Employment, firm size and value-added per worker by ownership, 1990-98**

	1990	1993	1996	1998
Total employment (million)	2.66	3.57	4.21	4.12
<u>Percentage</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Foreign	9	13	16	19
Domestic private	82	80	78	74
State-owned	9	7	6	7
<u>Workers/establishment</u>	<u>161</u>	<u>197</u>	<u>183</u>	<u>192</u>
Foreign	368	540	596	509
Domestic private	143	168	153	158
State-owned	432	734	585	494
<u>Value-added/worker<sup>1</sup></u>	<u>9</u>	<u>14</u>	<u>22</u>	<u>38</u>
Foreign	20	22	36	68
Domestic private	8	13	17	31
State-owned	8	13	51	29
Ratio foreign: domestic	2.4	1.7	2.1	2.2

Source: Dhanani (2000) table 3.5  
Note: <sup>1</sup> Million rupiah per year, current prices.

**Table 38. Relative value-added per worker in foreign establishments, 1990 – 1998 (value-added per worker in domestic firms = 1.0)**

Sub-sector ISIC	Food 31	Textile 32	Wood 33	Paper 34	Chem. 35	Mineral 36	B.Met. 37	F.Met. 38	Other 39	All Total
By year										
1990	1.6	1.6	1.4	6.0	2.8	2.0	1.0	3.4	1.7	2.4
1993	1.6	1.1	1.7	2.6	4.3	2.0	2.4	1.7	1.3	1.7
1996	2.2	1.3	3.1	3.2	4.0	2.2	2.6	1.2	2.3	2.1
1998	2.8	1.8	1.6	1.7	5.3	4.3	3.1	1.3	3.0	2.2
By size (workers), 1996										
20-99	7.3	2.3	12.6	1.3	7.6	6.3	-	2.8	3.3	6.9
100-499	5.1	2.1	1.7	1.4	1.8	1.9	1.5	1.5	0.8	2.5
500-999	3.7	1.6	1.8	3.3	6.3	2.0	1.9	1.4	3.7	2.8
1000 above	0.4	1.0	3.0	2.2	6.3	0.7	3.9	0.6	2.3	1.2
All sizes	<u>2.2</u>	<u>1.3</u>	<u>3.1</u>	<u>3.2</u>	<u>4.0</u>	<u>2.2</u>	<u>2.6</u>	<u>1.2</u>	<u>2.3</u>	<u>2.1</u>

Source: Dhanani (2000) table 3.6

### Cost of labour as per cent of gross output

Value-added increased twice as rapidly as employment during 1989-92 (22 per cent vs. 11 per cent) and four times as rapidly in 1993-1997 (12 per cent versus 3 per cent). Though labour costs per worker also increased by 7 per cent-8 per cent per annum during these two periods, labour productivity gains kept the cost of labour as a share of gross output constant at 7 per cent in the 1990s. With the exception of the plywood sub-sector, where it did not increase during 1993-1997, labour productivity increased in most sub-sectors and industries (Table 39).

**Table 39. Labour costs per worker, labour productivity and cost of labour, 1985 - 1997**

ISIC	Sub-sector/Industry	Labour costs/worker <sup>1</sup> (average annual growth)			Value-added/worker (average annual growth)			Cost of labour (%of gross output)		
		85-88	88-93	93-97	85-88	88-93	93-97	85-88	88-93	93-97
31	Food, drinks and tobacco	3	10	1	3	10	11	5	5	5
32	Textile, garments, leather	4	13	10	3	16	7	9	9	9
33	Wood and products	10	4	14	16	7	0	9	8	8
34	Paper and printing	5	7	2	13	13	7	11	7	8
35	Chemical	-1	13	3	4	11	8	8	8	7
36	Non-metallic mineral	-1	9	10	7	8	10	8	8	10
37	Basic metal	12	2	5	14	4	14	3	3	3
38	Fabricated metal	2	8	7	4	19	12	8	7	6
39	Other manufacturing	-	11	10	18	21	4	9	11	12
	<u>All medium and large</u>	<u>2</u>	<u>8</u>	<u>7</u>	<u>5</u>	<u>10</u>	<u>9</u>	<u>7</u>	<u>7</u>	<u>7</u>

Source: Dhanani (2000) table 5.15

Note: Nominal labour costs and value-added deflated by sub-sectoral specific wholesale price index.

In the case of paper and printing and fabricated metal products, labour productivity increased more rapidly than real labour costs per worker, leading to a decline in the cost of labour as a share of gross output.

As noted earlier, real labour costs per worker in medium and large-scale industries increased by 2 per cent per annum in the second half of the 1980s even though real earnings stagnated in the labour force data. There was no difference in the cost of labour as a share of gross output between foreign and domestic firms in most sub-sectors in 1993-1996 (Table 40). Foreign firms, though employing more expatriate labour than domestic firms, as indicated by their significantly higher labour costs per non-production workers,

nevertheless managed to contain their cost of labour as a share of gross output to the same level as domestic firms.

**Table 40. Cost of labour by ownership and sub-sector, 1993 –1998 (% of total labour costs/gross output)**

	Food	Textile	Wood	Paper	Chem.	Mineral	B.Met.	F.Met.	Other	All
	31	32	33	34	35	36	37	38	39	Total
<u>1993</u>	<u>5</u>	<u>9</u>	<u>9</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>3</u>	<u>7</u>	<u>11</u>	<u>7</u>
Domestic private	4	9	9	8	10	10	4	6	12	7
Foreign	5	10	7	7	6	9	2	6	11	7
State-owned	11	8	8	11	13	7	n.a.	11	n.a.	12
<u>1996</u>	<u>5</u>	<u>9</u>	<u>9</u>	<u>8</u>	<u>6</u>	<u>10</u>	<u>2</u>	<u>5</u>	<u>11</u>	<u>6</u>
Domestic private	5	9	10	8	6	9	3	5	12	6
Foreign	4	10	5	5	5	10	2	5	9	6
State-owned	12	11	11	13	12	12	2	13	n.a.	8
<u>1998</u>	<u>5</u>	<u>6</u>	<u>11</u>	<u>4</u>	<u>5</u>	<u>8</u>	<u>4</u>	<u>5</u>	n.a.	<u>6</u>
Domestic private	4	7	11	4	5	9	6	4	n.a.	6
Foreign	3	5	11	4	4	6	4	5	n.a.	6
State-owned	15	5	11	3	10	8	3	18	n.a.	9

n.a. = not available.

Source: Dhanani (2000) table 5.20.

## 5. Minimum wages and employment<sup>10</sup>

### 5.1 The context

In 1996, an influential study by the World Bank drew the attention of the Indonesian government to the adverse consequences of the sharp increase in regional minimum wages in the 1990s. Using a range of statistical indicators and drawing on econometric analysis, the report was able to argue that the rapid rise in regional minimum wages, particularly since 1989, is “...beginning to have a negative effect on the creation of employment, especially of women and young workers” (World Bank, 1996, Ch. 3, p. 81). The same study goes on to warn: “Caution must be exercised in raising them further for fear of eroding competitiveness, lowering employment growth and paradoxically of increasing poverty and labour unrest” (Ibid).

With the recent round of minimum wage increases that have been announced in 2000 and 2001, such issues and concerns have come to the fore.<sup>11</sup> Does a minimum wage policy really destroy jobs? What is the relationship between the level of minimum wage and business profitability? What preferred alternatives are there to protect the interests of workers, especially those suffering from low pay? This is an important issue at the best of times, but it becomes critical at a time when Indonesia is trying to recover from the terrible recession of 1998.

It appears that none of the key stakeholders in Indonesia – the government, the business community and unions – have made a comprehensive attempt to evaluate the likely impact of the new increases in regional minimum wages on the welfare of workers

<sup>10</sup> The section draws extensively on Islam and Nazara (2000).

<sup>11</sup> See *Jakarta Post* (‘Minimum wages set to rise...’, February 22, 2000).

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and whether it would abort an employment-friendly recovery.<sup>12</sup> In fact, the presumption that minimum wages have adverse effects on the labour market is upheld along with the empirically unverified assumption that minimum wage-induced increases in labour costs erode business profitability (BAPPENAS, 1999, p. 78; Hidayat et al., 1999).

