

## **D. Sawah Cultivation and Tenancy**

At national level, the overall area of sawah cultivated is important as it determines the so called “harvested area” (*luas panen*) to ascertain national rice production. At the micro level, farm size is also important when we want to analyze farming enterprises through analysis such as “farm management”, “factor shares”, and so on.

As mentioned earlier, since there is no data on yield or income in the re-census, it is impossible to conduct such analysis. Furthermore, given the data available, this report focuses more on the characteristics and structure of communities rather than on the detailed analysis of farming systems. For this reason, being liable to change every season, area of sawah cultivated is therefore considered as being not as relevant to the analysis of structure as the problem of “access to land through tenancy mechanism”. In short, sawah cultivated is related to tenancy market. However, as a general overview, a brief description of the distribution of sawah cultivated will be also presented here in order to have some background to the discussion of tenancy.

### **1. Distribution of Sawah Area Cultivated**

One feature which characterizes agrarian structure in Java is that farm sizes are very small. Data in Appendix Table 6.6. clearly show that in the Wet Season 1982/1983, overall, the average size was only 0.286 ha per household, or 0.416 ha per cultivator. When we look at each village, one of the differences between the lowland and upland is also indicated. While in the lowland the average size per cultivator was around half a hec-

tare, in the upland the largest mean area was only 0.32 ha (in Village VI).

As is well known, landless households could obtain land for cultivation through sharecropping, renting and mortgage arrangements. Consequently, in general we could expect that the number of households who do not cultivate land is lower than those who do not own land (despite the possibility of some owners who do not own land (despite the possibility of some owners who do not cultivate thus becoming owner non operators). Other things being equal, one would expect that this in turn influences the Gini index. The data on Gini indices presented here clearly show that, except in Village II and Village IV, compared to the Gini for sawah ownership, the Gini indices for sawah cultivated in each village (as well as in all villages) are low, indicating a relatively less unequal distribution (see Table 6.8.).

As mentioned above, the difference in the degree of inequality between lowland and upland villages in ownership is clearly marked. Due to the large difference in the number of households who did not have access to cultivation, the Gini indices for all households in each village greatly differs between the lowland and upland (Table 6.8., column 6). The lowest Gini index in the lowland (Village II, 0.631) was still much higher than the highest Gini in the upland (0.585 in village VIII). Even when the number of non-cultivators is left out, the difference in the Gini indices is still clear (Table 6.8., column 7). Using another measure, i. e. the ratio of top 10 percent to bottom 40 percent of cultivating households in terms of their proportion of area controlled, the data tell the same story (column 10 of the same table).

Table 6.8. Gini Indices of Sawah Owned and of Sawah Cultivated by Village, Wet Season, 1983

Village	N=	Sawah ownership (including bengkok)				Sawah cultivation					Ratio of (9) to (8)
		% HH who do not own land	Gini Index		% HH who do not cultivate land	Gini Index			(% ) Area among cultivators		
			For all HH	Among owners		All HH	Among Cultivators	Bottom 40% of HH	Top 10% HH		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
I. Wargabinangun	165	73.3	0.859	0.622	54.6	0.760	0.516	11.4	41.5	3.60	
II. Lanjan	210	28.1	0.632	0.503	23.3	0.631	0.481	10.9	33.3	3.06	
III. Gemarang	213	65.7	0.787	0.445	51.2	0.718	0.453	13.4	35.2	2.63	
IV. Sukosari	207	51.7	0.742	0.496	55.1	0.765	0.530	10.8	42.6	3.94	
V. Sukaambit	192	31.3	0.642	0.493	20.8	0.514	0.390	15.3	26.3	1.71	
VI. Gunungwangi	198	23.7	0.577	0.454	19.2	0.485	0.372	16.5	26.7	1.62	
VII. Malauma	206	2.4	0.499	0.484	4.9	0.465	0.440	13.6	33.6	2.47	
VIII. Ciwangi	224	21.0	0.633	0.542	23.2	0.585	0.470	11.6	33.1	2.85	
ALL	1615	36.3	0.694	0.537	36.7	0.684	0.519				

## **2. Sawah Cultivated and Sawah Owned**

Leaving aside the question of yield, discussion of area of sawah cultivated will be more meaningful if it is linked to the problem of access to land. This would mean that it should be linked to land ownership and tenancy.

It is well known that one of the characteristics of rural Java is that pure owner operators are predominant (Sinaga and White, 1979). The data collected in this re-census appear to support this proposition. More than 60 percent of total operators, or around 42 percent of total households were owner operators in the wet season of 1982/1983. As mentioned earlier, cultivation area is liable to change from season to season however slightly. While in one season landowners may either lease their lands out and become non operators, or cultivate larger areas than their own by leasing-in other's land, or simply cultivate only their own lands, in another season they may change their decision. Land owners decisions, therefore, will determine the landless households access to land for cultivation.

From a simple cross tabulation of sawah cultivated and sawah owned, an attempt here is made to examine the probable pattern of flow of the leasing in and out of land, and in what classes of area owned would there be a cutting line (see table 6.9. and Appendix-Table 6.7.). It appears that the above mentioned proposition is here again supported. In most classes of sawah owned, the proportion of households whose cultivation areas belong to the same class as that of sawah ownership, are close to, or above 50 percent (Table 6.9, column 1). Except for the landless (row-1), assuming that the figures in

column-1 are the proportions of owner operators (which in fact they may not be, because it includes those who lease out part of their land but also lease in other's land), it is clear that owner operators are predominant.

There is no clear pattern among owner non-operators, both small and large landowners are represented in this group (see Column-1, class less than 0.125 and above)<sup>17</sup>. Leaving aside the landless group of ownership, however, as one might expect, up to the fourth class of ownership (i. e. less than 0.5 ha, the *petani gurem*), landowners tend to lease-in rather than lease-out (compare column 4 to column (2+3), Table 6.9.). On the other hand, for the fifth and above classes of ownership, the proportion is the reverse. Looking at the ratios of owner leaser-out and owner tenants-in to pure owner operators (column 6 and 7 respectively, in the same Table), this cutting line is more clearly indicated. Despite this, however, the fact that there was a considerable number of landowners who lease in lands, even among the large landowners, would mean that the landless access to land for cultivation was hindered. This is also indicated by the relatively low proportion of landless households who obtained land for cultivation (31.3 percent).

### **3. Distribution of Tenancy Status**

Tenancy in general is considered important since it determines the distribution of wealth especially in an agrarian

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<sup>17</sup> These pattern of owner non operators are discussed further below in sections on tenancy.

society where land ownership is not equally distributed. As has been mentioned several times, through tenancy arrangements the landless can get access to land for cultivation. However, to what extent this access to land really leads to a greater access to wealth derived from agricultural production, still very much depends on the types of tenancy arrangement or contract that the cultivators adopt, since the types of contracts determine the types of labor use and allocation. In short, tenancy is also related to labor market.

On the other hand, types of contract also influence “returns to land” which, in practice, means accumulated wealth enjoyed by the landowners. In this respect, therefore, tenancy is interrelated with land ownership, labor market, sources of income and hence wealth.

In this subsection, and the three subsections that follow, tenancy status, tenancy contracts, and their links with sawah owned and sawah cultivated will be discussed descriptively. The links between tenancy, the labor market and sources of income will be discussed in section E.<sup>18</sup>

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<sup>18</sup> It is not the immediate aim of this paper to arrive at a final conclusion by simply using re-census data. It must be kept in mind, however, that the discussion and the presentation of information on these matters are mainly aimed at providing some basis from which further analysis using other sets of data (from the resurvey data, for example) may be undertaken.

