SEGMENTED DEVELOPMENT AND THE WAY PROFITS GO: THE CASE OF INDONESIA*

BY STEVEN J. KEUNING

Institute of Social Studies, The Hague

In most developing countries profits account for a large proportion of national income, but their origin and use are widely divergent, related to the nature of ownership of the enterprise. Here an institutional classification of productive activities is developed and illustrated by the way profits go in Indonesia. By branch of industry they accrue to four categories of owners (foreign, public, private national incorporated, unincorporated). Next imputed labour income of the self-employed is separated in order to arrive at the functional distribution of income by sector, and lastly the destination (depreciation, interest, taxes, dividends, retained earnings) of each type of corporate capital income is shown. The estimates indicate a segmentation of activities, with regard to ownership as well as factor shares.

Segmented Development

Inequality can only be evaluated if a multi-dimensional picture of wealth, receipts and outlays of various layers in a society is available. A framework designed to organise such an overview and to connect it with other variables which influence asset-, income- and expenditure distributions, is the so-called System of Socio-Economic Accounts, an extension of the more familiar Social Accounting Matrix (SAM). The results to be discussed here are embedded in such a system compiled for Indonesia.¹ But we will concentrate on the distribution of profits. For that purpose an institutional classification of business enterprise is proposed.

Distributional issues are not the only reason for decomposing aggregate statistics. It can be argued that a better understanding of the growth process itself requires the differentiation of various categories of agents (producers, consumers etc.) as well. Reality is less strained by combining only those units which can be expected to act more or less homogeneously (provided that enough data at a "meso-level" are available).

In particular the fate of the developing countries is hardly served by theories based on assumed overall similarity of decision-making in a uniform institutional

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¹This System of Socio-Economic Accounts relates a SAM to several other (non-monetary) sets of data considering population, intake of nutrients, employment, educational attainment, housing and access to electricity, piped water, agricultural land and some durable goods (BPS, 1982; Downey *et al.*, 1982). The literature on SAMs swells at a great pace. Concise and good introductions can be found in Pyatt and Thorbecke, 1976 and King, 1981.

setting. The first recognition of segmented development was provided by the early theories about economic dualism, which try to account for the gaps between a "modern" urban industrial part and a "traditional" rural agricultural part.²

Several efforts have been made to define these modern and traditional sectors (ILO, 1972; Schimmler, 1979). However, the relevance of this dichotomy has been questioned by many authors and the underlying theory of dualism has been subject to various criticisms. For example, Fitzgerald (1979: 14-26) points to plural market connections of the sectors, lack of a link with the international economy and dualism which exists *within* industries (agriculture, manufacturing, services). McGee (1978) mentions boundary problems and the mobility of labour, moving between and within urban and rural activities.

Consequently, a partition should not be based on the characteristics of a mobile labour force but on the type of enterprise (or even more precise: on the type of ownership of the enterprise). In addition it is clear that two sectors are not sufficient for an adequate description of the segmentation prevailing in many economies.

Reynolds (1969) suggests the use of four sectors (of which two are "traditional": agriculture and urban trade-services, and two are "modern": industry and government). According to Reynolds: "The reason for this classification is that these four sectors operate on different production functions and may be expected to show a characteristically different behaviour of productivity and employment over time." Adopting these fairly reasonable and practical criteria,³ a few refinements can be tested.

Firstly, the informal trade-service sector often employs a considerable number of people in both urban and rural areas. This is clearly the case in Indonesia (see e.g. Jellinek, 1977 and BPS, 1982: Table 3.1.3).

Secondly, linkage of Input-Output tables with labour force surveys and other sources of data enables a subdivision by type of ownership of the enterprise at industry level. This cross-classification gives a higher probability of grouping together firms which have a more or less homogeneous technical and organizational structure of production.

Thirdly, the specific goals and other characteristics of decision making in public enterprises, in addition to their strategic (and much-debated) position in most developing countries, warrant their separate treatment.⁴

Fourthly, the "production function" of foreign-owned business may have its own shape (in relation to global objectives, large scale of production, high wage rates, fast incorporation of new technology, easy access to credit etc.).⁵ It

 2 For an overview see Kelley *et al.*, 1972 and Meier, 1976: Ch. 3. For various contributions on dualism in Indonesia consult volume two of Fox *et al.* (Eds.), 1980.

³Additional requirements for the use of this categorization in a policy-oriented analysis are: firstly, sectors must consist of identifiable target groups for planning, and secondly, subsectors which are considered strategic for development must be singled out.

⁴See Kartadjoemena (1976) for a discussion of the special role state enterprises (should) play in Indonesia. Refer also to McCawley (1979: 28-31).

⁵In this connection one could think of a further split of national entrepreneurs into *pribumi* (indigenous) and *non-pribumi* (mainly Chinese) businessmen. The alleged difference in their opportunities and behaviour is an important and sensitive issue in Indonesia (Fox *et al.* (Eds.), 1980; McCawley, 1979). However, comprehensive quantitative evidence for either position is not available at the moment and for lack of data we dropped this distinction.

can be added that returns to direct foreign investments, and the proportion thereof which is remitted abroad, are important policy variables for the host country's government, aiming at high levels of domestic savings and (re-)investments. Moreover, the explicit consideration of subsidiaries of multinational corporations facilitates further research into Indonesia's link with the world economy.