This section makes an attempt to respond to the perceived limitations of previous evaluations. In carrying out such an exercise, the section argues that the core issue is not whether the imposition of minimum wages destroys jobs, but how best to assist the “working poor”, that is, those who are employed, but cannot earn enough to afford the basic necessities of life. The problem is far from trivial. In 1999, for example, 23 per cent of wage earners in manufacturing were classified as living below the poverty line, and accounted for 12 per cent of all poor households in Indonesia.<sup>13</sup>

## 5.2 Minimum wages and labour protection: The debate in a comparative context

It would be fair to say that up to the early 1980s at least there was an apparent consensus, forged primarily by a large number of US time-series studies, that minimum wages had a negative – but small – effect on employment. The typical estimate suggested that a 10 per cent rise in minimum wages would lead to a decline in employment by 1-2 per cent (Brown et al., 1982). Not surprisingly, this prompted one observer to conclude that the impact of minimum wages has been overrated (Brown, 1988). The questioning of this orthodoxy began in earnest in the 1990s. Once again, focusing on the US experience, a series of studies sought to distinguish between ‘myth and measurement’ and argued that, based on their empirical evidence; they could not find any evidence of a minimum wage-induced effect on employment.<sup>14</sup> These findings were reinforced by a study based on the UK experience that apparently showed a positive relationship between minimum wages and employment! (Machin and Manning, 1996, p. 667).

Needless to say, the revisionist view of minimum wages has not gone unchallenged. It has been subjected to all kinds of methodological criticisms, with critics ranging between those who have been dismissive to those who maintain that, at best, the revisionist view is able to demonstrate that minimum wages have a moderate effect on employment.<sup>15</sup> Every now and then, new studies report results that are consistent with the conventional

<sup>12</sup> In a recent interview (March 15, 1999) with a senior official of the Ministry of Manpower (DEPNAKER), it became clear to the authors that the last major evaluation was done by the World Bank in 1996 – which is the “influential study” that is cited in the text.

<sup>13</sup> Note that the incidence of the working poor in manufacturing is sensitive to the poverty line chosen. The figures reported in the text report only the estimates based on the “preferred” poverty line of the Central Board of Statistics (BPS). Sutanto and Irawan report figures as low as 13.4 per cent poverty incidence for wage earners in the manufacturing sector using alternative poverty lines. Note however that wage earners in manufacturing as a proportion of total poor households varies between 12-13 per cent regardless of the poverty line selected (2000, Table 14a, p.34).

<sup>14</sup> Prominent examples include Katz and Krueger (1992), Card (1992a, 1992b) and Card and Krueger (1995).

<sup>15</sup> Welch (1995) notes in exasperation that the findings “just can’t be right”, while Freeman (1995) supports the moderate position.

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position.<sup>16</sup> The debate, it seems, remains unresolved with protagonists possibly influenced by their prior beliefs.

In the case of developing economies, the presumption seems to be that while minimum wages may exist on paper, they are hardly effectively implemented. This is a reflection of poor enforcement capacities in such economies and the inherent difficulty of monitoring the fate of a very sizeable proportion of the work-force that reside in the unregulated informal sector as well as in rural areas. Nevertheless, attempts have been made to study the impact of minimum wages in selected developing countries. In two of them (Puerto Rico and Colombia) significant employment-inhibiting effects were found. In one of them (Mexico) no effects were discerned, while in another (Morocco) the imposition of rural wages apparently led to a reallocation of labour from small units to larger establishments.<sup>17</sup>

Another way in which the impact of minimum wages on employment in developing countries can be analysed is to focus on the experience of public works schemes. Such schemes, while instrumental in the building of public infrastructure, also act as unemployment relief mechanisms. The purpose is to attract unskilled workers at the prevailing wage rate and provide them with a cushion against transitory fluctuations in income by providing them with temporary employment. One public works scheme that has been extensively studied is the Maharashtra Employment Guarantee scheme (MEGS) in the state of Maharashtra in India. MEGS provided a “guarantee” of employment at the prevailing market wage rate to all who needed it, but was constrained to a 5-kilometre radius from the place of residence. At least this was the status of MEGS until 1988.

In 1988 the programme wage was substantially raised. It was doubled in line with the increase in the state minimum wage. Evaluations show that such changes induced a significant amount of job rationing and led to fewer person days of employment (Subbarao, 1997). However, MEGS is probably a special case because of the rather abrupt nature of the wage adjustment. Where such drastic adjustments do not take place, the typical recommendation is that wages for public works schemes should be set no higher than minimum wages (where they exist), thus implying that minimum wages are regarded as appropriate benchmarks in such cases.<sup>18</sup>

#### **5.4 Minimum wage determination in Indonesia: Endogenous versus exogenous factors**

If minimum wages are unilaterally imposed by the government without seeking sufficient consultations from business and unions/worker organisations, and without taking due account of macroeconomic or local labour market conditions, then the potential for minimum wages for damaging employment prospects may be significant. It is thus important to establish whether minimum wages are largely “exogenous”, i.e.,

<sup>16</sup> A very recent example is Neumark, Schweitzer and Wascher (2000) which uses US data to argue that workers earning near the minimum wage are adversely affected (in terms of reduced work-hours and employment) while higher-wage workers are little affected. The authors argue that since relatively low-wage union workers typically gain at the expense of the lowest-wage non-union workers, this enables one to appreciate why labour unions vigorously support minimum wage increases.

<sup>17</sup> On Puerto Rico, see Castillo-Freeman and Freeman (1992). The Moroccan case is analysed by Azam (1994), while the comparative evidence on Mexico and Colombia can be found in Bell (1995). These country experiences are reviewed in Rama (1996).

<sup>18</sup> Islam and Nazara (2000) review the experience of public works in developing countries, including Indonesia.

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administratively driven, or primarily “endogenous”, i.e., the process is sensitive to market conditions and stakeholder consultations.

While the Indonesian government places great emphasis on setting minimum wages according to administrative criteria (the so-called KHM approach that focus on the notion of the subsistence needs of a single worker), there is a well-established process of consultation with appropriate stakeholders. The first point to note is that the government has always avoided the imposition of a nation-wide minimum wage. The latter is derived as a “residual” after regional minimum wages for the 26 provinces have been set. Indeed, the larger provinces even have separate minimum wages for different districts and sub-regions. There are also separately published minimum wages for different sectors within provinces (or at least some of them). The focus on regional minimum wages recognises the country’s economic diversity characterised by distinct local labour market conditions and spatial variations in the cost of living.

Local labour market conditions are formally assessed by tri-partite councils represented by the government (through the regional counterparts of the Ministry of Manpower), employers and employees. The council makes a recommendation to the provincial governor who may seek a revision to align the recommendations with the long-run targets of the central government. The recommendations are then sent to the Ministry of Manpower in Jakarta that has the final say. However, starting from 2000, there was a significant change. In line with the regional decentralisation agenda, the implementation of minimum wages is now the responsibility of regional administrations. The central government focuses on specifying the criteria for setting minimum wages.<sup>19</sup>

It is also worth emphasising that recent regulations pertaining to the minimum wage setting criteria do not emphasise the subsistence needs of workers at the expense of other considerations. Thus, for example, a recent decree (Per-03/Men/1997) states that minimum wages are based on the subsistence needs of workers, the consumer price index, employment opportunities, the prevailing wage rate at the region, the firms’ ability, development and continuity and the nation’s economic development as a whole. These principles are consistent with the guidelines suggested by the ILO in its deliberations on the principles that should underpin the governance of minimum wages (ILO, 2000).

The true test of the endogeneity of the determination of minimum wages lies, however, at the level of implementation rather than in the statement of principles or even the formal process of stakeholder consultations. Stated guidelines or formal stakeholder consultations can, after all, degenerate into mere rituals. Hence, this section seeks to ratify the endogeneity hypothesis by focusing on the responses of key stakeholders – employers and employees – as revealed through public pronouncements, survey data and the incidence of strikes.