Table 6.9. Overall Distribution of Households in all Villages by Sawah Cultivated and by Sawah Owned, Wet Season, 1982/1983

Sawah ownership class (Ha)	(% HH in each class of sawah owned whose area of cultivation					Ratio of	
	The same as their own or remain LL	Less than their own	Become non operator	Larger than their own	Total (N=)	Tout to Onop. (2+3) to (1)	Tin to Onop (4) to (1)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) 0	68.7	-	-	31.3	100 (587)	-	0.46
(2) < 0.125	65.8	-	13.6	20.6	100 (243)	0.21	0.31
(3) 0.125 - < 0.250	64.1	3.3	8.4	24.2	100 (298)	0.18	0.38
(4) 0.250 - < 0.375	61.8	6.2	7.3	24.7	100 (191)	0.22	0.40
(5) 0.375 - < 0.500	46.8	24.2	11.3	7.7	100 (62)	0.75	0.38
(6) 0.500 - < 0.750	67.3	16.8	6.5	9.4	100 (107)	0.35	0.14
(7) 0.750 - < 1.000	46.9	31.2	18.8	3.1	100 (32)	1.07	0.07
(8) 1.000 - < 2.000	58.3	25.0	10.0	6.7	100 (60)	0.60	0.11
(9) 2.000+	60.0	34.3	6.7	-	100 (35)	0.67	-

Note: LL = Landless; Tout = Tenant out; Tin = Tenant in

Before discussing the information found in this study in detail several terms used in the narrative as well as in the presentation should be clarified first. Tenancy status in this report simply refers to cultivation status such as pure owner operator, pure tenant, owner-cum-tenant, etc. As has been known, not only landless households but also landowners could obtain others land for cultivation. In the latter case, several patterns are possible. These landowners may simply cultivate their own land plus the lands obtained from others, for simplicity, termed “owner tenant-in”, or they may cultivate only partly (of their own or of the land leased in, or of both) and lease out the other part of the land, for whom we call here “owner-tenant in and out”. The group of owners who lease-out part of their lands and cultivate the rest, we call “owner-ten-

ant-out”, whereas who lease out all their lands without leasing in are simply termed owner non-operator. The next status is the pure tenant which refers to landless households who obtain lands for cultivation, whereas the landless who do not cultivate any land are refer to as absolute or pure landless.

Overall, only a little more than one third of all households (or 56 percent of all landowners) were pure owner operators, but relatively they were still predominant, controlling 44 percent of all sawah area cultivated (Table 6.10.). Another prominent status is owner cum tenant-in or simply “tenant-in”. They were those who cultivated both their own and other’s land. Around 14 percent of all households or 22 percent of all owners belong to this status, controlling slightly more than one-fourth of all sawah cultivated. Pure landless came third, and pure tenant came fourth constituting 11 percent of all households, gaining only 13 percent of total sawah for cultivation. Owing to the fact that a considerable proportion of landowning households were involved in tenancy, it stands to reason that only 30 percent of non owners (i. e. the pure tenant) get access to land for cultivation.

As for the other statuses, leaving aside the owner “tenant-in-out” status which is only two percent of all households, the proportion of owner tenant-out (including both operators and non operators) is almost the same as that of owner tenant-in (12 percent of all households or 19 percent of sawah owners, as compared to 14 percent of all households or 22 percent of sawah owners respectively).

Looking at inter village variations (Table 6.11.), we were



Table 6.10. Distribution of Households, Sawah Owned and Sawah Cultivated by Tenancy Status (Wet Season 1982/1983)<sup>19</sup>

Tenancy Status	Number of Households	% of Households	Sawah Owned			Sawah Cultivated		
			Total Area (Ha)	% of Area	Mean Area/HH (ha)	Total Area (Ha)	% of Area	Mean Area/HH (Ha)
SAWAH OWNERS								
Pure owner operator	571	35.5 (56)	203.3	49	0.36	203.3	44	0.35
Tenant in	228	14.2 (22)	63.8	15	0.28	130.0	28	0.57
Tenant out - operator	104	6.5 (10)	87.1	21	0.84	45.6	10	0.44
non operator	89	5.5 (9)	36.9	9	0.41	-	-	-
Owner tenant in-out	32	2.0 (3)	23.2	6	0.72	20.9	5	0.65
All Owners	1024	63.7 (100)	414.3	100	0.40	399.8	87	0.39 <sup>20</sup>
NON SAWAH OWNERS								
Pure Tenant	177	11.0 (30)	-	-	-	61.5	13	0.35
Landless	404	25.2 (70)	-	-	-	-	-	-
All Non Owners	581	36.2 (100)	-	-	-	61.5	13	0.35
All Households	1605	100	419.3	-	-	461.3	100	0.29

<sup>19</sup> Excludes ten households with sawah uncultivated (fallow) or households who only cultivate other sawah by special arrangement.

<sup>20</sup> Including owner non operator.

surprised to find that there does not seem to be any indication of association between the high landlessness and tenancy rates (compare column (6+7) to (2+4+6). In Village IV (Sukosari), tenancy is extremely low despite a very high proportion (51 percent) of absolute landless households. Aside from this high landlessness, the low tenancy rate in this village may be due to the common practices of *betonan* or *kedokan*<sup>21</sup> which share some characteristics of tenant farmers but by definition were not included in the category of tenancy. In Village II (Lanjan), tenancy was low and owner operators were predominant (54 percent of all households, second rank following Village VII Malausma). There is no clear explanation for this except that it may be due to “historical heritage”. Village II is relatively recently settled and in the past the lands were cultivated by migrants many of whom originated from Central Java before they finally settled here. It is noteworthy, however, that among lowland villages the proportion of “tenant-in” households in this village is the highest (12.9 percent), most of them acquiring lands from adjacent villages. In fact, according to previous RDS studies, these features characterize Village II (i. e. villagers obtaining access to lands outside the village while outsiders lease-in land from Lanjan).

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<sup>21</sup> A system in which farm laborers have to do particular stages of work during the rice cultivation without being paid in money, and rewarded in terms of rights to harvest from which they will obtain a certain share, commonly much higher than the common harvester's share.

Table 6.11. Distribution of Households by Tenancy Status and Village (Wet Season 1982/1983)

Village	Pure owner operator	SAWAH OWNERS				LANDLESS		TOTAL		OTHER* N
		Tenant in	Tenant out	Tenant in-out	Non Operator	Tenants	Absolute Landless	%	N=	
		% of households								
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
I. Wargabinangun	11.5	3.6	1.8	2.4	7.9	26.1	46.7	100	(165)	-
II. Lanjan	53.8	12.9	1.9	0.5	2.9	7.6	20.5	100	(210)	-
III. Gemarang	17.5	7.1	2.8	1.4	5.7	19.4	46.0	100	(211)	2
IV. Sukosari	35.9	3.4	4.4	0.5	3.9	1.0	51.0	100	(206)	1
V. Sukaambit	20.0	22.1	13.2	5.3	8.9	18.4	12.1	100	(190)	2
VI. Gunungwangi	43.9	20.7	6.6	0.5	4.6	9.6	14.1	100	(198)	-
VII. Malausma	62.6	20.9	7.8	3.9	2.4	-	2.4	100	(206)	-
VIII. Ciwangi	33.8	21.5	11.4	1.8	7.8	11.9	9.6	100	(219)	5
All Villages	35.6	14.2	6.5	2.0	5.5	11.0	25.2	100	(1605)	10

Note : \*) Land fallow, cultivate other land or entrust land to other family members.

