

EMPLOYMENT STRUCTURE AND LABOR MIGRATION IN RURAL CENTRAL JAVA: A PRELIMINARY OBSERVATION

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CLIFFORD Geertz once characterized Javanese rural economy (and its history) basically through the twin concept of "agricultural involution" and "shared poverty" [1]. On the other hand, the present writer has pointed out, in a number of recent articles based on the writer's own experience in field research as well as upon recent trends in the studies of the Javanese rural economy, the need for a different perspective taking note of the dynamics of change and class division pertaining to the peasantry for both a contemporary and historical analyses of Javanese villages [10] [11] [12]. In these articles the differentiation in the scale of ownership and management was emphasized as the most fundamental moments in stratifying the village population.

However, this phenomenon of the differentiation in the scale of landownership and management does not tell the whole story, although it is both the most important impetus for stratification of the Javanese village population and an index to measure it. Among other impetuses for stratification are agricultural revenues from non-arable land operations (i.e., especially agricultural revenues from utilization of the yard, revenues from nonagricultural employment in the region (including part-time employment), and labor migration in search of new employment and income opportunities. Depending on the condition in and out of the village, these factors may prove more important than the strictly defined agricultural factors of landownership and management scales.

Villages in the Special Region of Yogyakarta (Daerah Istimewa Yogyakarta, hereafter abbreviated as D.I. Yogyakarta) seem to constitute a typical case of these various factors closely interacting in stratifying the village population. Probably because of the influence of a high population pressure on the arable land, there are neither landlords nor wealthy farmers worth establishing as a specific category in these villages (except for some genuine exceptions).¹ Rather, stratification has been achieved through expansion into nonagricultural activities and labor migration to other regions.

The writer refers to this unique type of village stratification as the "Central Javanese structure of agrarian problems."² This paper attempts to present one

¹ See, for instance, Kanō [11, pp. 85-92] for cases where landlords and wealthy peasants have amassed a considerable amount of land in East Java.

² It is called the "Central Javanese structure" simply because such a structure is found widely and typically in Central Java, including D.I. Yogyakarta, and it never denies the

TABLE I
POPULATION IN JAVA, 1971

Province/ Special Region	Area (1,000 km ²) A	Urban Population (1,000) B	Rural Population (1,000) C	Total Population (1,000) D	Population Density D/A	Ratio of Urban Population (%) B/D × 100
D.K.I. Jakarta*	0.59	4,546	0	4,546	7,705	100.0
West Java	46.30	2,683	18,938	21,621	467	12.4
D.I. Yogyakarta	3.17	406	2,082	2,489	785	16.3
Central Java	34.21	2,345	19,520	21,865	639	10.7
East Java	47.92	3,694	21,814	25,508	532	14.5
Total	132.19	13,674	62,354	76,029	575	18.0

Source: Compiled from [5, Nos. 9-13].

* Daerah Khusus Istimewa Jakarta Raya (Special Capital Region of Greater Jakarta).

aspect of such a structure as observed in villages in D.I. Yogyakarta. A comprehensive analysis would call for a multi-faceted examination of the cases, including the form of landownership and agricultural production. It would also necessitate a sufficient survey of existing literature and statistics, coupled with the result of intensive field researches of individual villages from the specific viewpoint as mentioned above.³ Within the limited space of this paper, only employment structure in nonagricultural sectors and labor migration will be taken up as the stratifying elements in presenting the outline of the issue mainly relying on macro data on the regional level.

I. OUTLINE OF THE REGIONAL ECONOMY

Let us first take a look at the population data. D.I. Yogyakarta (the former dominion of the Sultan) constitutes the core area of the so-called *Kejawen* (Java Proper),⁴ together with the former dominion of the Susuhunan in Surakarta on its eastern boundary. It thus records one of the highest population densities among other densely populated areas of Java (Table I). But the rate of population increase has been conspicuously low in comparison with other regions (Table II).

Table III gives the vital statistics as of mid-1976 from the population registration for one *kotamadya* (municipality) and four *kabupaten* (regencies) in D.I. Yogyakarta. In the rural *kabupaten*, Kabupaten Bantul and Kabupaten Sleman have extremely high population densities (compared with the all-Java average of 618 per square kilometer in the same year). In the municipality and all the

possibility of other parts of Java placed under similar conditions or that of Central Java having villages or areas differently characterized.

³ The present writer has already published the following report of a field research in Japanese [13].

⁴ It was C. Geertz who established the category of "Kejawen" in classifying rice-producing villages in Java from a cultural-ecological viewpoint [1, pp. 28-38]. For a summary of this work of Geertz's use of the term, see Kanō [12, p. 5] in particular.

TABLE II
POPULATION GROWTH IN JAVA, 1961-76

Province/ Special Region	1961 (1,000)	1971 (1,000)	1976 (1,000)	Average Annual Growth Rates (%)	
				1961-71	1971-76
D.K.I. Jakarta	2,907	4,546	4,919	4.6	1.6
West Java	17,615	21,621	23,526	2.1	1.7
D.I. Yogyakarta	2,241	2,489	2,627	1.1	1.1
Central Java	18,407	21,865	23,582	1.7	1.5
East Java	21,823	25,508	26,997	1.6	1.1
Total	62,993	76,029	81,652	1.9	1.4

Sources: [4] for 1961, [5, Nos. 9-13] for 1971, and [9] for 1977.