There is no clear evidence of widespread dissatisfaction of employers with the imposition of minimum wages. Despite the concerns raised by the Chairperson of the Business Development Council (DPUN) about the recent round of minimum wage increases announced in February 2000, APINDO (the employer’s association) has formally endorsed the increases.<sup>20</sup>

A small-scale survey of 300 companies in the organized sector in four cities of East Java carried out between July 1997 and January 1998 shows that 66 per cent of employers

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<sup>19</sup> See *Jakarta Post* (‘Minimum wages set to rise...’, February 22, 2000).

<sup>20</sup> The statement by the Chairperson of DPUN is reported in the *Jakarta Post*, March 9, 2000, while the statement by APINDO is reported in the *Jakarta Post*, February 22, 2000.



paid at or above the recommended regional minimum wage. Around 88 per cent of respondents from the same survey agreed with the notion of the KHM as a basis for fixing minimum wages, at least in the short-term. Between 1989-1996, the number of companies seeking exemptions has been moderate. Around 70 per cent of respondents in a survey carried out by the tripartite working group (between January 1998 and May 1998) reported that they were satisfied by the application of regional minimum wages between 1996 and 1997.<sup>21</sup>

Admittedly, a significant number of highly visible strikes have occurred that are related to the application of minimum wages, but their incidence needs to be kept in perspective. In 1993 and 1994, for example, less than 50 per cent of the strikes were related to non-compliance or some form of dissatisfaction with minimum wages. In 1995, less than 10 per cent of strikes were related to minimum wages.<sup>22</sup>

Statistical analysis conducted by the authors show that in practice, minimum wages – after adjusting for inflation - appear to be ‘endogenous’. In other words, they respond to macroeconomic conditions (approximated by GDP and average wages) as well – as can be seen from the estimated equation.<sup>23</sup> Note that the variables are specified in logarithmic terms, where GDRP represents gross domestic product at the province-level (excluding the oil and gas sector) and KHM represents the subsistence needs of a single worker.

Ln Real Minimum Wage =

$$-3.430 + 0.0871 \text{ Ln GDRP} + 0.8898 \text{ Ln Real Average Wage} + 0.223 \text{ Ln KHM}$$

(5.69)    (3.54)                      (14.60)                                      (2.36)

Observations: 26 provinces x 8 years (1990-94, 1996-98) = 208

Adjusted R<sup>2</sup> = 0.7833

t-statistics in parentheses, signifying that relevant variables are significant at the 5 per cent level).

In particular, the strong link between province-specific average wages and minimum wages is worthy of note: a one per cent increase in the former apparently leads to a 0.89 per cent increase in minimum wages. Province-specific average wages may be regarded as a good indicator of local labour market conditions. Thus, the results suggest that minimum wages are not simply driven by the government’s KHM criterion. In fact, the strength of the relationship between KHM and minimum wages, while statistically significant, is not very strong: a one per cent increase in the KHM variable leads apparently to a 0.22 per cent increase in minimum wages. Thus, the influence of average wages on minimum wages is much more potent than the KHM variable. This would not have been the case if the process of setting minimum wages were largely exogenous.

<sup>21</sup> All the survey results are discussed in Hidayat, Lubis and Bhoka (1999).

<sup>22</sup> The incidence of strikes is discussed in Rama (1996, March: 9). The data for 1995 pertain to the first half of the year only. See also Cox (1996, section 5.2) who draws attention to the surge in the incidence of strikes in the 1990s. In interpreting this disturbing trend, Cox argues that they can be related to a number of factors. These are “favourable market conditions” that enhanced the bargaining power of workers, the use of strikes as an attempt to gain organisational representation at the workplace, the aspiration to engender better working conditions and to the government’s role in influencing the wage setting mechanism (an oblique reference to minimum wages).

<sup>23</sup> All equations reported in this section (see Tables 2a, 2b, 3) have been obtained by applying the generalised least squares (GLS) “random effects” model. The latter generates theoretically consistent estimates for “pooled” data.

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## 5.4 Minimum wages in Indonesia: Are they too high?

There is little doubt that in nominal terms minimum wages have risen sharply during the 1990s, but the pattern is less dramatic after adjusting for inflation or when expressed in US\$ at current exchange rates. Indeed, given the steep depreciation of the Rupiah against the US\$ in the wake of the 1997 financial crisis, minimum wages have fallen well below 1 US\$ a day. Even in the pre-crisis period, it appears that the sharp increase in minimum wages (both in real terms and expressed at nominal exchange rates) hit a plateau around 1995 and began to taper off after 1996. The surge in inflation in 1998 decimated the value of minimum wages. In real terms, they actually fell significantly.<sup>24</sup>

Past attempts to demonstrate that regional minimum wages in Indonesia are too high compared the wages of urban workers in the manufacturing sector and the subsistence needs of a single worker (KHM) as calculated by the government with the urban official poverty line (which is published on a per person basis). The conclusion was that industrial workers were over five times better off when compared with the poverty line and that the KHM was two to three times higher than the official poverty line.<sup>25</sup> One could interpret these findings to imply that minimum wages were essentially geared towards the needs of a “labour aristocracy” because such “needs” did not represent the circumstances of a typically poor person in Indonesia.

Unfortunately, previous evaluations run the risk of comparing “apples with oranges”. They have overlooked the fact that the official poverty line is computed on the basis of expenditure needs of households to meet a prescribed minimal standard and then converted to a per person basis by deflating the poverty line by the average household size (just over four persons in 1998). This means that the comparison with the household poverty line should be made with a *national* minimum wage at the household level. The minimum wage per worker should be scaled up to reflect the average wage earners per household (1.4 persons in 1998). The underlying logic is that these wage earners – all assumed to receive minimum wages – will support dependants in the household.

If this procedure is accepted, the evidence shows a dramatic divergence between the “labour aristocracy” hypothesis of previous studies and what is reported here (Table 41). In 1996, minimum wages on a per worker basis were more than three times higher than the urban *per capita* poverty line. However, when the comparison is conducted on the basis of the notional household level minimum wage, it lies slightly above (by about 9 per cent) the urban *household* poverty line. In some provinces, the notional minimum wage lies below the poverty line.

The evidence for 1999 is even more telling (please see Table 41). The national minimum wages (of 1.4 persons) can, at best, meet only 65 per cent of the basic expenditure needs of households (of four persons). This is a testimony to the fact that the value of minimum wages was substantially eroded by the end of the 1990s. Between 1996 and 1999, the urban poverty line went up by 125 per cent. At the national level, the poverty

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<sup>24</sup> For details, see Islam and Nazara (2000).

<sup>25</sup> See World Bank (1996: Annexe table A3, p.90) for the comparison between average wage per worker and the per capita urban poverty line. See Agrawal (1995) for the comparison between KFM and the official poverty line (per capita once again) in urban areas.

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line went up by 136 per cent between 1996 and 1999. Over the same period, minimum wages at the national level went up by a moderate 46 per cent.<sup>26</sup>

Another way in which one can demonstrate that minimum wages are not too far out of line with the official poverty line is to compare the poverty line as a proportion of average expenditure and check the behaviour of this ratio with minimum wages as a proportion of average wages. In 1996, for example, the ratio of the poverty line with the average expenditure in urban areas was 43 per cent, while in 1999, it was 55 per cent. The ratio of the national poverty line to average expenditure was 52 per cent in 1996 and went up to 61 per cent in 1999.<sup>27</sup> Throughout the 1990s, the national average of regional minimum wages varied between 50 to approximately 60 per cent of average wages at the national level.

It thus seems reasonable to argue that minimum wages in Indonesia were not necessarily geared towards the needs of a “labour aristocracy”. They should instead be seen as a benchmark against which the incidence of low pay can be measured. As noted, the problem is not trivial. In 1999, 23 per cent of wage earners in the manufacturing sector did not earn enough to afford the basic necessities of life, while in 1998, 30 per cent of all workers earned below the minimum wage (which at current exchange rates is well below US\$1.00 per day).