In the upland villages the proportion of households involved in the tenancy market is higher overall than in the lowland especially in terms of the “tenant-in” category. Even in Village VII (Malausma) where owner operators are extremely predominant ( $\pm$  63 percent, the highest among all villages) and there are no landless-tenants, the proportion of “tenant-in” households is still more than 20 percent. This pattern is common in the upland because of the traditional practices where tenancy is arranged between relatives. Being characterized by a relatively low degree of landlessness (as has been indicated in previous section), in the upland villages tenancy relations mostly occurred among owners.

Overall, however, data in Table 6.11. suggest that many more households (27 percent of all households) and owners tend to lease in rather than lease out (the latter being 8.5 percent of all households), with the implication that on average, each “tenant-out” leases land to approximately three owning or landless households.

Tenancy status is liable to change every season. It is realized that in order to get a better picture of these changes, data on tenancy covering several seasons would be necessary. Having covered one year (two seasons) only, a longer trend of changes cannot be presented. Nevertheless, to get some idea of what changes occurred between the wet and the dry season, it is worth looking at the changes between these two seasons.

The figures on changes in tenancy status suggest, contrary to our expectations, that three categories were unchanged (pure tenant; tenant-in-out; and “other”), and the ten-

Table 6.12. Tenancy Status in Wet Season 1982/1983 and Dry Season 1983

TENANCY STATUS	WET SEASON 1982/83 Nb. of HH	DISTRIBUTION OF HOUSEHOLDS (IN ABSOLUTE NUMBER)								change between Wet and Dry Season (%)
		DRY SEASON 1983								
		Pure owner operators	Owner tenant- in	Owner tenant- out	Owner non operator	Pure landless	Pure tenant	Owner tenant in & out	Fallowing their lands	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. Pure owner operator	571	553	2	5	1	1	-	-	9	3.2
2. Owner tenant-in	228	18	207	2	-	-	-	-	1	9.2
3. Owner tenant-out	104	4	-	99	-	1	-	-	-	4.8
4. Owner non-operator	89	-	-	-	88	-	-	-	1	1.1
5. Pure landless	404	-	-	-	1	396	7	-	-	2.0
UNCHANGED STATUS										
6. Pure tenant	177	-	-	-	-	-	177	-	-	0
7. Owner tenant-in & out	32	-	-	-	-	-	-	32	-	0
8. Other	10	-	-	-	-	-	-	-	10	0
9. Total	1615	575	209	106	90	398	184	32	21	-

ancy status of the other five groups changed only slightly between the two seasons. Overall, however, in the dry season of 1983, while the number of pure owner operators and the number of pure tenants increased, compare to that in the previous season (compare the last row and the first column, Table 6.12.).

Partly, this stability in tenancy status (during one year) may be explained by the duration of rental and mortgage arrangements which almost invariably extend for a year or more. But it should be noted also that plots of land may change statuses between seasons – in particular more plots being cultivated by tenants in the more risk prone dry season – while tenancy status is constant.

Among the changing statuses, proportionally the highest change occurred in the category of “owner-tenant-in” (that is those landowners who also cultivate others land in the wet season): 9,2 percent of these households were no longer in that category (18 households became owner operators) in the dry season of 1983 (Table 6.12.). Another change is the small shift in ownership status. While there was only one household who has pure landless in the wet season who became non-operator owner in the dry season, there were two owners who sold their land and became pure landless in the dry season 1983. One was from the status of owner operator, the other was from the category of owner-tenant-out (see rows 1 and 3). One more point is that seven of those who were pure landless in the dry season.

#### **4. Tenancy Status and Tenancy Contracts**

Overall, sharecropping contracts are predominant.

Among those leasing in, as well as among the leasing out households, more than 60 percent arranged their land cultivation based on sharecropping contracts (Table 6.13.; first column), the status of pure tenant having the highest proportion (almost 68 percent). Renting contracts were more common among "owner-tenant-in and out" (25 percent) in the land leasing-in group, than among other statuses. A considerable proportion of households who mortgage out their land was found in the status group of "owner tenant-in-out" (28 percent), that is some families mortgaging out land but unable to repay the mortgage, sharecropped on rented land in, to augment family income. On the other hand, mortgage in land was found in 17 percent of "owner tenant-in" group. Mortgage type of contracts is of course much less prominent than the owner two types in general, partly because land mortgage is, in fact, legally prohibited according to the Basic Agrarian Law of 1960.

Looking at village variations, one thing seems clear: in all upland villages sharecropping contracts predominate whereas in the lowland renting contracts are relatively more common especially in Village I and Village II (Wargabinangun and Lanjan), although in these villages there is a considerable proportion of households also involved in sharecropping (Table 6.14.). Lowland Village III (Gemarang) is an exception. Sharecropping is much more dominant, yet, a quite high proportion of households were involved in rental contracts. Another exception worth noting is Village IV (Sukosari) where mortgaging was practiced by a high proportion of households, although the absolute numbers involved was small.

Table 6.13. Tenancy Status by Type of Tenancy Contract (Wet Season) 1982/1983

Tenancy Status	Tenancy Contract			Total	
	Sharecrop	Rent	Mortgage	Combination	% N=
LAND LEASED-IN					
1. Owner tenant in	575	18.9	17.1	6.6	100 228
2. Owner tenant in-out	56.3	25.0	15.6	3.1	100 32
3. Pure tenant	67.8	22.0	5.1	5.1	100 177
ALL TENANTS IN	61.1	20.6	12.1	5.7	100 437
LAND LEASED-OUT					
1. Owner tenant out	64.4	18.3	12.5	4.9	100 104
2. Owner tenant in-out	43.8	15.6	28.1	12.5	100 32
3. Owner non operator	66.3	16.9	11.2	6.6	100 89
ALL TENANTS OUT	62.2	17.3	14.2	6.2	100 225



Table 6.14. Distribution of Households by Tenant Status, Type of Tenancy Contract and Village, Wet Season 1982/1983

STATUS	WAR (I)	LAN (II)	GEM (III)	SUKI (IV)	SUKA (V)	GUN (VI)	MAL (VII)	CIW (VIII)
<u>TENANT IN</u>								
Sharecrop	49	23	68	20	76	69	29	95
Rent	49	25	29	20	6	23	28	1
Mortgage	0	45	0	50	10	0	33	3
Combination	2	7	3	10	8	8	10	1
Total (%)	100	100	100	100	100	100	100	100
(N =)	(53)	(44)	(59)	(10)	(87)	(61)	(51)	(72)
<u>TENANT OUT</u>								
Sharecrop	24	18	52	6	81	78	59	88
Rent	57	46	33	22	2	18	21	-
Mortgage	5	36	5	66	15	0	7	8
Combination	14	0	10	6	2	4	13	4
Total (%)	100	100	100	100	100	100	100	100
(N =)	(21)	(11)	(18)	(18)	(52)	(23)	(29)	(51)

Comparing the two types of contract (share and rent) among owners and among non owners, it appears that overall, most owners (74.5 percent) and most non owners (75.4 percent) were sharecroppers rather than renters (Appendix-Table 6.9). In the non owner group, the dominance of share contracts is clear in each village (except in Village VII where landless tenants were indeed absent, and in Village I where the two types of contract are evenly distributed); this is logical since share contracts require less cash capital than rent. In the owner group, while share contracts stood out in each of the upland villages, they varied in the lowland villages. However, even in the villages where renting was relatively more common than share contracts (Village II and Village IV), the proportions of owner sharecroppers was high enough (30 percent and 23 percent respectively), indicating that they must be the tiny owners. This is supported by the fact that the proportion of owner tenant-in is highly concentrated in the less than 0.5 ha ownership group, as will be described in the following sub-section.