TABLE III
POPULATION IN D.I. YOGYAKARTA, 1976

Municipality/ Regency	Population			Sex Ratio A/B	Area (km ²) D	Population Density C/D
	Male A	Female B	Total C = A + B			
Yogyakarta	180,200	181,220	361,420	0.994	31.8	11,365
Bantul	291,432	310,716	602,148	0.938	426.7	1,411
Sleman	300,092	318,499	618,591	0.942	524.6	1,179
Gunung Kidul	319,013	333,609	652,622	0.956	1,632.5	400
Kulon Progo	189,979	201,956	391,935	0.941	577.6	679
Total	1,280,716	1,346,000	2,626,716	0.951	3,193.1	823

Source: Compiled from [9, p. 6].

four regencies, there are more women than men, but the imbalance is more marked in the rural *kabupaten*, already suggesting male labor emigration from these villages.

Let us then confirm certain outstanding features of the regional economy through simple statistics. Table IV shows the percentage distribution of net domestic product for various sectors and their growth rates for D.I. Yogyakarta as of 1969, 1972, and 1975. The small discrepancies between 1972a and 1972b are due to the different data bases. Despite this inadequacy, the data are sufficient to clearly show a general trend in the changes in the relative weight of the sectors. Table V shows the same figures for gross domestic product for the entire national economy as of 1972 and 1975. By comparing these two tables one can point out certain salient features of the industrial structure of D.I. Yogyakarta and the directions in which it has been moving in recent years.

The overall growth rates of D.I. Yogyakarta's regional economy and the Indonesian national economy betray no significant differences, while sector-by-sector growth rates of the two entities are markedly different. D.I. Yogyakarta has almost no mining industries, such as oil and non-ferrous metals, which are one of the leading sectors of the Indonesian economy. Furthermore, in the total national economy the manufacturing sector shows a marked growth in recent

TABLE IV
NET DOMESTIC PRODUCT IN D.I. YOGYAKARTA, 1969-75
(1973 constant price; %)

Sector	Percentage Distribution of Net Domestic Product				Average Annual Growth Rate	
	1969	1972a	1972b	1975	1969/72a	1972b/75
Agriculture	38.9	38.3	35.9	38.6	5.3	11.9
Mining/quarrying	0.3	0.3	0.3	0.2	1.3	2.3
Manufacturing	20.6	11.6	12.3	8.4	-12.6	-3.7
Construction	3.0	3.9	3.3	4.0	15.2	16.1
Transportation & communication	2.8	3.8	4.0	5.2	17.4	19.6
Commerce & other services	34.4	41.9	44.1	43.7	12.9	8.9
Total	100	100	100	100	—	—
NDP (Rp. mil.)	41,232	48,766	46,330	60,386	5.8	9.2

Source: Compiled from [2, p. 30, Table 1].

TABLE V
GROSS DOMESTIC PRODUCT IN INDONESIA, 1972 AND 1975
(1973 constant price; %)

Sector	Percentage Distribution of Gross Domestic Product		Average Annual Growth Rate
	1972	1975	
Agriculture	40.9	37.2	4.6
Mining/quarrying	11.1	10.9	7.1
Manufacturing	9.3	11.1	14.6
Construction	3.7	4.7	17.2
Transportation & communication	3.8	4.0	9.8
Commerce & other services	31.3	32.1	8.8
Total	100	100	—
GDP (Rp. billion)	6,067	7,620	7.8

Source: Compiled from [7].

years, occupying over 10 per cent of the entire GDP in 1975, while the same sector registered a sharp relative decline in D.I. Yogyakarta. In 1969 it occupied over 20 per cent of the regional net domestic product, but in 1975 its share declined to less than 10 per cent. A close examination for possible reasons for this phenomenon falls outside the scope of this paper, but some of the most important reasons may be briefly mentioned here. First of all, foreign and domestic investment in the manufacturing sector since the promulgation of the Foreign Investment Act (Law No. 1 in 1967) had been concentrated in D.K.I. Jakarta and West Java, leaving only small fund to be invested in East Java and Central Java, especially in D.I. Yogyakarta. The traditional industry in D.I. Yogyakarta was also defeated in competition with new capital-intensive enterprises in other areas and with imported goods.

TABLE VI
CHANGES IN THE HARVESTED AREAS FOR PRINCIPAL FOOD CROPS
IN D.I. YOGYAKARTA, 1966-75

Year	(1,000 ha)								
	Lowland Rice	Upland Rice (gogo)	Sub-total	Corn	Cassava	Sweet Potato	Peanuts	Soy Beans	Total
1966	81	40	121	49	81	4	23	20	298
1967	81	35	116	35	56	3	23	20	253
1968	85	34	119	49	52	3	22	25	270
1969	81	37	118	27	55	4	26	24	254
1970	88	38	126	44	62	2	25	26	285
1971	86	41	127	38	60	2	21	25	273
1972	88	41	129	38	58	2	24	30	281
1973	96	39	136	60	58	3	21	29	307
1974	105	42	148	80	68	2	35	34	367
1975	102	43	146	52	67	2	30	31	328

Sources: [6] for 1966-71, [7] for 1972-75.

TABLE VII
RICE HARVEST PER HECTARE, 1972-75

Year	(100 kg)			
	D.I. Yogyakarta		Java Average	
	Lowland Rice	Upland Rice	Lowland Rice	Upland Rice
1972	40.19	14.34	37.59	16.31
1973	40.23	14.05	38.89	17.36
1974	45.40	13.87	39.77	16.47
1975	46.62	16.00	40.18	17.58

Source: [7].