There is also considerable variation across provinces (Table 42). In 1994, the incidence of low pay varied from 7.5 per cent in Central Kalimantan to 47.6 per cent in East Java. In 1998, the range of variation was from 8.8 per cent in South-East Sulawesi to 40.0 per cent in East Nusa Tenggara. Overall, the incidence of low pay seems to have come down from 38 per cent in 1994 at 29.9 per cent in 1998. It is difficult to determine whether it is a genuine improvement or partly the result of the way the minimum wage line is located *vis-à-vis* the wage distribution. Nevertheless, what one can at least conclude is that there is a sizeable incidence of the “working poor” in Indonesia. The challenge is to find ways in which one can assist them to earn a decent living.

<sup>26</sup> Information on official poverty lines going back to 1976 can be found in Dhanani and Islam (2000: Table A4, p.31).

<sup>27</sup> The ratios were computed from information provided in Dhanani and Islam (2000: Table A4, p.31).

**Table 41. The national monthly minimum wage at the household level, 1996 and 1999 (as % of urban monthly poverty line at the household level)**

Province	1996	1999
Aceh	92.5	60.0
North Sumatra	103.6	69.4
West Sumatra	85.2	53.1
Riau	148.9	87.4
Jambi	104.0	54.8
South Sumatra	80.4	55.1
Bengkulu	105.3	48.2
Lampung	107.8	56.5
Jakarta	112.4	69.3
West Java	126.9	74.7
Central Java	101.0	61.8
Yogyakarta	111.5	59.9
East Java	123.0	72.9
Bali	125.1	69.8
West Nusa Tenggara	91.7	55.0
East Nusa Tenggara	87.6	48.2
West Kalimantan	70.9	46.5
Central Kalimantan	96.6	66.3
South Kalimantan	85.3	54.0
East Kalimantan	86.9	57.5
North Sulawesi	111.2	58.4
Central Sulawesi	95.6	53.5
South Sulawesi	88.4	52.4
South East Sulawesi	105.2	49.9
Maluku	94.0	46.1
Papua	106.3	65.8
Indonesia	109.1	64.5

Due to data limitation, the notional monthly minimum wage at the household level uses the average number of 1998 wage earners per household which is 1.4. The monthly household poverty line is obtained by multiplying the per capita monthly income by the average number of household member in 1999.

Source: Authors' calculation of BPS poverty line, minimum wages and SAKERNAS 1998.

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**Table 42. Percentage of paid workers receiving below the minimum wage by province, 1994 and 1998**

<b>Province</b>	<b>1994</b>	<b>1998</b>
Aceh	25.0	14.7
North Sumatra	39.6	23.4
West Sumatra	26.1	17.4
Riau	27.6	23.4
Jambi	21.3	12.6
South Sumatra	35.2	31.3
Bengkulu	28.7	17.5
Lampung	43.5	28.0
Jakarta	21.0	19.2
West Java	41.0	34.9
Central Java	44.2	34.7
Yogyakarta	25.2	22.1
East Java	47.6	37.7
Bali	37.7	25.4
West Nusa Tenggara	46.6	40.0
East Nusa Tenggara	27.0	26.2
West Kalimantan	15.0	16.5
Central Kalimantan	7.5	14.7
South Kalimantan	22.1	18.6
East Kalimantan	17.5	18.3
North Sulawesi	25.1	20.3
Central Sulawesi	21.7	21.1
South Sulawesi	16.1	14.7
South East Sulawesi	20.6	8.8
Maluku	26.6	15.7
Papua	16.4	10.8
Indonesia	38.1	29.9

Source: SAKERNAS, 1994 and 1998.

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## **5.5 Minimum wage-employment relationship in Indonesia: Much ado about nothing?**

The pioneering work on estimating the impact of minimum wages on employment in Indonesia is represented by Rama (1996). Based on this study, the World Bank (1996) concluded that a doubling of minimum wages would lead to a two to three per cent decrease in total employment.<sup>28</sup>

Unfortunately, the World Bank did not qualify these conclusions by noting that the Rama findings were based on tenuous econometric estimates. Nor did it highlight the fact that Rama's results show that the imposition of minimum wages would actually lead to an

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<sup>28</sup> See World Bank (1996, Chapter 3, p. 78). Based on the Rama study, the World Bank also highlighted the fact that youth employment would decrease by a much larger percentage (5 to 7 per cent), investment would drop by some five to seven percentage points of GDP.

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increase in employment in large firms, although this would be offset by strong employment displacing effects in small firms.<sup>29</sup>

In light of the circumspect nature of previous findings, this section revisits the minimum wage-employment relationship in Indonesia. Rather than solely relying on econometric estimates, the section examines the issue at various levels. First, it considers the relationship between minimum wages and employment at the nation-wide level. It then focuses on the experience of the manufacturing sector. Finally, some econometric estimates are reported using “pooled”, province-level data for the 1990-1998 period.

At the national level, there is no clear evidence of a negative relationship between the ratio of minimum to average wages and wage employment as a ratio of the working age population. Note that the wage employment ratio is a better measure of labour utilization in Indonesia than the unemployment rate since the latter is highly correlated with socio-economic status. In other words, in a society that lacks a comprehensive unemployment benefits system, unemployment is a “luxury” that many cannot afford. Thus, if minimum wages have an adverse impact on the labour market, it would be reflected in sustained declines in the wage employment ratio as labour would be reallocated to self-employment (such as the urban informal sector) and to the agricultural sector. This has not happened – except during the terrible recession of 1998 when there were large-scale layoffs in the formal wage sector.

In the manufacturing sector as a whole, it is possible to report some results from a UNIDO project on the performance of large and medium scale enterprises.<sup>30</sup> The experiences of such enterprises are germane to the analysis here because they are often closely monitored for their compliance with minimum wage regulations.

The UNIDO study shows that there is no evidence of a wage cost squeeze on such enterprises, despite the sharp increases in minimum wages. The wage bill has been constant (7 per cent of gross output), while profitability has been preserved (25 per cent of gross output).<sup>31</sup>

The UNIDO project also hypothesises that the primary challenge facing both domestically-oriented and export-oriented large and medium-scale enterprises is coming from competitive pressures emanating from other manufacturers of labour-intensive products, such as China, rather than from domestic labour costs. The export performance of some key labour-intensive products has been faltering even during the pre-crisis period, largely because of external competitive pressures. The unit price of a number of key Indonesian labour-intensive exports in world markets has been sluggish and, in some cases, has declined (wood, garments, footwear).

Additional evidence can be offered to support the contention of the UNIDO report. For example, the Indonesian Footwear Association (APRISINDO) has drawn attention to the large influx of low-priced footwear in the major cities of Indonesia from abroad,

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<sup>29</sup> For a more thorough review of the findings of Rama, see Islam and Nazara (2000).

<sup>30</sup> The UNIDO report was prepared by Dhanani (2000).

<sup>31</sup> Business profitability is approximated by “operating surplus”, that is, total revenue less total costs of labour and non-labour inputs. The operating surplus is expressed as a proportion of gross output.

typically through illegal channels. The Association claims that such import competition is now the major threat to large-scale job losses in the industry.<sup>32</sup>

In evaluating the impact of minimum wages on the labour market, one also needs to consider the flow of foreign direct investment (FDI) to the economy in general, and to the manufacturing sector in particular. In Indonesia, as in many other countries, FDI serves both domestic markets and access to world markets. More importantly, FDI is an important source of domestic employment.

It is well known that Indonesia experienced an FDI boom prior to the crisis. Within manufacturing, FDI has largely flowed into textiles, metals and machinery sub-sectors. This occurred despite the sharp increases in minimum wages in the 1990s. Past studies do not reveal that FDI inflows have been influenced by minimum wage considerations (Rama, 1996). Today, in post crisis Indonesia, it would be fair to maintain that investors – both domestic and foreign – are more concerned about policy predictability, political stability and law and order rather than labour costs. The latter in any case have been decimated by the sharp depreciation of the Rupiah.

Statistical analyses do not enable one to convincingly demonstrate that minimum wages have a negative effect on employment. Several “regressions” were tried using province-level data for the 1990-1998 period. The results are reported in two batches. Tables 43 and 44 embody statistically significant results that show a positive relationship between minimum wages and employment.