Manning (1980), in his discussion about the labour market in Indonesian manufacturing, also starts out: "... the major position to be advanced in this chapter is that there are distinct segments in the labour market; the divisions are not merely dualistic and are closely related to technology and foreign ownership."

Summarising, we arrive at a taxonomy of activities in a "plural" economy which combines subdivisions by region (as a minimum: urban, rural), by industry (for instance according to the U.N. International Standard Industrial Classification (ISIC)), and by institution (informal, formal national private, public, foreign). Similar disaggregations are proposed by Seers (1976) in his plea for a new accounting system which no longer takes a "monistic" view of a nation.

For demarcation of the four institutional categories of producers we used two criteria, namely *ownership* and *legal status*. The former served to distinguish between *foreign*, *public* and *private national* capital. Afterwards the legal status of the firm served to subdivide private national capital into *unincorporated* and *corporate*, because in our view, whether or not an owner is personally liable for the whole of the firm's commitments plays a crucial role in his investment and other behaviour.⁶ It probably also influences the degree to which the enterprise accounts and those of the proprietor as a private person are separated. Moreover, incorporation often coincides with a segregation of management and ownership, which certainly influences the way in which a company is run. Finally, corporate taxes are not levied on individually owned companies in many countries, including Indonesia.

Legal organization is not merely a suitable indicator. For our research it proved to be an operational criterion as well, since a question on legal organization has been included in most industrial surveys of the Indonesian Central Bureau of Statistics.

Dick (1980), in his contribution to the volume on Indonesian dualism, also argues "... that dualism can be seen also in terms of organisation and that there is another fundamental dichotomy between so-called corporate and non-corporate forms." He sketches a classification which is similar to ours.

Of course hybrids, like the joint venture, frequently occur.⁷ In that case we tried to recover the distribution of share-holding between the two (or more) parties and segregated the company's record accordingly. Thus the categories in this article do not refer to types of enterprise but to types of capital ownership of enterprises engaged in a certain activity.

We will use this taxonomy to set out estimates of the distribution of profits. Profits are a crucial factor according to many theories of economic growth and yet their origins and destinations are largely unexamined in empirical terms. This

⁶In appendix A all legal status categories in Indonesia are reviewed.

⁷See e.g. Tsurumi, 1980 for a description of arrangements between indigenous and foreign (Japanese) business partners in Indonesia.

TABLE 1
DISTRIBUTION OF OPERATING SURPLUS PLUS DEPRECIATION AMONG TYPES OF CAPITAL OWNERSHIP
(Indonesia 1975, Billions of Rupiahs)

			Total	Operating Surplus and Depreciation (row %)				
		Depreciation		Public	Foreign	Private National		
ISIC Sector	Operating Surplus					Incorporated	Unincorporated	
11 Food Crops	2,080.8	31.2	2,112.0	1	0	0	99	
12 Other Agricultural Crops	328.2	14.6	342.8	15	4	4	77	
13 Livestock	233.9	4.0	237.9	1	0	3	96	
15 16 Forestry	194.4	23.5	218.0	4	11	36	49	
17 Fishing	207.0	13.1	220.1	0	3	8	88	
Total Agriculture	3,044.3	86.5	3,130.8	3	1	4	92	
21 Coal Mining	0,4	0.1	0.5	100				
22 Petroleum and Gas	2,129.0	56.8	2,185.8	21	79			
23 Metal Ore	41.6	11.2	52.8	59	41			
29 Quarrying	65.0	1.6	66.5	4	0	1	94	
Total Mining	2,236.0	69.6	2,305.6	22	75	0	3	
31 Food, Beverages and Tobacco	352.5	73.7	426.2	15	8	14	62	
32 Textiles, Apparel and Leather	85.3	20.4	105.7	6	14	22	58	
33 Wood Products	17.8	1.9	19.6	4	4	30	63	
34 Paper and Printing	29.8	6.5	36.3	25	9	40	25	
35 Chemicals and Plastics	127.2	21.2	148.4	74	8	13	5	
36 Non-metallic Mineral Products	30.6	5.2	35.8	34	6	12	48	
37 Basic Metals	10.5	2.7	13.2	·	38	62	_	
38 Metal Products and Machinery	160.1	23.6	183.7	13	24	49	14	
39 Other Manufacturing	0.6	1.4	2.0	2	6	4	88	
Total Manufacturing	814.5	156.5	971.0	23	12	23	41	
41 Electricity and Gas	39.9	12.7	52.6	75	9	13	3	
42 Water	1.8	1.3	3.2	100				

Total Utilities	41.7	14.0	55.8	76	9	12	2
Total Construction	274.5	43.2	317.7	16	1	64	19
 61 Wholesale Trade 62 Retail Trade 63 Restaurants 64 Hotels 	1,072.7 423.0 103.4 10.7	73.2 28.3 13.5 3.3	1,145.9 451.3 116.9 14.0	10 0 0 29	7 0 0 6	36 4 4 5	47 96 95 60
Total Trade Restaurants and Hotels	1,609.8	118.3	1,728.1	7	5	25	63
 71 Land Transport 72 Water Transport 73 Air Transport 74 Allied Services 75 Communication 	288.2 85.9 31.4 39.2 9.1	41.5 22.7 15.8 7.4 5.6	329.7 108.6 47.2 46.6 14.7	2 79 94 44 100	 	18 5 6 56	80 16
Total Transport and Communication	453.8	93.0	546.8	31	—	17	51
 Banking Insurance Real Estate and Business Services 	131.1 16.2 337.3	6.7 2.1 17.5	137.8 18.4 354.8	88 48 2	4 22	6 31 18	$\frac{2}{81}$
Total Finance, Real Estate and Business Services	484.6	26.3	510.9	27	2	15	57
91 92) Public Administration and Defense		35.2	35.2	100			
93 Community Services 94 Recreational Services	23.0 47.9	12.3 6.5	35.3 54.4	15 4		66 7	19 88
95) 96) Personal Services	160.7	18.3	179.0	1	—	4	95
Total Community and Personal Services	231.6	72.2	303.9	14		12	74
Total	9,190.9	679.7	9,870.6	14	20	12	54

Note: All totals are subject to rounding errors.