## **5. Sawah Owned and Tenancy**

When we compare between tenancy statuses in terms of area of sawah owned, three major points can be noted. The largest owning groups, that is the “owner operators” and the “tenant-in” have the smallest average holdings (See last row, Table 6.15). They were concentrated in the lowest classes of sawah area owned (approximately 60 percent of operators owned sawah below 0.25 ha). However, comparison between these two groups indicate that the mean area of sawah owned

as well as the proportion of large farmers (owning above 0.5 ha) is higher in the owner operator group than in the tenant-in group.

The second point is that the means of area of sawah owned in both groups, that is, "owner tenant-in-out" and "owner tenant-in-out" are high (0.81 ha and 0.80 ha respectively). Thirdly, owner non-operators were highly concentrated in tiny land owning groups below 0.25 ha, but also a significantly large percentage of them belonged to larger farmers (0.5 ha and above). The mean area of sawah owned, therefore, falls in between the other groups mentioned above.

When we compare classes of sawah area owned, it appears that in each class, pure owner operators were predominant (56 percent for all classes and more than 39 percent in each class), especially for classes below half a hectare (See Appendix-Table 6.10., column 1). Among these "tiny farmers" (*petani gurem*, owning below 0.5 hectare) around one-fourth also cultivated others land (owner-tenant-in), thus constituting a much higher proportion than in the higher classes of ownership (column 2). This is logical since tiny farmers tend to enlarge their cultivation holdings. On the other side, larger landowners i. e. owner groups of 0.5 ha and above, tend to lease out part while operating the rest of their lands (see column 4 Appendix-Table 6.10.), thus becoming "owner operator tenant out".

Table 6.15. Distribution of Households by Sawah Ownership Group and Tenancy Status (Sawah Owners, Wet Season 1982/1983)

Area of sawah owned (ha)	Pure Owner operator	Tenant in	Tenant in-out	Tenant out		All owners
				Owner operator	Non-operator	
	% of households					
< .125	25.6	28.1	3.1	2.9	30.0	23.4
.125 - < .250	30.7	34.7	25.0	11.5	25.0	29.0
.250 - < .375	19.3	21.5	15.6	14.4	16.7	19.0
.375 - < .500	4.6	4.8	12.5	12.5	7.9	5.9
.500 - < .750	10.5	5.7	15.6	22.2	7.9	10.5
.750 - < 1.00	2.1	-	12.5	9.6	5.6	3.1
1.00 - < 2.00	4.4	4.4	3.1	17.3	6.7	5.8
2.00 +	2.8	0.1	12.5	9.6	2.2	3.3
	100	100	100	100	100	100
(N=)	(570)	(228)	(32)	(104)	(89)	(1029)
Mean (ha)	0.49	0.33	0.81	0.80	0.64	

Table 6.16. Area of Aawah Owned by Tenancy Status and Type of Tenancy Contract (Owners Only, Wet Season 1982/1983)

Type of tenancy contract/sawah owned	Tenant in	Tenant out	
		Operator	Non operator
1. <u>Sharecrop</u>			
Mean (ha)	0.20	0.70	0.31
% HHd. < 0.25 ha	71	13	56
> 0.50 ha	3	57	20
(N=)	(131)	(67)	(59)
2. <u>Rent</u>			
Mean (ha)	0.43	1.28	0.72
% HHd. < 0.25 ha	42	16	40
> 0.50 ha	23	63	33
(N=)	(43)	(19)	(15)
3. <u>Mortgage</u>			
Mean (ha)	0.41	0.65	0.16
% HHd. < 0.25 ha	54	23	80
> 0.50 ha	23	46	-
(N=)	(39)	(15)	(10)
4. <u>Combination</u>			
Mean (ha)	0.22	1.45	1.17
(N=)	(15)	(5)	(5)

When we look at two distinct tenancy status groups, that is “tenant-in” and “tenant-out”, and types of contract, by sawah owned, it appears that in the “tenant-in” group the proportion of households who own less than 0.25 ha (the “bottom”) is more dominant than in “tenant-out” group, both for the share type and the renting type of contracts. For the mortgage type of contracts, most owner-non-operators were “bottom” owners (Table 6.16.).

## **6. Sawah Cultivated, Tenancy Status and Contracts**

In this section we examine features which characterize different statuses and different types of contract, in terms of area of sawah cultivated. Since, as has been discussed, a considerable proportion of sawah owners enter the tenancy market, it is important to explore the extent to which the cultivation area otherwise available to landless tenant, were “occupied” by farmer landowners.

Overall, the mean area of all sawah cultivated by owner in-out tenants is the largest (0.65 ha) amongst all statuses (Table 6.17., last column). Broken down into own sawah cultivated is evenly distributed amongst various owner statuses, with the mean area cultivated area by owner tenant-in being the lowest (0.28 ha), and by pure owner operators being the second lowest, just slightly higher (0.26 ha), supporting the data presented above that pure owner operators were especially prominent in the tiny-farmers group (*petani gurem*). These was a tendency, however, to enlarge their cultivation by leasing-in others land, thus becoming owner tenant-in. Besides this looking at the area of non owned sawah, it ap-

pears that pure tenants have the same area tenanted-in as owner groups, partly reflecting overall larger operational holdings in lowland villages where pure tenants are more common.

Table 6.17. Mean Sawah Cultivated by Cultivation Status and Tenancy Status (Cultivators only, Wet Season 1982/1983)

Tenancy Status	Mean Sawah Cultivated (ha)			
	Own sawah	Tenant-in sawah	All sawah cultivated	
	Mean	Mean	Mean	N=
	(1)	(2)	(3)	
1. Pure owner operator	0.36	-	0.36	571
2. Owner-op. tenant-in	0.28	0.29	0.57	228
3. Owner-in-out tenant	0.42	0.34	0.65	32
4. Owner tenant-out	0.44	-	0.44	104
5. Pure (landless) tenant	-	0.35	0.35	177

Table 6.18. Total Area of Sawah Tenanted-in and Total Area Leased out by Types of Tenancy Contracts, Wet Season 1982/1983

Tenancy Contract	All Tenanted-in Sawah (ha)			All Sawah Leased-out (ha)		
	N =	Total Area	Mean	N =	Total Area	Mean
Sharecrop	149	35.07	0.24	151	45.5	0.30
Rent	51	20.81	0.41	50	38.3	0.76
Mortgage	44	15.23	0.34	38	6.8	0.18
TOTAL Cultivators	244	71.11	0.29			
Owners				239	90.6	0.38

When we look at the breakdown of tenanted-in area of sawah alone by types of contract (Table 6.18.), while total sawah cultivated by sharecropping is larger than by renting arrangement (35 ha and 21 ha respectively), the comparison of the respective means of area cultivated is reversed. This

pattern is also indicated with regard to the total area of sawah leased-out (See also, Appendix-Tables 6.11 and 6.12.).

Linking these data to tenancy status, it appears that the average area of sawah cultivated by renting arrangements is the highest amongst other types of contracts both in the group of sawah owners and also, surprisingly, slightly higher for pure tenant group (Appendix-Table 6.13.). A likely explanation of the latter is that-there may be some landless cultivators involved in renting-in who are relatively better off households with access to cash. Thus, viewing all the data, it may be interpreted that sharecropping contracts are characterized by small sizes of farm cultivated by small landowners, while renting contract is more or less evenly distributed among households but with larger sizes of cultivation.

The final point worth noting is when we look at all sawah area leased out by tenancy status and contract, here again the highest mean of area leased out is of the renting type of contract, dominantly reflected in all three groups of statuses recorded.