On the other hand, agriculture in D.I. Yogyakarta fared quite well against the total agricultural picture of the country, due largely to the expansion of the total harvested area of lowland rice brought about by more double- and triple-cropping (Table VI) and also to a greater per hectare harvest than the Java average (Table VII).

And yet, per capita rice production in D.I. Yogyakarta falls considerably below the Java average (Table VIII). Agriculture alone is grossly insufficient to support the large population. This low per capita rice production is principally due to an extremely high man-land ratio (as of 1976 there was only 0.025 hectare of paddy per head), and also to the accompanying small-scale operation of individual farming units. These points can be confirmed in Table IX, where the 1973 census data are shown. The average per farm size of 0.53 hectare in D.I. Yogyakarta is considerably smaller than the Java average of 0.64 hectare, not to mention the national average of 0.99 hectare. One must further note that in this census farms with less than 0.05 hectare of paddy (or equivalent fields) and landless households were totally excluded from the data. The writer estimates that, in view of the population data, rural non-"farm" households

TABLE VIII
PER CAPITA LOWLAND RICE PRODUCTION (DRIED
UNHULLED RICE) IN JAVA, 1977

Area	Total		Per Capita Lowland Rice Production (kg)
	Lowland Rice Production (1,000 tons)	Population (1,000)	
West Java*	4,925	29,438	167
Central Java†	4,051	26,752	151
East Java	4,397	27,563	160
Total Java	13,373	83,753	160

D.I. Yogyakarta	292	2,670	109
Sleman‡	147	999	147
Bantul	83	614	134
Kulon Progo	50	399	127
Gunung Kidul	12	661	18

Sources: For total lowland rice production, Indonesia, Central Bureau of Statistics, *Production of Food Crops in Java and Madura* (Jakarta, 1979); for population, idem, *Population of Java-Madura: Results of Population Registration, End of Year 1977* (Jakarta, 1979).

* West Java Province + D.K.I. Jakarta.

† Middle Java Province + D.I. Yogyakarta.

‡ Kotamadya Yogyakarta is included.

TABLE IX
DISTRIBUTION OF FARMS BY SIZE OF LAND CONTROLLED
IN D.I. YOGYAKARTA, 1973

Size of Land Controlled (Ha)	Distribution of Farms		Area of Land Controlled		Average Farm Size (Ha)
	No.	%	Ha	%	
Less than 0.20	91,980	26.8	11,958	6.6	0.13
0.20-0.50	131,261	38.2	40,537	22.3	0.31
0.50-1.00	70,034	20.4	47,084	26.0	0.67
1.00-2.00	38,531	11.2	49,460	27.3	1.28
2.00-5.00	11,132	3.2	28,440	15.7	2.55
Over 5.00	634	0.2	3,901	2.2	6.15

Total	343,572	100	181,375	100	0.53

Source: Indonesia, Central Bureau of Statistics, 1973 *Agricultural Census*, Vol. 1, *Agriculture* (Jakarta, 1976).

number approximately 90,000 units, amounting to about 21 per cent of the total rural households of the region.⁵

Under such a severe state of affairs additional income generated through nonagricultural employment opportunities must become vitally important for the rural population. Table X indicates the size of employment for various sectors, obtained from the 1971 census. Despite the declining share of the manufacturing

⁵ This ratio for entire Jawa is estimated as high as 37 per cent.

TABLE X
EMPLOYMENT STRUCTURE IN JAVA, 1971

Sector	D.K.I. Jakarta		West Java		Central Java		D.I. Yogyakarta		East Java		Total	
	1,000	%	1,000	%	1,000	%	1,000	%	1,000	%	1,000	%
Agriculture	49	4	3,881	58	5,095	63	574	56	6,503	67	16,102	60
Manufacturing	117	9	442	7	818	10	163	16	541	6	2,081	8
Commerce	318	23	812	12	1,010	12	131	13	1,089	11	3,360	12
Construction	92	7	152	2	122	2	18	2	114	1	498	2
Transportation & communication	138	10	189	3	131	2	16	2	188	2	662	2
Public administration	457	34	693	10	762	9	101	10	935	10	2,948	11
& other services	180	13	521	8	178	2	17	2	384	4	1,280	5
Others	1,351	100	6,689	100	8,117	100	1,021	100	9,754	100	26,930	100

Source: Indonesia, Central Bureau of Statistics, 1971 *Population Census: Population of Indonesia, Series D (Jakarta, 1975)*, p. 222.

TABLE XI
EMPLOYMENT STRUCTURE IN D.I. YOGYAKARTA, 1971

Sector	Yogyakarta		Bantul		Sleman		Gunung Kidul		Kulon Progo		Total	
	1,000	%	1,000	%	1,000	%	1,000	%	1,000	%	1,000	%
Agriculture	3	2	113	45	114	50	277	90	67	55	574	56
Manufacturing	18	16	73	29	39	17	7	2	26	22	163	16
Commerce	31	29	37	15	38	17	9	3	15	12	131	13
Construction	3	3	5	2	8	3	1	0	2	1	18	2
Transportation & communication	7	7	3	1	4	2	0	0	0	0	16	2
Public administration	41	38	17	7	23	10	11	4	9	8	101	10
& other services	6	6	4	2	3	1	3	1	2	2	17	2
Others	109	100	253	100	229	100	308	100	122	100	1,021	100