Sources: a) Totals: BPS, 1980a.

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b) Distribution: Bank Indonesia, 1976; BPS, 1975, 1976a-c, 1977a-e, 1978a-c, 1979a-c, 1980b-c, 1981a-b; Embassy USA, Jakarta, 1981; GINSI, 1978; Kantor Sensus & Statistik, DKI Jakarta, 1979; Republic of Indonesia (Various Ministries), 1975, 1976, 1981a-b.

results partly from the difficulty of obtaining a reliable estimate of a company's operating surplus which is generally calculated as a residual.⁸

ORIGIN AND DISTRIBUTION OF PROFITS

Table 1 presents the distribution of operating surplus plus depreciation in Indonesia (1975) by two digit ISIC sector.⁹ For a synopsis of estimation methods refer to appendix B. It is self-evident that disaggregated data shown in this article have to be interpreted with considerable care, in view of the often heroic assumptions involved in their computation. Besides, total operating surplus by sector has usually been calculated as a residual, and estimates of depreciation are not among the firmest in the Input-Output table.

The last part of Table 1 shows that just over half (54 percent) of total profits—almost ten trillion Rupiah (or about 24 billion U.S. dollars) in 1975—accrued to unincorporated business, 20 percent ended up in foreign hands, 14 percent went to public enterprise and 12 percent was earned by private national incorporated capital.

The distribution differed considerably in the major sectors. Not surprisingly, *agriculture* was dominated by small-holders.¹⁰ Corporations only played a significant role in forestry and to a lesser extent in the growing of estate crops.

Ninety-five percent of profits in the *mining* sector originated from petroleum and gas production. About one quarter of the returns was appropriated by the state oil company and more than three quarters by investors from abroad. These proportions are somewhat arbitrary. Firstly, they refer to gross returns, *before* payments of taxes and royalties (Table 3 below will show a big difference in tax rates between public and foreign oil companies). Secondly, the government can influence receipts by means of its pricing policy.¹¹

Patterns in the *manufacturing* sector were rather heterogeneous. Broadly, in subsectors with low minimum viable levels of capital stock (food processing, textiles, wood processing, non-metallic minerals, other manufacturing) unincorporated enterprise prevailed. Government had a firm grip on the chemical industries (fertilizer, petroleum refinery). Paper products and printing, basic metals, and metal products and machinery were dominated by private domestic corporate capital. All in all roughly equal shares of profits (23 percent) were taken by public and private national incorporated business, foreign owners received about half that amount (12 percent) and non-corporate manufacturing accounted for the rest (41 percent).

⁸A conceptual difference exists between operating surplus and profits. Land rent, gifts and interest on loans must be subtracted from the former in order to obtain the latter. This is not a completely trivial operation. For instance, it is likely that unincorporated entrepeneurs borrow less but pay higher interest rates (McCawley, 1981:83). Data restrictions impeded the making of this refinement by industry; land rents were subtracted only in food crops cultivation (Keuning, 1984: 77-78). We will use the two terms interchangeably and return to this issue in Table 3 below.

⁹The recommended split of unincorporated profits by location (urban/rural) was carried out as well (BPS, 1982: Table 3.1.2), but is not reproduced here.

¹⁰The subdivision of this income from food crops by farm size is discussed in another paper (Keuning, 1984).

¹¹The oil companies were obliged to offer part of their output for sale on the domestic market, at a price much below world market level.

Electricity, gas and water were controlled by the government except for a few private plants and some own-generated electricity.

In the *construction* sector most profits accrued to private national incorporated capital (64 percent).

Trade could be separated into retail trade and restaurants on the one hand (almost exclusively carried on by self-employed entrepreneurs)¹² and wholesale trade and hotels on the other (which had a more dualistic structure).

Under *transport and communication*, air transport and communication were controlled by a few state companies. Land transport was mainly organized on an informal basis.¹³ The bulk of profits from water transport was earned by one public body (port authorities). Shipping was run by both incorporated enterprise (long distance hauling) and independent sailors (shorter routes). Finally only public and private national corporations were licensed in the allied service sector (travel agents, removers, forwarding companies and storage).

In the *finance*, *real estate and business service* sector most of the profits accrued to households. This reflects the large amounts of imputed rent on owner-occupied dwellings. Banks were mainly state-owned.

Finally, "own-account" workers dominated in the community and personal service sector.