As a final remark of this section, putting together all the details discussed above, we may conclude that tenancy practices in itself is indeed an intricate mechanism, which to some extent also reflects village diversity in Java. It is a subject which one should treat with care. Secondly, although the data on tenancy rates in this re-census study show that the proportion of households involved in tenancy-in was not as high as expected (approximately 28 percent of all households), this mechanism seems to be related to the efforts of villagers to increase their wealth (i. e. accumulate income through tenancy) even amongst landowners, but especially for landless peasants.

## **E. Sawah Ownership, Tenancy and Employment Structure**

In the previous two sections we have looked in some detail at the structure of sawah ownership and its relationship to economic status and examine the tenancy market, differentiating between ownership and cultivation classes. Although variations in access to sawah land appears to be quite closely related to economic status, there were enough expectations to suggest that tenancy status and, perhaps more important, source of non agricultural income have a significant influence on households income among the various sawah ownership groups.

With the expectations of a few villages, the tenancy market was clearly a busy one. Perhaps the most interesting aspect of this market was the relatively high proportion of sawah owning families in all classes involved in the market. As one would expect, a higher proportion of larger owners tended to lease land out, but even in the high tenancy villages many did not do so, and a small proportion were involved on the other side of the market. On the other hand, many of the smaller owners also leased land out, a significant proportion operating no sawah land. Quite a high proportion of landless in three of the four lowland villages were involved in tenancy contracts, a pattern which did not emerge in the upland despite quite high levels of landlessness in several villages.

In this section we will examine the extent to which ownership of sawah land and tenancy status are related to sources of family income. Smaller, poorer sawah owning families might be expected to be pushed into farm laboring and wage labor activities outside agriculture in order to meet basic family needs whereas larger owners more likely to be mainly



involved in non agricultural pursuits which make use of surpluses generated in the agricultural sector. Clearly access to sawah land through tenancy arrangements should play major role in determining the income earning strategies of the landless and households owning little sawah land. On the other hand, both smaller and larger owners might be partly expected to lease out land because of their ability to take advantage of higher income earning activities outside agriculture, although a range of other factors such as age of the household head, control of family labor supply and village specific tenancy patterns may also be expected to be of some significance.

One important question is the extent to which lowland and upland (and inter village) differences in tenancy pattern are related to contrasting patterns of labor market behavior. From the baseline studies we know that in the lowland non farm employment tends to be mainly in firm laboring activities whereas non agricultural activities predominate in upland villages. Although it is not possible to provide direct comparisons at this stage, changes in these patterns over the past 6–7 years, and their relationship to macro trends in employment, are of special interest.

Especially in light of lack of income data by employment source, it is not possible to provide definitive answers to these questions at this stage of the analysis. Nevertheless this overview of interrelationships between sawah land ownership, tenancy an employment should be able to suggest relevant hypotheses which can be tested in the analysis of survey data.

The two major measures of employment structure adopted in this section are “family income status” and major

sectors of household income. The former indicates the mix of three major income sources—farming, farm laboring and non agricultural—from which each household derived its income and employment over the past year.<sup>22</sup> This measure is particularly useful because it provides one overall indicator of the diversification of employment activities for each household. It does not, however, indicate the relative contribution of each activity to total income and must therefore be supplemented by data on major and minor income sources. Moreover, it is not possible from this measure to examine household differences in occupational structure by sex and age characteristics; unfortunately we were not able at this stage to incorporate data on the participation and major occupation undertaken by household heads, the wives of household heads and other family members.

From the outset we should mention that respondent answers to the question on major income source probably tended to overstate the importance of farming, despite interviewer probes on the approximate net income received from each source. This was a consequence of the relatively higher status of farming, especially compared to farm laboring, and a tendency for landowning household to always portray themselves

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<sup>22</sup> Data was collected on the five major family income sources ranked according to estimated contribution to total family income for the rice growing year 1982/83, beginning in the wet season cultivation period in 1982. Our measure of family income status indicates the mix of the three major sources only, since a relatively small proportion of household (less than ten percent) reported more than three sources.

primarily as farming household (*petani*). We will pay more attention, therefore, to inter group differentials in major income source rather than overall relative contribution of different activities.

The section begins with an examination of the relationship between sawah ownership class and major sources of household income, followed by a discussion of tenancy status and employment structure.

### **1. Sawah Ownership and Family Income Sources**

Multiple employment and income sources, a major theme of the baseline studies continues to be a dominant pattern. Nevertheless, the multiplicity of income earning activities varied significantly between sawah owning class (See Table 6.19.).<sup>23</sup> Looking at the first three rows of the table diversification of income source is most marked among smaller landowners (by far the largest group absolutely) with tiny plots of less than 0.25 ha of sawah land. At the two extremes, a relatively high proportion of landless and especially landowners with one hectare or more depended solely on one income source: the former both in farm laboring and outside agriculture, and the latter as farmers.

Examining the activities in which households from each

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<sup>23</sup> Income source was broken down into nine major activities: farming, farm laboring, household industry, manufacturing labor, construction, transport, trade, services and white collar or professional jobs. Within each group, especially farming, a household may undertake a range of activities which were not picked up by the broad categories used here to define income source.

class participated, however, despite some important contrasts, one is struck by the similarities between the landowning groups. Table 6.19 shows that proportion of landless households involved in farming was predictably lower than among the sawah owning groups, and the proportion of larger farming households (especially those among one hectare and above) engaged in farming laboring relatively low, but in both groups a significant proportion of households found employment in these activities. The landless households were engaged in farming through tenancy arrangements, cultivated dry land or obtained family income from caring for farm animals. Larger owning families involved in wage labor on the other hand were most likely to participate in relatively remunerative harvest activities. Overall there were only slight interclass variations in the percentage of households with income from non agriculture (see last row of the table). Only the relatively small, largest sawah owning group differed significantly from the others, recording a lower figure of 51 percent. The proportion of all households obtaining some income from outside agriculture was considerably higher than individuals engaged in non agricultural activities as a major source of income recorded in the 1980 census for rural Java (39 percent).

Table 6.19. Distribution of Households According to Major Family Income Sources by Area of Sawah Owned<sup>1)</sup>

	Sawah Owned (Ha)					All Households
	0	<.25	.25 < .5	.5 < 1.0	1.0+	
% of Households with <sup>2)</sup>						
- One wage income source	31.7	12.8	19.7	14.6	32.9	22.3
- Two wage income sources	42.0	41.4	36.9	39.4	27.6	40.0
- Three wage income sources or more	26.3	45.8	43.4	46.0	24.5	37.7
(N=) <sup>3)</sup>	100 (572)	100 (529)	100 (249)	100 (137)	100 (87)	100 (1574) <sup>3)</sup>

% of all households with some income from :						
<u>AGRICULTURE</u>						
- Farming	41.9	90.6	91.5	93.7	82.2	73.4
- Farm laboring	68.9	47.8	41.0	37.6	21.5	52.4
<u>NON AGRICULTURE</u>						
- Household industry	6.8	24.6	20.7	18.6	9.7	16.2
- Construction	10.8	10.2	7.8	7.1	2.2	9.5
- Transport	11.4	4.6	8.2	12.1	13.8	8.9
- Trade	24.6	32.8	29.3	33.6	16.1	28.4
- With collar	5.8	5.0	5.5	8.6	16.1	6.3
- Other <sup>3)</sup>	17.1	8.0	8.2	6.4	3.2	10.9
Sub Total non agric. <sup>4)</sup>	62.7	66.7	63.7	65.7	50.6	63.8

- 1) Three major sources only
- 2) Excludes families depending entirely on non wage income
- 3) Manufacturing labor and service activities (non white collar)
- 4) Sum of non agric. activities is greater than sub total since some households have more than one activity outside agriculture.