Source: [7, No. 12, p. 227].

sector in recent years, the share of this sector in terms of its employment capacity in D.I. Yogyakarta is higher than any other areas including D.K.I. Jakarta. Moreover, one must note that nearly 90 per cent (145,000 people) out of the total number of those employed in the manufacturing sector (163,000 people) reside in rural areas outside of Kotamadya Yogyakarta (Table XI). A number of them naturally commute to the city, but they are only a small minority. The only convincing explanation can be the alleged high degree of prevalence of rural manufacturing industries and above all household and cottage industries. In addition, rural residents also occupy 100,000 out of the 131,000 employed in commerce, 60,000 out of the 101,000 employed in public administration, and 15,000 out of the 18,000 employed in construction. In sum, 341,000 out of the total number of rural residents employed (912,000), i.e., nearly 40 per cent, find their jobs outside of agriculture. This single fact will be of a great importance, never to be neglected in elucidating the structure of agrarian and rural problems not only in D.I. Yogyakarta but also probably in the entirety of Central Java.

II. EMPLOYMENT OPPORTUNITIES IN NONAGRICULTURAL SECTORS

It was observed in the preceding section that a surprisingly high proportion of the rural population in D.I. Yogyakarta are employed in nonagricultural sectors. Except for public services with job security guaranteed by the state finance, most of these nonagricultural sectors are made up of rural peddling, artisanship (*pertukangan*), and household and cottage industries, which are all small in scale, low in profitability, and often only part-time occupations of poor peasants. The data in Table XII, taken out of Ann L. Stoler's report on a village in D.I. Yogyakarta under the pseudonym of Kali Loro [16], are more than sufficient to illustrate this situation.

Unfortunately there has been little organized data collection on the local level regarding these nonagricultural industries. There are few available statistics concerning commerce and other services. But manufacturing fairs somewhat better, with some data available to illuminate the situation in D.I. Yogyakarta. However, since the data are derived from a variety of sources thus creating some contradictions, they can be used only as a rough guide to indicate broad trends.

Table XIII compares D.I. Yogyakarta with the rest of Java in terms of the numbers of manufacturing establishments (large and medium) and the numbers of their employees. In view of the 1971 population distribution (D.K.I. Jakarta, 6.0 per cent; West Java, 28.4 per cent; D.I. Yogyakarta, 3.3 per cent; Central Java, 28.8 per cent; and East Java, 33.6 per cent), one may conclude that the ratio of the employed in large- and medium-scale establishments in D.I. Yogyakarta is considerably lower than the Javanese average. This is because there are only a small number of large-scale establishments. Table XIV classifies these large- and medium-scale units by industry, giving the numbers of establishments as well as the numbers of the employed. Weaving and batik dying—two textile-related industries—occupy around the half of the total numbers of establish-

TABLE XII
 RETURNS TO LABOR PER HOUR OF VARIOUS OCCUPATIONS
 IN KALI LORO, 1973

Occupation	Returns to Labor (Rp./Hour)
Rice cultivation:	
(1) Owner-cultivator, 0.5 ha	50
(2) Owner-cultivator, 0.2 ha	25
(3) Sharecropper, 0.2 ha	12.5
(4) Garden cultivation	25
Agricultural wage labor:	
(5) Plough (own animals)	70-90
(6) Hoe	9-11
(7) Transplant	6- 7
(8) Weed	9-11
(9) Harvest	16-20
Nonagricultural wage labor:	
(10) Carrying/construction	10
(11) Craftsman (carpenter)	15
(12) Weaving factory	7
Trade:	
(13) Women on foot, capital=Rp.1,000	5-10
(14) Men on foot, capital=Rp.1,000	15
(15) On bicycle (Rp.8,000-12,000), capital=Rp.3,000	20
Preparation of food for sale:	
(16) Coconut sugar (own trees)	5- 6
(17) Coconut sugar (sharecropping)	2.5- 3
(18) <i>Longtong</i> ("rice processing")	3.5
(19) <i>Tempe</i> ("beancake")	5
Animal husbandry:	
(20) Ducks	5-12
(21) Goats	1- 2
(22) Cattle (own)	4- 6
(23) Cattle on <i>gaduhan</i> ("sharecropping") basis	2- 3
Handwork:	
(24) <i>Tikar</i> ("straw mat")	1.5
(25) <i>Kepang</i> ("bamboo board")	3

Source: [16, p. 687].

ments and the employed, followed by sugar production, where one establishment (Madukismo Sugar Factory owned by the local government) engaged the third greatest number of people.

Table XV gives the spatial distribution of all the full-time manufacturing establishments (regardless of their scales) in D.I. Yogyakarta in terms of the numbers of establishments, the numbers of the employed and the amount of production. Kotamadya Yogyakarta and Kabupaten Sleman occupy 84 per cent

TABLE XIII
LARGE- AND MEDIUM-SCALE MANUFACTURING ESTABLISHMENTS
AND EMPLOYMENT IN JAVA, 1971

Province/ Special Region	Number of Establishments				Number of Employees (1,000)			
	Large Scale	Medium Scale	Total	Share of the Total (%)	Large Scale	Medium Scale	Total	Share of the Total (%)
D.K.I. Jakarta	271	1,479	1,750	10.9	43.7	24.0	67.7	8.2
West Java	530	3,035	3,565	22.2	151.0	44.9	195.9	23.8
D.I. Yogyakarta	26	539	565	3.5	8.4	9.0	17.4	2.1
Central Java	367	4,430	4,797	29.9	132.5	67.8	200.3	24.3
East Java	619	4,739	5,358	33.4	265.5	76.4	341.9	41.5
Total	1,813	14,222	16,035	100	601.1	222.1	823.2	100

Source: [17, p. 168].