Table 2 shows the sectoral origins of profit income for each type of capital ownership. Overall, 32 percent of Indonesia's gross operating surplus in 1975

ISIC	Type of Capital			Private National	Unin-	
Sector		Public	Foreign	Incorporated	corporated	Total
1	Agriculture	6	2	10	55	32
2	Mining	37	87	0	1	23
3	Manufacturing	17	6	19	8	10
4	Electricity, Gas and					
	Water	3	0	1	0	1
5	Construction	4	0	17	1	3
6	Trade, Restaurants and					
	Hotels	9	4	36	21	18
7	Transport and					
	Communication	12		8	5	6
8	Finance, Real Estate and Business					
	Services	10	0	6	5	5
9	Community and					
	Personal Services	3	—	3	4	3
Total		100	100	100	100	100

TABLE 2

DISTRIBUTION OF OPERATING SURPLUS PLUS DEPRECIATION BY TYPE OF CAPITAL OWNERSHIP (INDONESIA 1975, COLUMN PERCENTAGE)

Note: This table has been derived from the absolute figures underlying the row percentages in Table 1. Figures are subject to rounding errors.

Sources: See Table 1.

¹²Refer to Jellinek (1977) for a description of the structure of much of the petty trade in Jakarta.
 ¹³Dick (1981) reviews the organization of urban public transport in three big cities in Java.

originated in agriculture, followed by 23 percent in mining and 18 percent in trade, restaurants and hotels. Manufacturing accounted for only 10 percent.

Apparently the lion's share of foreign direct investments has been made in the oil sector, since about six-sevenths of profits due to expatriate capital were created in that industry. The oil sector was an important source of surpluses for the public sector too. Besides petroleum, state companies supplied for instance: chemicals, electricity, gas and water, transport and communication and financial services. Private incorporated business was mainly engaged in trade (wholesale), manufacturing and construction. The bulk of informal activities took place in agriculture and trade.

THE AMBIGUITY OF PROFITS

Whereas returns of a limited liability company can generally be regarded as remuneration to invested capital, operating surplus of a non-corporate firm primarily reflects imputed labour income which in the first instance serves for subsistence of both the entrepreneur and unpaid family workers. Particularly in countries where formal wage labour is not yet widespread profits in this sense account for a large part of value added. From the 1975 Social Accounting Matrix for Indonesia (BPS, 1982), computations show that only 21 percent of Gross Domestic Product at factor cost consisted of wages and salaries. Operating surpluses (including depreciation) thus accounted for 79 percent and most was earned by unincorporated business (notably farmers).

A classification of productive activities by type of ownership subsequently permits an estimation of imputed labour incomes in unincorporated industries (with total incomes of these firms serving as an upper bound). Kelley and Williamson (1968), in their case study of the determinants of household savings in an Indonesian region, found that the non-farm entrepreneurial group had the highest marginal and average savings rate from *total* income. This is not astonishing, if only because of the necessity for asset owning own-account workers to maintain their depreciating capital stock (however small that may be). Therefore a comparison of spending out of *labour* income by different household groups (for instance classified by asset ownership and main employment status of the principal income earner) would be more interesting, in addition to a comparison of the relative size and destination of net *capital* income of different firms (unincorporated business versus various types of corporate enterprise).

The former analysis then concentrates on savings rates, destinations of savings and consumption patterns (e.g. propensities to buy imported commodities). The latter considers rates of return, re-investment ratios and directions of (re-)investment (technology, productivity, import content, general effects on foreign trade). For these purposes the split of unincorporated profits into imputed labour income and capital income is a modest first step.

This was attempted by Downey (see Downey *et al.*, 1982). Estimation procedures started with re-tabulating and cleaning basic data from the 1976 labour force survey and adjusting them for limited coverage (scaling up all data by about 2 percent). Subsequently the number of "worker equivalents" was calculated by multiplying the number of workers in each labour-factor category

last year, times average hours worked per worker last week, and dividing by a "normal" working week of 40 hours.¹⁴ Labour has been simultaneously classified by sex, occupation (6 groups roughly reflecting the skill required for the job), status category (employee, employer/self-employed, unpaid family worker), age (10-16/above 16 years old), primary or secondary job, and location (urban/rural). This makes 288 categories (some of them empty) in each sector of activity.

A first approximation of wage rates for employees was arrived at by dividing annual reported income by the number of worker equivalents. Next, these wage rates for employees in each labour-factor category were applied to the corresponding unpaid categories of workers (employers/self-employed, unpaid family workers) and then multiplied by their total number of hours worked.¹⁵ Afterwards, labour payments in each sector were reconciled with the Input-Output table.

Capital income by sector was then computed as a residual after subtraction of the "salary" for entrepreneurs and unpaid family workers. In a few sectors total wages and salaries, as recorded in the Input-Output table, appeared to include a compensation for the labour of the self-employed. In those cases sectoral imputed labour income was not deducted from the unincorporated operating surplus, but from wages and salaries. The problem of provisional estimates of total labour income in a sector more than exhausting the sum of paid wages and unincorporated operating surplus did not occur.

The method described here seems reasonably accurate. It involves close examination of a very extensive data base (labour force survey) and reconciliation with estimates from other sources (input-output table).

However, it assumes that the bias introduced by not considering seasonal changes (see footnote 14) equally affects paid and unpaid workers. Moreover, it critically depends on the supposition that similar wage labourers and own-account workers do not operate on separate labour market segments, but entry into various forms of salaried employment may be severely restricted, thereby artificially keeping up wages (see also Manning (1980) on this point).