There were, nevertheless some quite large interclass differences in the kind of non agricultural activities undertaken. Landless households were more prone to seek wage labor employment in construction, transport (mainly *becak* driving), services and manufacturing labor compared with the other groups, although quite a significant proportion of landless (25 percent) were also engaged in trade. Smaller and medium land owning groups were relatively more concentrated in household industry (still mainly an upland activity) and petty trade, whereas the larger owning groups as entrepreneur in transport (12–14 percent) and especially among the largest landowning class, in professional and white collar occupations.

The special role of the trade sector in non agricultural income sources is worthy of further examination. In all sawah owning classes this was the dominant non agricultural family income source. Nevertheless, one would expect the types of activity undertaken by landless to differ from sawah owners,

the latter being involved in activities which require more capital. More detailed data on individual household member's sector of employment to some extent confirm this hypothesis; although types of trade activity did not differ markedly between the sawah ownership groups (see Appendix 6.14.). Trade stalls and credit, and other type of small trade requiring some capital (items 1 and 2) tended to be more common among the larger owning households, both for household heads and wives of the household head. On the other hand, market trade and hawking were more pronounced especially among household heads in the landless and small farmer categories. Of course, the scale of trade stalls varies significantly from small capital enterprises selling a few items to quite large shops offering a wide range of goods; we need additional data on turnover, sources of capital and net profits before drawing definite conclusions from these distributions.

We now turn to the combination of the three major income sources farming, farm laboring and non agriculture – by area of sawah owned (Table 6.20.). As column 6 of the table indicates, by far the largest income source, accounting for nearly thirty percent of all households, was the farming non agriculture group, followed by these two sources combined with farm laboring and the farmer-farm laboring group. These three groups covered just under two thirds of all households whereas none of the single source groups accounted for over ten percent.

Mean sawah owned and operated differed quite considerably among the groups. Both the pure farmer and small, non wage income categories owned by far the largest mean areas of sawah land, followed by the farmer non agriculture groups

Table 6.20. Distribution of Households According to Family Income Status by Sawah Area Owned<sup>1)</sup>

Family Income Status	AREA OF SAWAH OWNED (ha)					All House- holds	Sawah Owners		
	0	<0.25	0.25 - <0.5	0.5 - <1.0	1.0+		Mean sawah owned (Ha)	Max Area	N
	% of households								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Farmer	3.3	9.1	11.3	12.9	34.4	9.1	0.65	3.12	(128)
2. Farmer – Farm Laborer	13.8	21.3	21.9	17.9	8.6	17.9	0.29	2.14	(304)
3. Farmer – Farm Laborer– Non Agriculture	15.6	23.0	19.9	18.6	11.8	19.1	0.30	1.79	(212)
4. Farmer–Non Agriculture	9.7	37.8	39.1	44.3	36.6	28.3	0.43	6.00	(400)
5. Farm Laborer	17.6	1.1	0.4	1.4	1.1	6.8	0.47	2.93	(13)
6. Farm Laborer–Non Agric	21.9	2.6	0.4	0.7	-	8.7	0.16	0.55	(17)
7. Non Agriculture	15.5	3.1	4.3	2.1	1.1	7.5	0.33	1.78	(34)
8. Pure Non Wage <sup>(3)</sup>	2.4	2.0	2.7	2.1	6.4	2.5	0.98	10.15	(27)
ALL HOUSEHOLDS	100	100	100	100	100	100	0.41	10.15	(1034)
(N=)	(586)	(540)	(256)	(148)	(93)	(1615)	-	-	

1) Three major income sources only.

2) Income from remittances, pensions, rent or mortgage of land and other transfer payments.

in the middle of the range (Table 6.20.).<sup>24</sup> with the exception of the small number of pure farm laborers owning sawah,<sup>25</sup> all groups of households involved in some farm laboring owned on average relatively small areas of sawah land.

<sup>24</sup> The pure farmer category includes a small proportion of dry land farmers and households deriving income from farm animals, fish ponds and the like. This explains why pure farmers owned no sawah land (see row 1).

<sup>25</sup> The mean among this (0.47 ha) is greatly influenced by one extreme case owning 2.9 ha; if this household is excluded the mean falls to 0.27 ha. This group tenant all their land out mainly in rental or mortgage arrangements, and undertake farm laboring presumably to meet daily cash needs.

Turning to the distribution of various income status groups by sawah ownership class, we can distinguish three contrasting groups: landless, owner with less than one hectare of sawah land and the small group of household owning one hectare of above (Table 6.20.). The landless households, as expected, were concentrated in farm laboring activities, mainly in combination with non agricultural pursuits (rows 3 and 6). A relatively small proportion of landless households (18 percent), almost all from low-land villages, depended on farm laboring only for family income, and only a slightly smaller percentage (16 percent) obtained all their household income from outside agriculture.<sup>26</sup> The small and medium group recorded the highest proportion of households engaged in both farming and farm laboring (rows 2 and 3), with a relatively high proportion in each owning group also engaged in non agricultural activities (19–23 percent).

A much smaller proportion of households in the large land owning group were involved in farm laboring (though 20 percent of households even in this group were reported some farm laboring activity). This group was marked by the high proportion of pure farmers (33 percent) and also recorded the highest share of pure non wage earners, most likely to consist of older household heads leasing out all their land.

The above refer to activities in which households obtained

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<sup>26</sup> It will be useful at the later stage to identify the household characteristics of these pure farm laboring families. One might expect that they mainly consist of households with older, less mobile household heads. Nevertheless, inter village differences among pure laboring families suggests that access to farm laboring jobs was also important (see below).



some income. Intergroup variations were greater in the case of major family income source, in the large majority of cases contributing to well over 50 percent of all household income (Table 6.21.).<sup>27</sup> Indeed a rather different picture emerges when we look at the data in Table 6.21 For the landless group, non agricultural employment is relatively more important as a major income source than for all income sources, accounting for 43 percent of all activities undertaken by landless households, and significantly larger than the proportion of landless households in the farm laboring group. Among the land owning classes there was a significance in the proportion of households which reported farming as a major income source between the very small farmers (owning less than 0.25 ha) and the other classes. In the very small farmer group farming was still the major source for over half all households, but non agricultural income, especially trade was also prominent. The two intermediate sawah groups indicate fairly similar distributions but there is a significant change when we look at the largest sawah ownership class: farming increases in importance and so too does the white collar and non wage groups. Many village officials fall into the largest sawah owning class and so too do households depending entirely on rental income from leased land.

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<sup>27</sup> Data were also collected on the approximate contribution of each income source to household income but in coding only broad groups were distinguished, the upper group unfortunately being 50 percent or more into which almost all major income sources fell. For this reason the data is not presented here.