**Table 43. Econometric evidence supporting a positive relationship between minimum wages and employment (logarithmic specifications) using ‘pooled’, province-level data (26 provinces), 1990-1998**

Dependent variables	Ln Employment (all categories)	Ln Employment -paid workers only	Ln Employment-paid male manufacturing	Ln Employment-paid urban male manufacturing	Ln Employment-paid female manufacturing	Ln Employment-paid urban female manufacturing
Explanatory variables						
Constant	12.847 (56.57)	8.516 (27.91)	4.819 (6.57)	4.136 (4.54)	5.317 (4.07)	4.48 (4.15)
Ln minimum wage	0.136 (11.79)	0.395 (22.15)	0.497 (8.47)	0.484 (6.52)	0.368 (4.82)	0.37 (4.08)
Adjusted R-squared	0.0084	0.0412	0.0449	0.0467	0.0213	0.0306

Note: t-statistics in parentheses. The statistics signify that all relevant variables are significant at the 5 per cent level. Ln = natural log of the relevant variable.

**Table 44. Econometric evidence supporting a positive relationship between minimum wages and employment (non-logarithmic specifications, with province-level income as an added variable) using ‘pooled’, province-level data (26 provinces), 1990-1998**

Dependent variable	Annual changes in employment (paid workers)
Explanatory variables	
Annual change in real minimum wage	1.191 (1.93)
Annual change in gross regional domestic product (excluding oil and gas sectors)	0.036 (9.38)
Adjusted R-squared	0.321

Note: t-statistics in parentheses. The statistics signify that all relevant variables are significant at the 5 to 10 per cent level.

<sup>32</sup> See *Jakarta Post* (‘Illegal foreign footwear products concern APRISINDO’, May 25, 2000).

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Where there is a statistically significant negative relationship between employment and minimum wages, the estimates are presented in Table 45. It is worth emphasising that the negative relationship only holds when dummy variables representing the crisis period and different island groups are inserted in the equations. In the absence of such dummy variables, the relationship disappears. Thus, the results, in common with others reported here, are highly model-specific.

Even if one is prepared to ignore the model-specific nature of the estimates, the finding of a negative relationship between minimum wages and employment in some cases should not be cause for alarm. The significance of such relationship depends critically on the implicit assumption of a zero-growth economy. A growing economy can absorb the increase in minimum wages to the point that net job losses may be negligible.

Using the figure of 90 million workers, the estimates in Table 45 can be manipulated to suggest that for every 1 per cent increase in GDP growth, minimum wages can rise by 6 per cent without incurring any net job losses.<sup>33</sup> This is because for every 1 per cent increase in GDP, approximately 350,000 jobs are created, but for every 1 per cent increase in minimum wages only around 52,000 jobs are lost. These are the magnitudes that can be derived from the implied elasticities in Table 45. Thus, if the Indonesian economy can grow at four per cent in the short to medium term (which is within the growth forecast of three-to-four 4 per cent for 2000-2001), minimum wages can increase by 24 per cent without incurring net job losses. More importantly, the fact that the Indonesian economy managed to grow at 7 per cent for sustained periods during the pre-crisis period also possibly explains why the doubling of minimum wages in the 1990s apparently had barely noticeable effects.

One could, of course, argue that in the absence of minimum wages, employment growth would have been even faster – but counterfactuals are inherently difficult to prove. Furthermore, one has to contend with the findings of the aforementioned UNIDO project that external competitive pressures – and not domestic labour costs – represent the major challenge to large- and medium-scale manufacturing firms in their job creation efforts.

<sup>33</sup> The manipulation is based on equation no. 1 and 2 in Table 5.5.



**Table 45. Econometric evidence supporting a negative relationship between minimum wages and employment (logarithmic specifications, with province-level income and 'dummies' as added variables) using 'pooled', province-level data (26 provinces), 1990-1998**

	Equation 1	Equation 2	Equation 3	Equation 4	Equation 5
Constant	8.9051 (0.000)	8.9675 (0.000)	8.3332 (0.000)	8.6452 (0.000)	8.7505 (0.000)
Ln minimum wage. (real): mwr	-0.0591 (0.016)	-0.0581 (0.018)	-0.0862 (0.001)	-0.0869 (0.000)	-0.0974 (0.000)
Ln gross domestic regional product (excluding oil and gas sector): income	0.3894 (0.000)	0.3848 (0.000)	0.4451 (0.000)	0.4212 (0.000)	0.4218 (0.000)
Ln mwr*dummy crisis	0.0084 (0.000)	0.0276 (0.096)	0.2598 (0.000)	0.2586 (0.000)	0.2390 (0.000)
Ln income*dummy crisis	--	-0.0143 (0.245)	-0.0218 (0.069)	-0.0283 (0.023)	-0.0269 (0.030)
Dummy crisis (1997,1998=1)	--	--	-2.6272 (0.000)	-2.5082 (0.047)	-2.3026 (0.001)
Ln mwr*dummy Java (Java=1)	--	--	--	0.0332 (0.047)	0.0376 (0.035)
Ln income*dummy Sumatra (Sumatra=1)	--	--	--	--	-0.0481 (0.096)
Ln mwr*dummy Sumatra	--	--	--	--	0.0653 (0.059)
Adjusted R-squared	0.6612	0.6602	0.6575	0.7078	0.7073

*Note:* Prob>|t-stat| in parentheses. All relevant variables are significant at the 5 to 10 per cent level. The only exception is "Ln income\*dummy crisis" variable in Equation 2. The sign on the minimum wage coefficient becomes positive when dummy variables are removed.

## 6. Conclusions and policy implications

This paper has navigated a wide terrain. An appropriate juncture has been reached where it would be useful to weave together different strands in the discussion and highlight the pertinent policy implications. For ease of exposition, this concluding section delineates several themes that have guided this paper:

- ~~///~~ an evaluation of the nature of the wage payment system;
- ~~///~~ trends in real wages and the causal factors underpinning them;
- ~~///~~ aspects of wage inequality;
- ~~///~~ minimum wages and their role in labour protection.

### 6.1 Wage payment system

A key normative issue here is whether the Indonesian wage payment system has become more flexible over time. There is hardly any evidence of this, despite the crisis. The available data indicate that the "flexible wage component" in the formal sector fell from 28 per cent to 25 per cent between 1996 and 1998. This evidence needs to be seen in conjunction with the fact that "over-time, bonuses and other" components fell rather moderately (from 22 to 20 per cent) between 1996 and 1998 for all establishments in the manufacturing sector.

One plausible interpretation of the lack of any major change in the flexibility in the wage payment system could be that the primary adjustment took place in the form of employment rather than just relative wages. Certainly, the relative size of the informal sector went up during the crisis, but – as was noted – real wages fell significantly as well.

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Another plausible explanation is that the data relates to 1998 and is thus unable to capture fully how the wage payment system has evolved beyond that date. It may well be that at the time the data was collected, business organisations had not fully anticipated the severity and persistence of the crisis and were treating it as a short-run phenomenon.

Perhaps the only significant change is the decline in the provision of subsidized rice – from 28 per cent in 1969 to 6 per cent in 1997 – as a fringe benefit to civil servants. This may be construed as an attempt at greater flexibility in the wage payment system in the public sector in the sense that there is now a greater reliance on cash, rather than in-kind, remuneration. This is to be expected as Indonesia became, over time, a more monetized and modernized economy and as the urgency to protect public sector workers from the ravages of hyperinflation of the 1960s (the terrible legacy of the Sukarno era) receded sharply.

Another point that one could emphasize is the extent to which income protection arrangements are embedded in formal wage payment systems and how they have been affected by the crisis. Here, once again, there is little evidence of any dramatic change. Thus, for example, pension and insurance contributions as a proportion of total labour costs have remained virtually unchanged between the pre-crisis and post-crisis period (6 per cent in 1996 versus 5 per cent in 1998 for all establishments in the manufacturing sector). One can also detect evidence that state-owned firms have more generous income protection arrangements than private enterprises (13 per cent in pension/insurance contributions in the public sector in 1998 compared to 4-5 per cent in the private sector – a conspicuous difference).