A less time-consuming alternative is to take average value added per head in firms employing only a few people (say five) as an approximate (unpaid) wage rate (Fitzgerald, 1979: 308-309), but in that case returns to assets (land, structures, tools) are not allowed for in small firms.¹⁶

Figure 1 shows the distribution of gross value added (at factor costs) by sector among wage income, imputed labour income and capital income (or non-labour income). Several small ISIC sectors have been aggregated and the SAM codes agree with the Social Accounting Matrix for Indonesia, 1975.

The figure was constructed in such a way that the whole area represents gross value added in Indonesia. The horizontal axis was divided in accordance with the share of each sector in the Gross Domestic Product and the vertical axis

¹⁶Refer also to Kuznets (1958: 23-29) for an early survey of attempts to allocate entrepreneurial income. In his later work he is in favour of a procedure which is analogous to the one adopted here (Kuznets, 1969: 177-180).

¹⁴Note that the number of working weeks per year in one or more jobs is not considered.

¹⁵Jones (1981) observes that poorer (unpaid) workers tend to have a longer working week, so that merely counting numbers probably distorts employment and labour income data. He also stresses the importance of reckoning with the possibility of multiple jobholding. Refer also to Moir (1979).



Figure 1. Distribution of Gross Domestic Product (at factor costs) by Type of Income and Activity, 1975

separates this income per sector into three types of production factors. So the surface of each rectangle corresponds to the size of the income depicted in it.¹⁷

On the right-hand side of the whole block we find a bar giving the national average break-down. It is striking that over 60 percent of Indonesia's Gross Domestic Product accrued to capital, even after allowing for imputed wages. This seems a remarkably high proportion for such a labour-abundant country.¹⁸

This non-labour income not only reflects returns on investments, but also rents on the depletion of natural resources (minerals, timber and perhaps fish). Further, land rents are high in the densely populated island of Java, where most of the non-mining activities are situated. Moreover direct taxes have not yet been subtracted. Since corporate taxes largely exceeded income taxes, the labour factor obtained a higher share of the (after-tax) disposable income distribution. But despite these reservations the impression of a lack of competition in various sectors cannot be completely avoided.

Figure 1 shows that labour income is seriously underestimated if only paid wages are taken into consideration. Total imputed labour income almost equalled the aggregate wage bill.¹⁹

A comparison of sectors reveals substantial differences. Indonesia's high "capital intensity" of production (here approximated by the capital income/value added ratio) was partly caused by the large weight of the very capital (and resource) intensive mining industry. Other sectors in which a low percentage of value added accrued to labour are real estate (owner-occupied dwellings), forestry, livestock and fishery. Not surprisingly, most imputed labour income, absolutely and relatively, was earned in food crops and trade, although in the latter sector a conspicuously large share of value added still consisted of capital income (this can point to significant monopoly profits in (wholesale) trade).

The proportion of wage payments to employees was largest in the service and wood products and construction sectors. The labour income/value added ratio came out above average in the manufacturing sector as a whole, but this sector is not homogeneous. The ratio was markedly low in the food, beverages and tobacco industries.

Figure 1 also permits a judgement on absolute amounts. As manufacturing did not (yet) play a major role in Indonesia in 1975, the vertical bars representing these activities are rather narrow. Another example concerns food crops production where paid wages were a *relatively* minor source of income, although the total wage bill was certainly not insignificant (second in size, only after sector 56—public administration and related services).

Inequality cannot be understood without considering such relative and absolute aspects simultaneously—an operation, which is facilitated by this type of histogram analysis.

¹⁹Estimates of physical labour input and wage differentials by sector and status category can be found in the Indonesian System of Socio-Economic Accounts (BPS, 1982: Tables 3.1.3 and 3.1.4).

¹⁷I owe the basic idea of this type of figure to Roger Downey.

¹⁸Probably the share of capital income in Indonesia's GDP is higher and the share of paid wages and salaries is lower than in various other developing countries (Keuning, 1982: Table 3). However, international comparisons of functional distributions of income are rather hazardous in the absence of standardized procedures for their computation.



Figure 2. Distribution of Capital Income (before taxes) by Type of Ownership and Activity, Indonesia 1975 (Sectors ranked according to declining Capital Income/Value Added Ratios)

DISTRIBUTION OF CAPITAL INCOME

Figure 2 examines in detail the capital incomes of Figure 1, and disaggregates them into the four types of owners mentioned before. This time the horizontal axis has been divided in accordance with the weight of each sector in total capital income. The sectors are ranked according to declining capital income/value added ratio, in order to get a rough impression of the correlation between "capital intensity" and type of ownership of fixed assets. Again on the right-hand side a column representing the national average appears.

Of course, the share of the informal sector is smaller than in Table 1, since imputed labour income has been subtracted. Returns on assets were spread among the four categories of capital owners in the following way: foreign 25 percent, public 17 percent, domestic private corporate 15 percent and unincorporated 43 percent. This indicates that non-labour income of the self-employed is not negligible, contrary to common practice in the calculation of the functional distribution of income in developing countries.

We have already discussed the sectoral distributions of operating surplus, which resemble the patterns in this graph. It seems that, although the dominant foreign involvement in the most "capital intensive" activity might not be coincidental, in general no clear-cut relationship exists between the share of 'pure' profits going to incorporated owners and "capital intensity". Inter alia, this is due to a substantial participation of unincorporated capital in various activities which have a high rent component, like real estate, livestock and forestry. Evidently a high capital income/value added ratio might either point to a heavily mechanized (incorporated) production process or to an (informal) activity which collects the "reward" for the control over non-reproducible wealth (see Ward (1976) on the definitions of capital). Furthermore, differences in labour input (per "unit" of capital) are considerable. A comparison of the following positions may prove illustrative: (a) food crops, where a relatively low rent component is earned because of a very high labour/land ratio, (b) non-food crops plus fishery, which need more reproducible capital, namely trees and boats, and (c) forestry plus livestock, which use reproducible capital and have a relatively high rent component because of a low labour/land ratio (and because of the rapid destruction of the jungle in the case of forestry).