Table 6.21. Distribution of Households According to Major Source of Family Income by Sawah Area Owned

	MAJOR SOURCE OF FAMILY INCOME					
	Sawah Owned (ha)					All Households
	0	<0.25	.25 - <.5	0.5 - <1.0	1.0+	
	(1)	(2)	(3)	(4)	(5)	(6)
I. <u>AGRICULTURE</u>						
Farmer	20.3	55.7	70.7	71.4	25.3	47.7
Farm Laborer	32.6	6.9	2.3	2.1	-	14.7
II. <u>NON AGRICULTURE</u>						
Household industry	3.2	2.4	1.1	0.1	-	2.2
Construction	6.0	4.8	1.2	0.1	-	4.1
Transport	7.5	1.9	1.2	2.1	-	3.8
Trade	15.4	12.0	10.9	7.9	3.2	13.9
White Collar	7.1	4.1	3.9	4.3	8.6	4.3
Other	2.0	1.7	2.0	0.7	-	3.5
<u>Sub Total</u>	43.2	31.9	20.3	15.2	11.8	31.8
III. NON WAGE	3.9	5.6	5.8	10.0	12.9	5.8
	100	100	100	100	100	100
(N=)	(586)	(540)	(256)	(140)	(93)	(1615)

Two other points emerge, especially from comparing Table 6.21. with Table 6.20. First, although quite a high proportion of sawah owners obtained income from farm laboring, a very small proportion of owners (even among the very small sawah owning households) depended on farm laboring as a major source of family income. This was also true of the notorious low wage cottage industries dealt with at length in previous SAE reports. In both these cases—farm laboring and household industries—household involvement was clearly a supplement to family income for the most part earned in farming and to lesser extent in other non agricultural pursuits. Second, despite the relatively uniform distribution of all sources of non agricultural income across ownership classes, its relative importance was clearly inversely related to the area of sawah owned. For many in the landless and very small

farming groups non agricultural employment was a primary source of income, but for the large majority of larger owners with non agricultural pursuits was clearly supplemental.<sup>28</sup>

## **2. Tenancy Status and Source of Family Income**

Differential access to sawah land through the tenancy market was expected to help explain variations in the distribution of family income sources within the sample. Data on family income status by tenancy status and sawah owned is presented in Table 6.22. Looking first at the landless group, households with no access to sawah (column 1) are relatively evenly divided in participation in both non agricultural and farm laboring activities, with approximately one third obtaining some income from both sources. Pure tenant families on the other hand, mostly from lowland villages, stood out among all tenancy groups in their participation in wage labor in agriculture, either combined with farming activities (31 percent) or with farming and non agriculture (43 percent).

Pure tenant farmers, for the most operating less than 0.25 hectares, indicated the most diversity in income sources, perhaps partly related to the acute seasonality in agricultural labor demand in most of the lowland villages and high demand for wage labor at peak periods.

Among the two major sawah owning groups—operators and non operators—there was surprisingly little difference between smaller and larger owners in major sources of family

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<sup>28</sup> The distribution of secondary income sources is shown in Appendix-Table 6.15.

Table 6.22. Distribution of Households According to Family Income Status, Tenancy Status and Sawah Area Owned<sup>1)</sup>

Family Income Status <sup>1)</sup>	AREA OF SAWAH OWNED (ha)					
	0		<0.5		0.5+	
	Absolute Landless	Pure Tenant	Sawah Operators <sup>2)</sup>	Non Operator	Sawah Operators <sup>3)</sup>	Non Operator
	(1)	(2)	(3)	(4)	(5)	(6)
1. Farmer	2.8	4.0	9.9	11.5	23.7	16.7
2. Farmer – Farm Laborer	6.9	30.2	23.5	1.9	15.5	8.3
3. Farmer – Farm Laborer – Non Agric.	3.9	43.1	24.2	1.9	19.1	-
4. Farmer – Non Agric.	4.1	22.1	42.4	1.9	47.7	16.7
5. Farm Laborer	26.4	-	-	11.5	-	25.0
6. Farm Laborer – Non Agriculture	32.8	-	-	21.2	-	8.3
7. Non Agriculture	23.1	-	-	50.0	-	25.0
	100	100	100	100	100	100
Other (N=) <sup>3)</sup>	-	-	(5)	-	(1)	-
All Households (N=)	(404)	(177)	(700) <sup>3)</sup>	(52)	(195) <sup>3)</sup>	(12)

- 1) 3 major sources only.
- 2) Excludes tenant in-out (32 households) and 10 households with land fallow or other statuses.
- 3) Households in which farming was a forth income source and one large TRIS sugar can non operator.

income. A higher proportion (24 percent) of the larger owner–operator derived family income solely from farming and smaller proportion were involved in farm laboring; nevertheless in both groups quite a high percentage of households derived income from outside agriculture and from farm laboring. The relatively small non operator group, especially those owning less than 0.5 hectares of sawah, stood out (in contrast to the absolute landless) in their sole dependence on non agricultural income. One would expect that many in this group were involved in the tenancy market partly because of relatively high returns from non agricultural pursuits.

Among the sawah operating groups, sawah cultivated is the relevant variable to help explain contrasting labor market behavior. But here again one is impressed by the similarities rather than differences between groups (Table 6.23.). House-

hold deriving income from farming alone were slightly more prominent among larger cultivators, and farmer–farm laborers among those operating less than 0.5 ha of sawah; nevertheless, differences in the proportions obtaining income from these sources was not large. Owner operators leasing out land in both operating categories were heavily concentrated purely in farming—many of these possible order household heads especially in the small land cultivating group—or combine farming with non agricultural activities helps explain involvement of many of these households, rarely engaged in farm laboring, in the tenancy market.

Among smaller and larger pure tenant households there was remarkably little difference in the distribution of family income sources. Both small and larger tenant operators continued to stand out from other operating groups in their participation on agricultural wage labor activities: over 80 percent of pure tenants families operating more than 0.5 hectares of sawah land obtained some income from farm laboring, again presumably many mainly in higher earnings harvest work.

Table 6.23. Distribution of Sawah Operators by Family Income Status and Area of Sawah Operated<sup>1)</sup>

Family Income Status <sup>1)</sup>	AREA OF SAWAH CULTIVATED							
	<0.5 ha				≥0.5 ha			
	Pure Owner Op.	Owner Tenant in	Owner Tenant out	Pure Tenant	Pure Owner Op.	Owner Tenant in	Owner Tenant out	Pure Tenant
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Farmer	9.8	4.9	28.2	4.3	21.4	11.6	30.0	2.8
Farmer – Farm Laborer	26.7	20.5	7.7	31.1	19.6	19.8	3.3	30.6
Farmer – Farm Laborer – non- agriculture	24.6	27.5	9.9	40.6	22.3	26.7	3.3	50.0
Farmer – non Agriculture	38.9	46.5	52.2	24.0	36.6	41.9	63.3	16.6
	100	100	100	100	100	100	100	100
Other <sup>2)</sup> (N=)	(4)	(1)	-	-	-	-	(1)	-
All Households (N=)	(459)	(143)	(71)	(141)	(112)	(86)	(32)	(36)

- 1) Excludes tenants in-out (32 households) and ten households with land fallow or other statuses.
- 2) Households in which farming was a fourth income source and one large TRIS non operator.

From the data presented above we can conclude that diversity in income earning activities is not significantly influenced by area of land owned or operated among the various tenancy groups. The major contrasts were between tenancy groups irrespective of area of sawah owned or controlled. Between tenancy groups, however, there was little variation in the distribution of major income sources for the various tenancy status groups. The data are presented in Table 6.24 Farming was reported as the major source of family income by the majority of households in all tenancy statuses for both small and larger operators, the single exception being smaller tenant operators.

Even the majority of operators tenanting land out reported farming as their major source of family income. Indeed, the contrast between small and larger operators was much greater than for all income sources with farming, as one would expect, being of greater importance within the larger operating group (ranging from 87 percent of households among owner operators and owner tenants—in 75 percent for pure tenants).