## 6.2 Real wages

There is some debate on what has happened to real wages in Indonesia in the pre-crisis period. Just about every informed observer would agree that real wages in the long-run have risen quite significantly in Indonesia, but there are disagreements about magnitudes and about periods when they have either stagnated or even declined. The various sources of data on wages broadly agree on nominal trends, but real trends diverge in magnitude simply because of the use of alternative price deflators. Real wage trends in particular periods are also sensitive to the use of ‘end-points’ (that is, initial and terminal observations) for the various wage series.

Bearing the above caveats in mind, the findings show two episodes of either stagnant or declining real wages in the pre-crisis period – 1976 to 1978 and 1986 to 1989 – that marred a rather laudable record of rising real wages over two decades (a growth rate of 5-7 per cent). It is significant that these episodes also coincide with what many would regard as periods that entailed rather favourable developments for the Indonesian economy – the oil boom of the mid-1970s and the much-touted economic liberalization programme of the mid-1980s. The lessons to be learnt from these episodes are that a favourable external development or a major policy reform does not necessarily engender benefits to the living standards of workers in the short-run, although they do so in the long run.

The crisis period (1997-1998) and its aftermath represent the most conspicuous case of a collapse in real wages in Indonesia. Real wages fell at an annual rate of 6 per cent between 1997 and 2000 representing an inflation-driven collapse in purchasing power. Real wages have been rising again, but are still approximately 20 per cent below their pre-crisis level.

The short-run behaviour of real wages also has implications for poverty measurement. For example, official statistics in the pre-crisis period show sharp falls in poverty at a time when real wages either stagnated or declined. It is plausible to conjecture that methodological changes in computing official poverty lines are responsible for this

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anomaly. Nevertheless, the sharp declines in official measurements of Indonesian poverty in the long run are consistent with the sharp increase in real wages over two decades.

In trying to explain the long-run behaviour of real wage trends, practitioners often either refer to the rapid growth of the Indonesian economy or point to the manufacturing export boom unleashed by the economic liberalization programme of the mid-1980s. There is another view that the aggressive implementation of minimum wages in the 1990s put upward pressure on average wages.

These explanations are useful, but incomplete. Thus, the overall GDP growth is not a reliable guide to real wage improvements. Rather, the sectoral composition of this growth determines whether growth translates into higher real wages. One could easily argue that the boom in market-determined wages led minimum wage increases in the 1990s. The manufacturing export boom story can explain real wage developments may well explain the behaviour of real wages in the 1990s, but is deficient in explaining the behaviour of real wages in the 1970s and 1980s.

A simple supply-demand framework is invoked in this paper to account for the long-term trends in real wages in Indonesia. On the supply side, the government's family planning programme led to reduced fertility and slowed down the growth of the labour force appreciably. Second, an aggressive school building programme combined with an education campaign led to a rapid increase in enrolments. This in turn set the basis for an increased supply of skilled workers – a development that is compatible with reduced wage differentials by education levels. On the demand side, an ambitious public investment policy fuelled by the oil booms of the 1970s led to an increase in the demand for construction workers. Such a policy initiative also had spill over effects on agricultural production that triggered ample demand for rural labour. Of course, the manufacturing export boom of the 1990s eventually complemented these processes, but they should not be seen as the central part of the story when studying the long-run behaviour of real wages in Indonesia.

A central policy implication of the above findings is that the government should continue to invest in the agricultural sector – still home to half the work force. This will keep the demand – and hence the supply price – price of unskilled labour buoyant. This strategy was, after all, a key factor behind rising real wages before the manufacturing export boom of the 1990s.

Finally, real wage developments in Indonesia are also conspicuous for the fact that they grew at roughly similar rates across sectors and regions indicating a reasonably well-integrated labour market. This evidence goes against the interpretation of some observers who have suggested that real wages in agricultural and non-agricultural sectors exhibited different patterns and growth trends (suggesting segmented labour markets).

One could argue that the findings have important implications for regional decentralization, which, of course, is currently a major policy agenda. If decentralization facilitates labour mobility across slow-growing and fast-growing regions, then the benefits that Indonesian workers enjoyed in the pre-crisis period of a reasonably well-integrated labour market will endure. On the other, if decentralization is accompanied by an upsurge in regional factionalism and the spread of social and communal conflicts based on ethnicity, then they are bound to impede the geographic/sectoral mobility of labour. This will, in turn, impede the sharing of the benefits of rising real wages that were the hallmark of the pre-crisis era.

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### 6.3 Wage inequality

This paper approached the issue of wage inequality in Indonesia by seeking to identify the importance of gender disparities in the labour market. The analysis went beyond simple measures of gender disparities in terms of the male-female wage ratio and sought to adjust this ratio for other group-specific characteristics, such as education and age. This endeavour was complemented by “decomposition analysis” in which total wage inequality was disaggregated into two distinct components: “within-group” and “between-group” inequality. This particular procedure was applied to gender dimensions of wage inequality.

The analysis of wage differentials along various dimensions (rural-urban, gender, education, region, sector) led to a number of conclusions.

- ✍ Wage differentials between rural and urban areas narrowed significantly. Rural wages were 54 per cent of the urban level in 1982, but rose to 70 per cent in 2000.
- ✍ Wage differentials by sector narrowed substantially over the last 25 years, with agricultural earnings increasing from less than 50 per cent of the national average to 54 per cent by 2000
- ✍ In line with rising educational attainment of the overall population, educational wage differentials narrowed considerably. For example, in 1976, a junior school leaver earned almost twice the national average, but this dropped to 80 per cent of the national average by 2000.
- ✍ Regional differences in wages also narrowed significantly between 1976 and 2000, probably as a result of increased labour mobility from labour-surplus to labour-scarce areas. Thus, for example, wages in Jakarta in 1976 were 2.4 times the national average, but fell to 1.5 times the national average in 2000.
- ✍ The gender gap in wages – while significant – improved over two decades. In 1982, for example, female wages were 54 per cent of male wages, but this became 68 per cent of male wages by 2000.

An important point that the paper makes is that aggregate measures of gender wage gaps may overstate the extent of gender discrimination in the labour market. There is some evidence that as the educational attainment of female workers go up, they catch up – but by no means achieve parity – with their male counterparts. This suggests that one effective way of resolving gender discrimination in the labour market is to enhance the educational endowment of females. The analysis also suggests that the industrial affiliation of female workers matter. In some industries apparently earn more than men, although it is difficult to establish to what extent these are spurious results driven by measurement errors. Finally, older workers appear to be at a particular disadvantage: the male-female wage gap worsens for older female workers. Thus, one way of addressing gender discrimination in the Indonesian labour market is to simultaneously tackle age discrimination.

The thrust of the decomposition analysis was to show that between-group inequality was not a significant feature of overall wage inequality. Thus while the absolute gender gap appeared large, i.e., females earning just 70 per cent of male earnings, only 5 per cent-10 per cent of this inequality was due to the gender gap, while inequality within gender due to education, age, sector of work and region, was far more important, both for males and females. The policy implication is that, while measures to combat gender discrimination is certainly desirable, since this will reduce overall inequality by as much as 10 per cent, such measures will be ineffective in grappling with the more difficult task of dealing with inequality within groups.

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The analysis of wage inequality was complemented by a discussion of income and expenditure inequality as well as disparities in land ownership. The functional distribution of income improved during the pre-crisis period and closely reflected trends in real wage developments. Unfortunately, consistent series of data on income and expenditure inequality are not available, but estimates available for one particular year (1984) suggest that both income and expenditure inequality are rather similar in magnitude (as measured by the Gini ratio on a *per capita* basis). Time series data on expenditure inequality show that it improved between 1978 and 1987 but worsened in the 1990s. There is some disagreement on what happened to expenditure inequality during the crisis, with some observers arguing that it improved, but with others suggesting that it worsened when measured on an inflation-adjusted basis.

## 6.4 Minimum wages

This study has exonerated Indonesian regional minimum wages policy from the allegation that they impair employment prospects. There is no evidence to suggest that minimum wage-induced increases in domestic labour costs erode business profitability in large and medium-scale manufacturing. It is also difficult to argue that minimum wages are geared to the needs of a “labour aristocracy”. It thus plausible to interpret the minimum wage as a benchmark against which the incidence of the ‘working poor’ can be measured.