The detail shown in the figures above will be of use in answering questions regarding profit rates, sectoral employment opportunities, social costs and benefits of investments etc. For that purpose time-series of capital income/value added ratios by sector and by institution will be even more illuminating. Further research should also concentrate on a disaggregation by asset type, the role of human capital and the extent to which capital is actually utilized (Sen, 1975: 47-48).

DESTINATION OF PROFITS

We may go one step ahead and examine the destination of profits for each type of owner. Unincorporated returns have accrued entirely to households. Table 3 shows then what happened with *corporate* capital income. In this table the industry specifications are abandoned (except for the crucial oil sector).

Type of Ownership	Operating Surplus + Depreciation	Depreciation	Operating Surplus	Net Interest Payments (Partly ^c)	(4)/(3) %	Profits before Taxes	Unre- quited Transfers to Government	(7)/(6)	Profits after Taxes
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
 Foreign i) Oil^a ii) Non-Oil 	2,004 1,719 285	85 45 40	1,919 1,674 245	69 ^d 59 10	4 4 4	1,850 1,615 235	1,136 1,095 41	61 68 17	714 519 195
 Public^b i) Oil^a ii) Non-Oil 	1,315 467 848	122 24 98	1,194 444 750	12 4 8	1 1 1	1,182 439 742	113 4 109	10 1 15	1,068 436 633
3. National Private	1,202	140	1,062	88	8	974	172	18	802
Total	4,521	346	4,174	169	4	4,006	1,421	35	2,584
Type of Ownership	Distributed Profits	Retained Earnings	(11)/(9) %	(11)/(6) %	(11)/(1) %	Gross Savings	Net Savings	Stock Change	Resi- dual
	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
 Foreign i) Oil^a ii) Non-Oil 	503 402 101	211 117 93	30 23 48	11 7 40	11 7 33	296 162 133	211 117 93	54 38 16	157 80 77
2. Public ^b i) Oil ^a ii) Non-Oil	27 27	1,041 436 605	97 100 96	88 99 82	79 93 71	1,163 459 704	1,041 436 605	32 22 10	1,009 413 595
3. National Private	521	281	35	29	23	421	281	72	210
Total	1,051	1,533	59	38	34	1,880	1,533	157	1,376

TABLE 3 THE DESTINATION OF NON-WAGE INCOME IN THE CORPORATE SECTOR BY OWNERSHIP, INDONESIA 1975 (Billions of Rupiah)

^aI/O Sectors 45, Petroleum and Natural Gas Mining; 103-108; Petroleum Refinery; and 109, Other Petroleum and Coal Products. ^bExcluding depreciation of general government (and public non-profit community services) and rents of government land. ^c See footnote 21. ^d Including property income n.i.e. paid abroad (for patents, copyrights etc.). Sources: See Table 1, and IMF, 1980.

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First, depreciation in each Input-Output sector was apportioned to each type of capital ownership (in accordance with the distribution of operating surplus plus depreciation as shown in Table 1^{20}). The aggregated results are presented in column 2. The fact that the oil sector wrote off relatively small amounts is yet another sign of its windfall profits.

Afterwards net interest payments (incl. compensation for the use of patents, copyrights etc.) were taken into consideration (in so far as they had not already been settled²¹). They were estimated with the help of statistics on net claims on each type of enterprise (Bank Indonesia, 1976). The data did not permit a partition into oil and non-oil activities, so we assumed the same percentages for each of them (see column 5). Public enterprise, noticeably, hardly paid any net interest in 1975.

The next deduction concerns corporate taxes and various other legal fees (for licences etc.) which were distributed by type of duty. Details by type of institution were generally not available and much educated guesswork was involved.²² In all events, the lion's share (77 percent) was collected from foreign oil companies. They were liable to a special tax and handed over 68 percent of their profits (column 8).

Whereas this higher tax rate on profits gained in petroleum production is justifiable because of the rent component, it is inconsistent that the other extractive industries (forestry, fishery, other mining) are allowed to keep these "supernormal" gains. There seems room for appropriating these resource rents to the national common good.²³

Column 10 of Table 3 shows dividends paid, which were derived from the balance of payments for foreign companies, from the government receipts for state enterprises and from an investment survey for national private corporations. The residual retained earnings by type of owner then appear in the next column. A comparison of the retention ratios (column 12) is of interest. Firstly, the state hardly received any benefits from the corporations it owned. Secondly, branches of multinationals transferred proportionally more abroad (70 percent) than national private incorporated concerns (or parts of joint ventures) distributed among their share-holders (65 percent). Thirdly, the foreign oil corporations transferred 77 percent of after tax profits and the other foreign owned subsidiaries only 52 percent.²⁴

²⁰This assumes a constant relationship within sectors between depreciation rates of and rates of return on fixed capital stock.

²¹This refers to the interest margin (banking output) which is treated as an intermediate input in the Input-Output table.