Note: A large-scale unit is defined as the one which employs 50 or more workers when using power and 100 or more workers when not using power. A medium-scale unit is defined as the one which employs 5-48 workers when using power and 10-99 workers when not using power.

TABLE XIV
LARGE- AND MEDIUM-SCALE MANUFACTURING ESTABLISHMENTS
AND EMPLOYMENT BY INDUSTRY IN D.I. YOGYAKARTA, 1971

Industry	Number of Establishments	Employees	
		No.	%
Weaving	156	6,129	35.1
Batik	135	2,342	13.4
Sugar (dried or powdered)	1	1,760	10.1
Drying tobacco	18	603	3.5
Wigs	1	800	4.6
Printing	5	798	4.6
Wooden furniture	20	350	2.0
Tea processing, sorting, & packing	8	293	1.7
Tiles	11	214	1.2
Others	210	4,165	23.9
Total	565	17,454	100

Source: Compiled from [17, pp. 169-70].

of the establishments, 79 per cent of the employed, and 93 per cent of the total production. The high concentration of establishments in Kabupaten Sleman among the four regencies is due to its location, with two trunk national roads going through this regency in the directions of Surakarta-Surabaya and Semarang.⁶

At any rate, however, these establishments in the factory system engage only about 20,000 people in the total D.I. Yogyakarta, which is not a substantial

⁶ Manufacturing production of Sleman exceeds those of Kotamadya Yogyakarta probably because there is a major spinning and weaving plant owned by GKBI (Indonesian Federation of Batik Cooperatives) in Kabupaten Sleman on the road to Semarang.

TABLE XV
SPATIAL DISTRIBUTION OF MANUFACTURING ESTABLISHMENTS
IN D.I. YOGYAKARTA, 1972

Municipality/ Regency	Establishments		Employees		Production	
	No.	%	No.	%	Amount (Million Rp.)	%
Yogyakarta	958	69.8	8,593	43.8	3,090	41.0
Bantul	122	8.4	1,696	8.7	306	4.1
Sleman	201	13.8	6,996	35.7	3,892	51.7
Gunung Kidul	40	2.75	520	2.7	66	0.9
Kulon Progo	135	9.25	1,807	9.2	181	2.4
Total	1,456	100	19,612	100	7,535	100

Source: [17, p. 171].

TABLE XVI
HOUSEHOLD AND COTTAGE INDUSTRIES IN JAVA, 1974/75

(1,000)

Province/ Special Region	Number of Household and Cottage Industry Units				Number of Participants			
	Without Hired Partici- pants	With Hired Partici- pants	Total		Members of House- hold	Hired Partici- pants	Total	
			No.	%			No.	%
D.K.I. Jakarta	11.9	4.5	16.3	1.7	49.2	8.7	57.9	1.9
West Java	133.9	15.6	149.5	15.8	442.6	29.8	472.4	15.7
D.I. Yogyakarta	83.4	3.0	86.3	9.1	262.7	5.2	267.9	8.9
Central Java	497.1	23.8	520.9	55.1	1,592.4	41.1	1,633.5	54.4
East Java	154.2	17.5	171.7	18.2	535.7	33.3	569.0	19.0
Total	880.4	40.5	944.8	100	2,882.6	118.1	3,000.6	100

Source: [8, p. 1].

number. The presence of a relatively large group of people engaged in manufacturing (Table X) cannot be accounted for merely by these establishments. This brings us to the household and cottage industries.

Central Java as a whole (embracing D.I. Yogyakarta) is noted for its prevalence and development of household and cottage industries. This can be seen most convincingly from Table XVI, where the results of the 1974/75 industrial census: household and cottage industries are shown.⁷ Java as a whole has as

⁷ Household and cottage industries here refer to manufacturing establishments engaging less than 5 participants, in accordance with the definition adopted at the 1974/75 *Industrial Census*:

- (1) Large manufacturing establishments (engaging 100 persons and over);
- (2) Medium manufacturing establishments (engaging 20 to 99 persons);
- (3) Small manufacturing establishments (engaging 5 to 19 persons);
- (4) Household and cottage industries (engaging less than 5 persons).

See [8, p. xi]. The definition of the term "household enterprises" used in tables XVII and XIX instead of household and cottage industries is not clearly formulated in the source of those tables, so that the figures in Table XVI are not comparable to those in tables XVII and XIX.

TABLE XVII
EMPLOYMENT IN HOUSEHOLD ENTERPRISES IN D.I. YOGYAKARTA, 1976

Industry	(1,000)					
	Yog- yakarta	Bantul	Sleman	Gunung Kidul	Kulon Progo	Total
Coconut sugar production	—	22.0	0.5	0.4	11.1	34.0
Batik	6.0	6.8	0.5	0.2	10.0	23.5
Matting & mat weaving	—	0.6	5.4	1.0	7.8	14.8
Weaving	—	0.1	0.8	1.0	9.0	10.9
Bamboo work	0.1	2.5	1.7	3.6	0.3	8.2
Tile manufacture	—	0.4	3.0	2.1	0.4	5.9
Bean curd & bean cake production	—	2.1	1.0	0.9	1.4	5.5
Others	2.6	4.9	2.9	5.8	2.2	18.5
Total	8.7	39.4	15.8	15.1	42.1	121.2

Source: [2, p. 34].