However, this does not mean that the above conclusions uphold the view that more efforts should be invested in a stringent application of regional minimum wages policy. After all, despite a decade of highly publicised – and controversial – attempt to implement regional minimum wages, 30 per cent of workers (and in some cases much more than that) still struggle to survive on earnings that are below such minima.

One should make a distinction between goals and instruments. A minimum wages policy is one possible, but not the only possible, instrument for dealing with the primary goal of assisting the working poor – that is, those who are employed but cannot earn enough to afford the basic necessities of life. Once this distinction between goals and instruments is appreciated and accepted, the policy debate in Indonesia on minimum wages can move to a more constructive phase.

In reflecting on this evolving policy debate, it is worth recalling that an ILO study has argued that the coverage and protection offered by statutory minimum wages have declined even in industrialised countries. This is a reflection of the trend towards labour market flexibility in an age of globalisation. One is thus witnessing increasing informalization and casualization of the workforce, the progressive replacement of collective bargaining instruments with individual contracts at the enterprise-level, and declining trends in unionisation (Standing, 1999, Ch. 9). In such changing circumstances, using minimum wages to offer income protection to low-paid workers becomes rather difficult. Alternatives need to be considered.

The recent move towards regional decentralisation in Indonesia has also complicated the determination – and imposition – of minimum wages. The implementation of minimum wages is now at the discretion of regional administrations. The central government will still play a role, but only in setting the criteria for minimum wages. It remains to be seen how such a system will evolve because a lot will depend on the interplay among politics, bureaucratic capacity and the industrial relations system at local levels.

Given the particular circumstances of Indonesia, and the changes that have taken place, what should be the appropriate role for minimum wages in post-crisis Indonesia? It is worth recalling that when the ILO adopted the Minimum Wages Convention (No. 131) in 1970 with special reference to developing countries, the underlying assumption was that collective bargaining and other non-statutory means of wage determination would not

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spread rapidly enough in such countries (ILO, 2000). This implies that efforts should be invested in improving the underlying institutional factors whose lack necessitates the need for state-driven minimum wages.

It seems that Indonesia's new found political freedom and the ratification by the government of all the core ILO conventions, provide a unique opportunity to invest efforts into developing an effective industrial relations system that will become the foundation for collective bargaining and non-statutory wage determination processes. These developments in turn will probably prove critical in empowering the government for dealing with the problem of low pay in Indonesia.

Unfortunately, recent events do not bode well for the future of labour protection in Indonesia. In the haste to redress grievances of the past, there appear to be cases of ill-conceived changes in rules and regulations. For example, a recent issue of considerable contention is the way the government has tried to deal with severance pay. Current laws suggest that workers are entitled to severance pay, even if they resign voluntarily. This has understandably infuriated the business community – both domestic and foreign and has impaired the credibility of attempts by the government to enhance the capacity of the regulatory framework pertaining to labour protection.<sup>34</sup> To make matters, the labour movement is still rather fragmented to offer an effective instrument for 'voice' representation. Individual workers are also often harassed by well-organized thugs at the workplace, thus compounding the weak and splintered nature of the union movement.<sup>35</sup>

Such sorry examples demonstrate that the Indonesian industrial relations system has a long way to go in the post-crisis era. New directions in setting and designing minimum wages are ultimately intimately linked with the more fundamental agenda of developing a credible industrial relations system. The latter ought to be able to provide individual workers – in particular the vulnerable groups in the labour force – the capacity to pursue their material well-being under conditions of dignity, equal opportunity, justice and security.

<sup>34</sup> The contentious legislation in question pertains to decree no.150/2000. The provisions are that severance pay can amount to as much as 10 times the gross (annual) wages of an average worker. See *Jakarta Post* ('Labour Woes Aplenty', April 20, 2001) and *AsiaWeek* ('You Can't Fire Me, I Quit', May 2, 2001)

<sup>35</sup> See Vedi Hafid in the *Jakarta Post* ('Do Workers Turn Away Investment', May 2, 2001).

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## References

- Agrawal, N. 1995. *Indonesia: Labour market policies and international competitiveness*, World Bank Policy Research Working Papers no. 1515, September 1995.
- Asra, A. 1989. "Inequality trends in Indonesia: 1969-1981: A re-examination", in *Bulletin of Indonesian Economic Studies*, Vol. 25, No. 2, pp. 100-9.
- \_\_\_\_\_. 1992. *Studi penyempurnaan penghitungan distribusi pendapatan [Study to improve the estimation of income distribution]*, Mimeo (Jakarta, Central Bureau of Statistics).
- Azam, J.P. 1994. *Effects of minimum wages in developing countries: An exploration*, Background paper for the 1995 World Development Report (Washington DC, World Bank).
- Bell, L. 1995. *The impact of minimum wages in Mexico and Colombia*, Policy Research Working Paper 1514, (Washington, D.C., The World Bank).
- Brown, C. 1988. "Minimum wage laws: Are they overrated?", in *Journal of Economic Perspectives*, Vol.2, No. 3, pp. 133-147.
- \_\_\_\_\_, Gilroy, C. and Kohen, A. 1982. "The effect of the minimum wage on employment and unemployment", in *Journal of Economic Literature*, Vol. 20, June, pp. 487-528.
- Card, D. 1992a. "Using regional variations in wages to measure the effects of the federal minimum wage", in *Industrial and Labour Relations Review*, Vol.46, No. 1, pp.22-37.
- \_\_\_\_\_. 1992b. "Do minimum wages reduce employment? A case study of California, 1987-89", in *Industrial and Labour Relations Review*, Vol. 46, No. 1, pp. 487-97.
- \_\_\_\_\_ and Krueger, A. 1995. *Myth and measurement: The new economics of the minimum wage* (Princeton, New Jersey, Princeton University Press).
- Castillo-Freeman, A. and Freeman, R. 1992. "When the minimum wage really bites. The effect of US-level minimum on Puerto Rico", in G. Borgjas and R. Freeman (eds.) *Immigration and the workforce* (Chicago, Illinois, University of Chicago Press).
- Cox, A. 1996. *Labour regulations and industrial relations in Indonesia*, Mimeo, Poverty and Social Policy Department, Human Capital Development and Operations Policy, (Washington, D.C., The World Bank). Website version: [www.worldbank.org](http://www.worldbank.org). June 28.
- Cray, C. 1979. "Civil service compensation in Indonesia", in *Bulletin of Indonesian Economic Studies*, Vol. 15, No.1, pp. 85-113.
- Dhanani, S. 1992. *Indonesia: Mid-repelita versus assessment of agricultural employment and incomes*, Sectoral Employment Policy and Planning Project, National Development Planning Board (Bappenas)/UNDP/ILO No. INS/90/035 (Jakarta, International Labour Organization).
- \_\_\_\_\_. 1993. *Indonesian manufacturing employment and training: Major findings of the 1992 Enterprise survey - Volume I (West Java), Volume II (East Java) and Volume III (North Sumatra)*, Technical reports No. 2, 3 and 4 (Jakarta, Regional Manpower

---

Planning and Training Project-RMPT, World Bank Human Resource Development Loan 3134-IND, Bappenas).