²²According to Lerche (1980), less than one-half of all *registered* corporations indeed paid some taxes in 1971 and, more surprisingly, this low proportion also applies when only state enterprises are considered. Refer also to McCawley (1979: 42-43).

²³This conclusion is also reached by Ruzicka (1979) in his case study about logging in East-Kalimantan. Race (1980) mentions that monopoly rents accrue to (the managers of) public enterprises in various other sectors as well (trade, banking, entertainment).

²⁴1975 may have been a somewhat atypical year in this respect because of the severe liquidity problems which hit the national oil company Pertamina by the end of 1974. Still, foreign petroleum business accounted for 40 percent of Indonesia's incorporated operating surplus (excluding depreciation), 20 percent of total corporate profits after taxes and only 8 percent of net company savings.

Retained earnings plus depreciation equals gross savings (column 15). In conclusion stock changes by type of capital owner are presented, estimated in the same way as depreciation was broken down. Then in the last column a residual appears, which was available for new investments (in either fixed or financial assets). From here on, a flow-of-funds analysis should take over and show how this money was channelled through the banking system and was used for new capital accumulation by each type of capital in each activity.²⁵

CONCLUDING REMARKS

The seventy-nine percent of Indonesia's GDP in 1975 which consisted of operating surpluses included incomes with widely diverging origin and destination, such as windfall profits in the oil sector versus labour compensation of agricultural small-holders. In this paper a breakdown of profits has been presented, not only by industry of origin but also by ownership of the institution and by factor (labour, capital) entitled to the surplus generated.

The results mainly serve to indicate orders of magnitude, in view of the often heroic assumptions which had to be used during the process of disaggregation (apart from the bias introduced from the typically bad coverage of the informal sector in particular—see Seers (1976) on this point).

Overall, a remarkably high proportion of GDP was received by capital owners (61 percent), and this was counterbalanced by a very low proportion consisting of paid wages and salaries (21 percent). The share of imputed labour income (18 percent) almost equalled the total wage bill.²⁶ This distribution remains somewhat puzzling even after allowing for the high rent component in several key industries (oil).

It would however, be inaccurate to identify capital income with corporate income, since 43 percent of non-wage incomes accrued to the self-employed. In fact, of total unincorporated operating surplus more than half (60 percent) served as remuneration for capital, contradicting the common thought that in "own-account" firms value added only consists of (imputed) labour payments.²⁷

This does not imply that these returns to capital were collected by the entrepreneurs. A large proportion might be handed over to the landlord, moneylender, trishaw owner etc. More research into the size and direction of these inter-household property income transfers is desirable.

Gross corporate profits went into net interest payments (4 percent), taxes and other levies (31 percent), dividends and such (23 percent), and retained earnings (42 percent). These company savings comprised of half of Indonesia's total savings (BPS, 1982: Table 1), so that each (modelling) analysis of the

²⁵Outlines and applications of the flow of funds analysis are explained by Stone and Roe (1971) and by Bain (1977). Incorporation into the SAM framework is discussed by King (1981).

²⁶The distinction between own-account worker and employee is regularly not very sharp, though. The former may not own any of his means of production but he may still bear all the risk, a doubtful benefit which is not shared with wage labourers.

²⁷Note that paid wages have not (yet) been disaggregated by institutional organization of the employer, so that factor proportions by type of ownership of the enterprise cannot be derived directly from our study. This is an interesting area of further development, in order to gain better insight into the choice of technology in each industry.

country's growth potential which overlooks them or lumps them together with household savings introduces a serious distortion.

The main part of these retained earnings ended up in public enterprise²⁸ which handed over very little to the general government. What happened next with these large sums of money can only be guessed.

About a quarter of foreign profits was remitted abroad, more than half was transferred to the government and the rest was retained. Private corporate enterprise distributed almost half of operating surplus to their share-holders.

Most types of income were concentrated in a few sectors. Wages and salaries were mainly received in the service sector. Seventy-two percent of imputed labour income and 43 percent of unincorporated capital income were earned in food production and retail trade. Almost all foreign capital income and a large proportion of public capital income originated in the petroleum sector. Private national incorporated investors were chiefly engaged in wholesale trade, manufacturing and construction.

A recent overview of the Indonesian economy since the mid-sixties emphasizes the lack of integration: "Certainly few contemporary observers would deny that the dualistic features of the Indonesian economy described by Boeke are still obvious today, and have in many ways been aggravated by the type of technological change..." (Booth and McCawley, 1981: 15).

This paper has tried to indicate that a more complex system of disaggregation of activities can improve our understanding of a segmented economy. If a subdivision of a conventionally delineated industry classification into four ownership types (foreign, public, private national corporate, unincorporated) and two regions (urban/rural) were established, many criticisms of theories of dualism might be obviated. It has been argued that features like *legal status* (the degree of liability) and *capital ownership* (foreign or national, public or private) have a decisive influence on the objectives and constraints of the enterprise, in particular if the economy is highly compartmentalized.

These non-numerical criteria can be measured in an easy and reliable way and do not result in volatile classes, so that consistent time series can be constructed. The only prerequisite is the inclusion of an additional core classification of enterprises (supplementary to ISIC) during the processing of surveys of productive activities. The institutional classification described here involves only two (non-numerical) questions which actually are already asked in many surveys of the Indonesian Central Bureau of Statistics.

It goes without saying that the number and types of institutions distinguished have to be tailored to the needs and conditions of each country concerned. On most occasions it seems worthwhile to single out financial institutions, in order to allow for the important link with a flow of funds analysis. This in turn would pave the way for an empirical investigation into the transmission mechanism from retained earnings (and other savings) to investments.