Note: The data in this table are not comparable to those in Table XIX; these figures refer to licensed firms, while those in Table XIX refer to all firms.

many as 945,000 units of household and cottage industries and as many as three million participants, over 60 per cent of which (64 per cent of the units, and 63 per cent of the participants) are located in Central Java. D.I. Yogyakarta alone embraces 86,000 units and 268,000 participants. The number of rural households having employment and income opportunities in these household and cottage industries must be far larger than in the industrial establishments. Of great importance here is the fact that an overwhelming majority of them are of non-capitalistic management, employing no labor but dependent only on family hands.

Table XVII classifies all the participants in household enterprises in D.I. Yogyakarta in accordance with the regions and jobs. In terms of spatial distribution, Kabupaten Bantul and Kabupaten Kulon Progo have a high concentration. In jobs, coconut sugar production, batik, matting and mat weaving, and weaving are prominent. A majority of these jobs are probably made up of low-productivity, rural part-time work as they are classified as "preparation of food for sale" and "handwork" in Table XII.⁸ In this sense, the very presence of these household and cottage industries itself may be taken as a sign of rural poverty. At the same time, however, they also provide essential additional employment opportunities to the lowest strata of the rural population, along with agricultural wage-earning, without which their income may well drop below the subsistence level. This phenomenon in D.I. Yogyakarta may be of special significance in characterizing the general conditions in Central Java.

It was pointed out earlier that, contrary to the general trend in the total national economy, D.I. Yogyakarta saw a decline in manufacturing from the late

⁸ Coconut sugar production, a typical instance of household and cottage industries, is described in detail in Penny and Masri Singarimbun [15, pp. 36-44].

TABLE XVIII
CHANGES IN THE NUMBER OF MANUFACTURING ESTABLISHMENTS, 1968-72

Industry	1968	1969	1970	1971	1972
Food stuffs	393	297	287	227	222
Textile (including ready made garments)	2,379	2,078	2,057	1,905	1,878
Construction materials	132	131	195	126	137
Drugs, chemicals, & pharmaceutics	62	50	49	37	36
Stationary/printing	53	40	39	50	32
Transportation/communication	68	43	53	45	45
Handicrafts	314	270	200	202	398*
Others	49	49	61	56	42
Total	3,450	2,958	2,941	2,648	2,790

Source: [17, p. 172].

* One hundred and twenty-three establishments in leather work are added.

TABLE XIX
LABOR FORCE EMPLOYED IN MANUFACTURING ESTABLISHMENTS
IN D.I. YOGYAKARTA, 1964 AND 1974

	1964 (1,000)	1974 (1,000)	Changes	
			No. (1,000)	%
Factories:				
Kotamadya Yogyakarta	15.2	8.9	-6.3	-41.4
Large	2.9	2.9	-0.0	+2.8
Medium	3.5	3.2	-0.3	-9.0
Small	8.8	2.8	-6.0	-68.4
Rural <i>kabupaten</i>	8.8	16.4	+7.6	+72.7
Large	3.9	8.3	+4.4	+111.6
Medium	1.3	1.6	+0.3	+21.9
Small	3.6	6.5	+2.9	+80.5
Total	24.0	25.3	+1.3	+5.4
Household enterprises:				
Kotamadya Yogyakarta	18.7	5.0	-13.7	-73.3
Rural <i>kabupaten</i>	173.4	126.6	-46.8	-27.0
Total	192.1	131.6	-60.5	-31.5
Factory and household enterprises	216.1	156.9	-59.2	-27.4

Source: [2, p. 33].

1960s onward. This also can be seen from Table XVIII,⁹ in the changes in the numbers of manufacturing establishments from 1968 (one year after the Foreign Investment Act was introduced) to 1972 (note the sharp decline of textile establishments in particular). What effect did this general manufacturing decline

⁹ Table XVIII is grossly inconsistent with Table XV due most probably to the difference in the definition of "manufacturing establishments" adopted in the two distinctive sources. But they still are of some use to grasp certain basic trends.

TABLE XX
FACTORY EMPLOYMENT BY INDUSTRY IN
D.I. YOGYAKARTA, 1964 AND 1974

Industry	(1,000)	
	1964	1974
Food & beverages (including cigarettes)	5.6	8.1
Textiles (including leather)	13.5	9.2
Furniture & building materials	1.1	3.2
Others	3.6	4.9
Total	24.0	25.3

Source: [2, p. 34].

have on the employment opportunities? Table XIX and XX attempt to answer this question by comparing the 1964 and 1974 industrial censuses, indicating the following points. First, the declining number of establishments produced slightly more employment opportunities, due to employment growth in the rural *kabupaten* and to greater employment in all jobs except in textiles (which saw a major decline in labor). Secondly, of greater importance has been a sharp decline in the labor force employed in household enterprises during this decade, both in Kotamadya Yogyakarta and the rural *kabupaten*. This means the large-scale destruction of rural part-time manufacturing establishments, to the extent of bringing down the total industrial labor force in 1974 to three-fourths of that of 1964.