- \_\_\_\_\_. 1994a. "Estimating informal sector employment and incomes in Indonesia", in *Bulletin of Labour Statistics 1994-1* (Geneva, International Labour Office).
- \_\_\_\_\_. 1994b. *A review of alternative national and regional poverty measures and trends in Indonesia*, Interim technical report No. 22 (Jakarta, Regional Manpower Planning and Training Project-RMPT, World Bank Human Resource Development Loan 3134-IND, Bappenas).
- \_\_\_\_\_. 2000. *Indonesia: Strategy for manufacturing competitiveness*, UNDP/UNIDO Project No. NC/INS/99/004, United Nations Development Organization: Jakarta.
- \_\_\_\_\_. 2000. *Strategy for building manufacturing capability and the competitiveness of Indonesian firms*, Report prepared for UNIDO (Jakarta, UNIDO/UNDP/UNSFIR project No. NC/INS/99/004).
- \_\_\_\_\_ and Sweeting, E. 1995. *Employment, remuneration and training in a 1994 tracer study of technical graduates in Indonesia*, Technical report No. 41 (Jakarta, Regional Manpower Planning and Training Project (RMPT), World Bank Human Resource Development Loan 3134-IND, Bappenas).
- \_\_\_\_\_ and Islam, I. 2000. *Poverty, inequality and social protection: Lessons from the Indonesian crisis*, Working paper No. 00/001 (Jakarta, United Nations Support Facility for Indonesian Recovery -UNSFIR).
- Freeman, R. 1995. "Comment - What will a 10 per cent...50 per cent...100 per cent increase in minimum wages do?", a Review Symposium on Myth and measurement: The new economics of the minimum wage by D. Card and A. Krueger 1995, in *Industrial and Labour Relations Review*, Vol.48, pp. 842-9.
- Godfrey, M. 1991. *Wage statistics for employment monitoring and labour market analysis*, Report Series A No. 9 (Jakarta, Information System for Employment Development and Manpower Planning Project INS/90/001, Ministry of Manpower/United Nations Development Programme/International Labour Organization).
- \_\_\_\_\_, Swenson, C.G. and Kasryno, F. 1988. *Agricultural real wage trends, East and West Java, 1983-1998: A comparison of BPS and Patanas data*, Statistical paper No. 16 (Jakarta, Development Studies Project, Central Bureau of Statistics/USAID).
- Hidayat, L.E. and Bhoka, W. 1999. *A review of the fixing of the minimum wage and its implementation in Indonesia* (Jakarta, International Labour Organization).
- Hill, H. 1990. "Indonesia's industrial transformation. Parts I and II", in *Bulletin of Indonesian Economic Studies*, Vol. 26, Nos. 2, pp. 79-120 and No. 3, pp. 75-109.
- International Labour Office (ILO). 2000. *Minimum wage fixing: A summary of selected issues*, Briefing Note No. 14 (Geneva, ILO - website version: [www.ilo.org](http://www.ilo.org)).
- Islam, I. and Khan, H. 1986. "Spatial patterns of inequality and poverty in Indonesia", in *Bulletin of Indonesian Economic Studies*, Vol. 22, No.2, pp. 80-102.
- Islam, I. and Nazara, S. 2000. 'Active' and 'Passive' labour market policies in a comparative context: Implications for post-crisis Indonesia, Mimeo (Jakarta, International Labour Office).



- 
- Jammal, Y. and Steel, W. 1993. *Dynamics of growth in large and medium scale manufacturing 1975-90*, Statistical paper No.49 (Jakarta, Development Studies Project, Central Bureau of Statistics/USAID).
- Katz, L. and Krueger, A. 1992. "The effect of the minimum wage in the fast food industry", in *Industrial and Labour Relations Review*, Vol.46, No. 1, pp.6-21.
- Korns, A. 1987. *Distinguishing signal from noise in labour force data for Indonesia*, Discussion paper No.1 (Jakarta, Development Studies Project, Central Bureau of Statistics/Bappenas/USAID).
- \_\_\_\_\_. 1988. *Wage data at BPS*, Discussion paper No.4 (Jakarta, Development Studies, Project Central Bureau of Statistics/Bappenas/USAID).
- Lluch, C. and Mazumdar, D. 1983. *Wages and employment in Indonesia*, World Bank Report No. 3586-IND (Washington, D.C., World Bank).
- Machin, S. and Manning, A. 1996. "Employment and the introduction of a minimum wage in Britain", in *The Economic Journal*, Vol. 106, Issue 436, pp. 667-676.
- Manning, C. 1994. "What has happened to wages in the new order?", in *Bulletin of Indonesian Economic Studies*, Vol. 30, No. 3, pp. 73-114.
- \_\_\_\_\_. 1995. *Wage growth in a labour surplus economy? Indonesia during the new order*, Paper presented at the Economics Department Seminar, Research School of Pacific and Asian Studies, Australian National University: Canberra.
- \_\_\_\_\_. 1998. *Indonesian labour in transition: An Indonesian success story?* (Cambridge, Cambridge University Press).
- \_\_\_\_\_. 2000. "Labour market adjustments to Indonesia's economic crisis: Context, trends and implications", in *Bulletin of Indonesian Economic Studies*, Vol. 36, No.1, pp. 105-135.
- Mazumdar D. and Sawit, M.H. 1986. *Trends in Rural Wages, West Java, 1977-1983*. *Bulletin of Indonesian Economic Studies*, Volume 22, No.2, pp. 93-102.
- National Development Planning Agency (BAPPENAS). 1999. *Looking to the future of the Indonesian economy* (Jakarta, National Development Planning Agency).
- Naylor, R. 1992. "Wage trends in rice production on Java: 1976-1988", in *Bulletin of Indonesian Economic Studies*, Vol. 26, No.2, pp. 133-156.
- Neumark, D., Schweitzer, M. and Wascher, W. 2000. *The effects of minimum wages throughout the wage distribution*, National Bureau of Economic Research Working paper No. W7519 (Cambridge, Mass., NBER).
- Papanek, G. 1980. "The effect of economic growth and inflation on workers' income", in G.F. Papanek (ed.) *The Indonesian economy* (New York, Praeger).
- \_\_\_\_\_. 1985. "Agricultural income distribution and employment in the 1970s", in *Bulletin of Indonesian Economic Studies*, Vol. 21, No.2, pp. 24-50.
- \_\_\_\_\_. and Handoko, B. 1999. *The impact of the poor of growth and crisis: Evidence from real wage data*, Paper presented at Conference on "The Economic Issues Facing the
-

---

New Government”, August 18-19, Institute of Social and Economic Research-LPEM, Faculty of Economics, University of Indonesia and USAID: Jakarta.

- Rama, M. 1996. *The consequences of doubling the minimum wage: The case of Indonesia*, Mimeo (Washington, D.C., World Bank).
- Skoufias, E., Suryahadi, A. and Sumarto, S. 1999. *The Indonesian crisis and its impacts on household welfare, poverty transitions and inequality: Evidence from matched households in 100 village survey*, Research working paper (Jakarta, World Bank/AusAID/ASEM/USAID project Social Monitoring and Early Response Unit-SMERU).
- Staiger, D., Spitz, J. and Phibbs, C. 1999. *Is there monopsony in the labour market? Evidence from a natural experiment*, National Bureau of Economic Research Working Paper No. W7258 (Cambridge, Mass., NBER).
- Standing, G. 1999. *Global labour flexibility: Seeking distributive justice* (London, Macmillan Press).
- Stigler, G. 1946. “The economics of minimum wage legislation”, in *American Economic Review*, Vol. 36, pp. 358-65.
- Subbarao, K. 1997. *Public works as an anti-poverty programme: An overview of cross-country experience*, Paper presented to Allied Social Sciences Association (ASSA) Annual Meetings, January 3-5.
- Sutanto, A. and Irawan, P. 2000. *Regional dimensions of poverty: Some findings on the nature of poverty*, Paper presented at International Conference on Poverty Measurement in Indonesia, Jakarta, May 16.
- Welch, F. 1995. “‘Comment’ in Review symposium on myth and measurement: The new economics of the minimum wage by D. Card and A. Krueger 1995”, in *Industrial and Labor Relations Review*, Vol.48, pp.842-9.
- World Bank (WB). 1991. *Indonesia: Employment and training: Foundations for industrialization in the 1990s*, Report No. 9350-IND (Washington, D.C., World Bank).
- \_\_\_\_\_. 1993. *Indonesia: Public expenditures, prices and the poor*. Report No. 11293-IND (Jakarta, Indonesia Resident Mission).
- \_\_\_\_\_. 1996. *Indonesia: Dimensions of growth*, Report No: 15383-IND, May, Country Department III, East Asia and Pacific Region (Washington D.C., World Bank).
- \_\_\_\_\_. 1999. *Indonesia: Country assistance strategy*, Progress report No. 18963 IND, (Washington, D.C., World Bank).

---

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