Finally, the notion of a plural segmentation still has to be embedded in a theory modelling the assumedly distinct objectives and constraints of various

²⁸It is possible, however, that this amount was somewhat overstated because in many cases equal efficiency of all types of institutions operating in one sector was assumed.

types of capital owners engaged in various activities in different regions, as well as their interrelations, which matter, even in a fragmented society. Therefore the taxonomy presented in this paper has been integrated into a set of disaggregated estimates of the full economic circle, laid down in the Indonesian System of Socio-Economic Accounts.

Appendix A

LEGAL STATUS CATEGORIES OF INDONESIAN ENTERPRISE

The most common forms of business enterprise in Indonesia are the following:

(a) Perusahaan Negara-profit-oriented state enterprise

Variations are: Perusahaan Daerah (usually owned by a provincial government), Perusahaan Umum (public utilities corporation) and Perusahaan Jawatan (public service agency).

(b) Perseroan Terbatas—limited liability company

The majority are private, but some of them are owned by the government. Foreign companies can only operate under this legal status.

(c) Commanditaire Vennootschap—limited partnership

This type represents a hybrid between incorporated and unincorporated enterprise. It allows one or more silent partners. Silent partners are liable only for their capital contributed. Managing partners are personally liable for the whole of the firm's commitments.

(d) Firma-full partnership

The partners carry unlimited personal liability for the whole of the firm's commitments.

(e) Yayasan-foundation

(f) Koperasi-cooperative

(g) Perseorangan—individually owned company

Of these legal forms (a) and (b) are definitely corporate; we treated (d), (e), (f) and (g) as unincorporated and for (c) we applied an (arbitrary) fifty-fifty split. Evidently our bipartition simplifies the range of organisational forms which exists in Indonesia. When sufficient data become available, a more suitable classification of institutions might consist of all (six) categories mentioned above, adding a subdivision of limited liability companies according to capital ownership (foreign, public, private national).

APPENDIX B

METHODS FOR ESTIMATING THE DISTRIBUTION OF PROFITS

Operating surplus and depreciation by sector have been taken from the Input-Output table for 1975 (BPS, 1980a) except for a few minor corrections required for the overall consistency of the Indonesian System of Socio-Economic Accounts (BPS, 1982). Their distribution among types of capital ownership has been estimated for each of the 179 sectors distinguished in the I/O table.

Afterwards, these results have been combined to the two digit ISIC level. Unfortunately, various (indirect)methods had to be used due to limited data availability:

- 1. In some sectors (or subsectors) only one type of capital ownership existed. For example coal mining and railway transport were state monopolies. Corporate enterprise engaged in cultivating food crops, cutting bamboo or catching fish from ponds was negligible. A breakdown of the road passenger transport subsector served to single out informal horsecarts, trishaws and such.
- 2. In the crucial petroleum and gas sector three types of enterprise operated: the state oil company, foreign owned companies, and joint ventures between the state oil company and a foreign contractor. Output proportions were used as a proxy to allocate profits to each type. For the profit-sharing arrangements which applied to the joint ventures, Johnson (1977) and a report of the American embassy (Embassy of the USA, 1981) were consulted.
- 3. The manufacturing sector (including processing of crops on the farm) had been documented relatively well because of recent censuses of household and cottage industries (BPS, 1976a), of small establishments (BPS, 1978b) and of medium and large establishments (BPS, 1978a). Profits recorded by the lastmentioned enumeration have been retabulated by type of capital ownership (and by five digit ISIC code). The first two censuses concerned factories employing less than 20 people, and at most a marginal error was introduced by assuming that they were all unincorporated.

Total profits in each subsector have been reconciled with the data from the Input-Output table, for which the 1975 results of the annual survey of large and medium establishments (BPS, 1977b) served as a cross-check.

- 4. In several sectors the production accounts of public enterprises (BPS, 1978c) provided us with an initial estimate of the profits of this type of capital ownership.
- 5. In many sectors the distribution of profits among some or all types of capital ownership could not be recovered, but with the help of bold assumptions concerning identical rates of return (cases a and b below), identical capital/output ratios (case b below) and what not (case c below), proportions from the following available distributions were applied:
 - a. The distribution of assets (e.g. land area owned by various types of estates
- in part of the other agricultural crops sector (BPS, 1976b and 1977c); number of cows, hens etc. in part of the livestock sector (Rep. of Indonesia, 1981a); number of rooms times room rates in the hotel sector (BPS, 1975); number of trucks and buses by size-class in part of the land transport sector (BPS 1980c and 1981b).
 - b. The distribution of output (in parts of the forestry, fishing, mining, construction, trade, transport and service sectors).
 - c. Various other indicators, such as the distribution of credit outstanding in part of the banking sector (Bank Indonesia, 1976) and the location of sales in the retail trade and restaurant sectors (assuming that in rural areas only unincorporated traders were operating, and that in urban areas the patterns closely agreed with those in the capital city (BPS 1979c and 1981a; Kantor Sensus and Statistik, DKI Jakarta, 1979)).

6. At most a "reasonable guess" was available for parts of a few minor service sub-sectors, like cinemas, night-clubs and amusement gardens.

For a more detailed overview of estimation procedures, industry classifications and estimates for subsectors refer to the original report (Keuning 1982: 12-48).

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