It is not difficult to imagine that this had a suppressing effect on the rural employment opportunities and this affected the capacity of the population to support itself. What happened, then to those who lost employment or to the newly created labor force during the decade? Logically one would expect even more pressure than before to push the people out of the region. But we have already seen in Table II that the population in D.I. Yogyakarta increased at a constant annual rate of 1.1 per cent during the 1961-76 period, giving no signs of large-scale emigration during the last several years. Since the agricultural sector can hardly be expected to engage more peasants, a considerable portion of the labor force must have been absorbed in the newer industries other than agriculture and manufacturing, especially in commerce and other services.¹⁰

III. LABOR MIGRATION

The rural labor force not employed in agriculture or manufacturing in part seek employment in newly established commerce and other services in the same village (specifically including commutation to the towns) and also in part attempt to emigrate and find employment in other localities. In this section, labor migration involving geographical transfer of the place of residence is examined through

¹⁰ This expansion of the commerce and service sectors seems to have been led by the thriving tourist trade. See Hall and Mubyarto [2, p. 3].

TABLE XXI
POPULATION GROWTH IN PRINCIPAL CITIES IN JAVA, 1930-76

City	1930		1961		1971		1976	
	Popu- lation	Index	Popu- lation	Index	Popu- lation	Index	Popu- lation	Index
Jakarta	535*	100	2,907	543	4,546	850	4,919	919
Bandung	167	100	973	583	1,200	719	1,233	738
Semarang	218	100	503	231	642	294	876	402
Yogyakarta	137	100	313	228	341	249	361	264
Surakarta	163	100	368	226	413	253	461	283
Surabaya	367	100	1,008	275	1,552	423	1,755	478
Malang	87	100	341	392	422	485	440	506

Sources: [3, Part 2, p. 21] for 1930, [4] for 1961, [5, Nos. 9-13] for 1971, and [9] for 1976.

* The sum total of populations of Batavia and Mr. Cornelis.

some data of population movement.

First, labor migration within D.I. Yogyakarta is examined. This category can be divided into two kinds: movement from the rural *kabupaten* to Kotamadya Yogyakarta, and movement within the rural *kabupaten*. There being no population data giving these figures, one can only make some judgments on the basis of inter-regional comparison of population growth ratios.

Table XXI gives population growth for the seven major cities in Java with a population greater than 300,000 as of now, relying on the 1930, 1961, and 1971 population censuses and 1976 population registration. Both for the forty-six year period of 1930 to 1976 and for the fifteen-year period following 1960, the growth rate for Kotamadya Yogyakarta was always the lowest among these cities. The average growth rate for 1961-71 being 0.9 per cent and that for 1971-76 1.0 per cent, it was even lower than the average of D.I. Yogyakarta as a whole for the respective periods. Disregarding the stage migration to other regions via Kotamadya Yogyakarta, the population migration to Kotamadya Yogyakarta itself from surrounding rural areas can be surmised to be near zero.

But certain new population concentration can be observed in village around Kotamadya Yogyakarta along the trunk roads. P. F. McDonald and A. Sontosudarmo assert that the average 1961-71 annual population growth ratio of over 1.5 per cent was recorded in seven villages out of nine along the Solo Road (for Surakarta and Surabaya), four out of five villages along the Magelang Road (for Magelang and Semarang), all the four villages along the Bantul Road, and three out of the four villages along Wates Road (for Cilacap and Bandung) [14, p. 85].

The growth in the labor force employed by factories, as seen in Table XIX, probably is related to this phenomenon in that newly established factories or expansions of existing factories took place along these trunk roads, attracting some population in general and a labor force in particular. In the case of the villages along the Solo Road connecting Kotamadya Yogyakarta, Yogyakarta

TABLE XXII
MIGRANTS IN AND OUT OF D.I. YOGYAKARTA BY AREA OF
ORIGIN OR DESTINATION, 1961-71

Province/ Special Region	Outflow	Inflow	Net Migration
Lampung	-37,886	+ 3,883	-34,003
D.K.I. Jakarta	-39,295	+ 7,917	-31,378
West Java	- 6,829	+ 7,497	+ 668
Central Java	-35,031	+38,986	+ 3,955
East Java	-12,593	+11,779	- 814
Others	-16,238	+20,398	+ 4,160
Total	-147,872	+90,460	-57,412

Source: [14, p. 57].

Airport and the Prambanan ruins, expansions of such tourist facilities as hotels, restaurants, and souvenir shops can be cited as another labor absorptive factor.

In all other rural areas the growth rate of population remains low. Among the sixty districts in the four rural *kabupaten* (excepting the six districts which have the above-mentioned villages of high population growth in their boundaries), only three registered the average annual growth rate of over 1.5 per cent for the 1961-71 period [14, pp. 73-82]. In general these districts can be characterized as population exporters. P. F. McDonald and A. Sontosudarmo also estimate the rate of population migration on the annual average basis for the 1961-71 period to be -0.5 per cent for Bantul, -0.5 per cent for Sleman, -1.0 per cent for Gunung Kidul, and -0.5 per cent for Kulon Progo (- sign indicating an outflow) [14, p. 68]. These estimates support the above characterization of the region.

Based on these reflections, it can be judged that the emigrating population from these rural areas flew not into the principal city in the region, i.e., Kotamadya Yogyakarta, but to other areas outside of D.I. Yogyakarta. This inter-regional population movements can be substantiated only by the 1961 and 1971 population censuses as yet, which serve as the basis for Table XXII, giving the calculated population migration between D.I. Yogyakarta and other areas during the decade of 1961-71. The total net emigration numbered 57,000, amounting to 2.6 per cent of the 1961 D.I. Yogyakarta population.¹¹ Most conspicuous are the net loss to Lampung of 34,000 and the net loss of 31,000 to D.K.I. Jakarta.¹² A bulk of the rural people going out of D.I. Yogyakarta for new employment opportunities then are absorbed by either of these two places.

In order then to identify the salient features of emigration to these two areas,

¹¹ This includes a considerable number of the so-called transmigration, a policy-encouraged migration to the Outer Islands, which numbered 22,275 in the nine-year period from 1962 to 1971 (3,092 from Bantul, 3,462 from Sleman, 12,972 from Gunung Kidul, and 2,569 from Kulon Progo, Gunung Kidul sending out by far the largest number). The destinations are not confirmed, but it is safe to assume that the bulk of them went to Lampung Province in Sumatra [14].

¹² Among the migrants to and from other areas are a considerable number of entrants to and graduates from institutions of higher learning in D.I. Yogyakarta.

TABLE XXIII
SOME CHARACTERISTICS OF MIGRANTS FROM D.I. YOGYAKARTA
TO D.K.I. JAKARTA AND LAMPUNG, 1961-71

Features	To D.K.I. Jakarta	To Lampung
(%)		
Age distribution*		
0- 9	4.9	5.7
10-19	20.4	17.4
20-34	50.3	37.9
35-49	16.7	27.0
Over 50	7.7	12.1
Total	100	100

Duration of residence in D.I. Yogyakarta		
0- 4 years	35.9	15.0
5- 9 years	25.9	29.2
Over 10 years	38.1	55.8
Total	100	100

Level of education completed†		
No schooling	12.1	46.1
Less than completed primary school	15.6	30.6
Completed primary school	29.5	18.2
Junior high school	20.6	2.5
Senior high school and above	22.2	2.6
Total	100	100

Source: [14, p. 62].

* Born in D.I. Yogyakarta.

† Persons aged ten years and over in D.I. Yogyakarta.

let us see Table XXIII, where emigrants to Lampung and D.K.I. Jakarta are classified and compared in terms of age, duration of residence in D.I. Yogyakarta, and educational background.

Among the common features of these two groups of emigrants is the rather high ratio of the people who had resided in D.I. Yogyakarta only for a short period, i.e., less than nine years. This is an indication of these migrants in many cases not migrating permanently but only temporarily for jobs, returning to D.I. Yogyakarta after a certain period of time. This trend is more marked for the people moving to D.K.I. Jakarta.

In terms of the age distribution of the migrants, over 70 per cent of those going to D.K.I. Jakarta are between ten to thirty-four years of age, while there is a far flatter distribution among those going to Lampung. This suggests a great proportion of those to D.K.I. Jakarta being young and single workers, and many of those to Lampung moving with the entire family.

A distinction can be made between these two migrant groups as to their educational background. Those moving to D.K.I. Jakarta are made up of peasants having an exceptionally high educational background, over 70 per cent of them having experienced formal school education and over 40 per cent of them graduating from junior high schools and above. In contrast, over 70 per cent of those moving to Lampung have had no schooling at all or have only attended

but not finished primary schools, and only 5.1 per cent of them have gone through junior high schools or more. This contrast suggests that many of those to D.K.I. Jakarta have relatively high educational training, are oriented toward nonagricultural sectors requiring certain skills and formal education and tend to be only temporary migrants in search of employment opportunities, while most of those going to Lampung are ordinary peasants with little education and they leave the villages with the entire family.

The two migrant groups both seek employment opportunities, but those to Lampung constitute a horizontal emigration with middle- and low-ranking peasants looking for new agricultural land, while those to D.K.I. Jakarta constitute a vertical emigration with upper- and middle-ranking residents trying to promote themselves to nonagricultural sectors. The general labor migration from the villages thus involves differing strata of people for differing motives, forms, and mechanisms. It can also be easily anticipated that stratification of the emigrating labor serves to promote further stratification of the village population at its basis.

IV. CONCLUSIONS

The following two points can be mentioned as a result of the preceding analysis:

(1) D.I. Yogyakarta rural areas have an extremely high population density, even among the generally densely populated Javanese villages, to as high as 1,000 per square kilometer in the two regencies of Bantul and Sleman. This has been made possible on the one hand by rather high per hectare rice production and on the other by the presence of nonagricultural employment and income opportunities thanks to the high prevalence of nonagricultural small establishments in villages such as household and cottage industries and peddling;

(2) High population pressures on land have long promoted emigration to other areas, further encouraged in recent years by the shrinking employment opportunities due to declining local industries (except for D.I. Yogyakarta, where burgeoning tourist industry arrests this trend somewhat). Main destinations of such emigration are the nation's capital, D.K.I. Jakarta, and Lampung in Sumatra. Well-educated young and single people emigrate to D.K.I. Jakarta to promote themselves upward to nonagricultural sectors, while many poorly educated peasants move to Lampung horizontally to seek agricultural employment. This indicates the presence of stratification in labor migration, which in turn further stratifies the rural population.

In view of various symptoms, it seems highly probable that these two points apply generally to other villages in Central Java besides those in D.I. Yogyakarta. The problem of how these factors affect the directions in which peasants are stratified and the manner in which they will characterize the economic structure of rural Central Java remains to be analyzed.

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