Consistent with findings for the various landowning classes, trade was the major non agricultural source of income for most of the smaller operator tenancy groups, although it was of much less significance among the larger operators. As alluded to above, relatively well paid and stable white collar jobs were of some importance (13 percent of households)

among the operator tenant-out group, a pattern which was also clear for owner non operators.<sup>29</sup> Finally some mention should be made of the not insignificant proportion of both smaller and larger pure tenant families whose major source of family income was obtained from farm laboring, a point which underlines once more the importance of farm laboring for this group.

Table 6.24. Distribution of Households According to Major Income Source by Tenancy Status and Sawah Area Operated<sup>1)</sup>

Family Income Status <sup>2)</sup>	AREA OF SAWAH CULTIVATED							
	<0.5 ha				>0.5 ha			
	Pure Owner Op.	Owner Tenant in	Owner Tenant out	Pure Tenant	Pure Owner Op.	Owner Tenant in	Owner Tenant out	Pure Tenant
I. <u>AGRICULTURE</u>								
Farming	66.4	65.5	69.1	49.3	87.4	87.2	82.8	75.0
Farming Laborer	6.2	2.2	2.9	16.4	0.9	1.2	-	16.7
II. <u>NON AGRICULTURE</u>								
Construction/Transport	6.0	5.0	1.5	13.6	1.8	1.2	3.5	5.6
Trade	15.1	20.9	13.2	15.0	6.3	5.6	-	-
White Collar	2.2	3.6	13.2	3.6	2.7	1.2	13.8	-
Other <sup>3)</sup>	4.0	2.9	-	2.1	0.9	3.5	-	2.8
Sub Total non-Agriculture	(27.3)	(32.4)	(27.9)	(25.3)	11.7	11.4	17.3	8.4
Other <sup>3)</sup>	(4)	(1)	-	-	-	(1)	(1)	-
	100	100	100	100	100	100	100	100
(N=)	(459)	(143)	(71)	(141)	(112)	(86)	(32)	(36)

- 1) Excludes, non wage income earners (104 households), tenants in-out (32 households) and owners not cultivating level or other's tenant statuses (10 households).
- 2) Includes household industry, services and manufacturing wage labor.
- 3) See note to Table 6.23.

### Intervillage Variations

In the above discussion, to simplify we have intentionally

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<sup>29</sup> The latter are not in Table 6.24. Over 25 percent of owner non operator families derived income from white collar occupations.

refrained from looking at specific village patterns and made only passing reference to upland and lowland variations in employment and income earning activities. The major upland and lowland contrasts in land ownership and tenancy were dealt with in the previous section, and the main differences in employment and income structure briefly summarized in the introduction to this paper; they are well documented in previous SAE research. Most interesting, of course, is how these patterns have changed over time, a subject on which we are unable to present data at this stage of the analysis. We will very briefly allude to some possibilities here and focus especially of some of the village specific patterns which can only be analyzed more rigorously when more data becomes available. The data on which this discussion is based is included in Appendices 6.16. and 6.17.

Looking briefly at inter village variations in family income status (Appendix-Table 6.16.) the quite marked role of non agricultural income sources, rivaling that of farm laboring, among landless families appears to be a relatively new development. Lowland villages II (Lanjan) and IV (Sukosari) are especially prominent in this respect, with well over 70 percent of landless families involved outside agriculture, primarily in *becak* driving (despite the efforts of city officials to control this activity in recent years) in the former and tobacco processing in the latter (Sukosari was the only village in which manufacturing wage labor is significant). The large proportion of smaller and larger farmers involved in wage labor activities is primarily a lowland phenomena, being especially marked in the East Java Village Gemarang (Village III) where



cropping is most intensive and yields high compared with other villages. The one exception is upland Village VI (Gunungwangi) where over 50 percent of even the larger owners (0.5 ha and above) are involved in farm labor, many of them temporarily migrating at harvest and cultivation time to nearby villages. Partly because of the diversified agricultural base in the upland villages, we find very few households involve in pure farm laboring or pure non agricultural activities, quite a high proportion even of landless households combining these pursuits with agriculture.

With respect of major sources of family income (Appendix-Table 6.17.), farm laboring is only important among landless in the lowland (though also of some significance in Village VI mentioned above). Village III (Gemarang) stands out once again with over fifty percent of landless households depending on farm laboring as a major income source. Farming is of overwhelming significance among all sawah owning groups, the one major exception being Village VII (Malausma) in which quite a high proportion of even the larger farmers obtained most of their family income from trade in Semarang, many of these families presumably involved in land leasing arrangements. Mention might also be made of white collar work in Sukaambit (Village V) conducted by around 15–20 percent of households in all land owning classes (even the landless), and probably a major explanation for the predominance of tenancy contracts in this village as note in Section C.

In general, looking at the data by village, there is no doubt that some of the marked lowland-upland contrasts noted in the baseline studies continue prevail. Nevertheless, one is

struck also by intervillage variations related in part to tenancy patterns discussed in Section C, cropping intensity and sawah productivity, and to historical and locational factors affecting the types of economic opportunities taken advantage of in specific villages. We have only begun to describe some of the variations in employment structure in this paper, explanation must also await further analysis of the recensus data.

Concluding this section on income sources, one major point stands out. From the respondent's reporting of the contributing of various kinds of economic activity to household income, farming activities related to the control of sawah land are overwhelming significance. While there has undoubtedly had been an expansion of off farm employment activities mainly in the trade sector, it is clear that for the majority of households these activities only provide a secondary source of family income.<sup>30</sup>

Returning to some of the questions raised in the introduction to the section, it does seem that involvement of small farmers in land tenancy arrangements is related, though not as closely as was expected, to access to non agricultural employment opportunities. Relating the findings to micro data, one point might be mentioned. The substantial shift of individuals out of agriculture recorded in the national survey data

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<sup>30</sup> We should reiterate, of course, the probable bias in respondents answers, with a tendency to overstate the importance of higher status farming activities; the above conclusions will need to be checked from income data collected in the survey. Nevertheless, it seems unlikely that this very dominant pattern will be altered radically by such biases.

may actually overstate the importance of rural economic transformation. While some households members, especially among the younger age groups may have shifted out of agriculture it is likely that, in predominantly sawah villages which have taken advantage of new agricultural technology in the past decade, family income continue to depend mainly on rice cultivation. We need, as mentioned above, more data to sustain this point but the data do suggest that occupational multiplicity with farming as a base continues to be much greater than diversification of major income opportunities, as the studies of the mid seventies suggest.

## **F. Conclusion**

Taking the sample as a whole, the data reminds us once again of the three major characteristics of sawah ownership patterns in Java: on average very small holdings, a high proportion of landless and relatively unequal distribution. Approximately one third of landless households gained access to sawah land through tenancy arrangements and just under 25 percent of all sawah owners (the large majority owning less than 0.375 ha) increased operational holdings through the tenancy market. Operational holdings were, thus, more evenly distributed than sawah owned even among owners, and the net effect of tenancy arrangements was to increase the proportion of households obtaining some income directly from sawah land by about five percent. Nevertheless parcels of sawah cultivated were small, on average slightly smaller than owner operated plots, and the large majority distributed through share cropping arrangements.

Looking at one indicator of labor market structure only (sources of family income) the predominant pattern was multiple sources from combinations of farming, farm laboring and non agricultural activities. Relatively few households had moved out of agriculture altogether and, indeed, the majority reported farming as their major source of family income. Sawah owning households, however small their plots of land, were for the most part not prepared to move entirely out of agriculture, perhaps both because of relative security and high earnings in sawah agriculture.<sup>31</sup> Although this paper did not look at sectors of employment for individual household members, preliminary analysis suggest the majority of both wives and children of household heads in land owning classes continued to channel the main share of their labor inputs into farming (See Wiradi, Manning and Sri Hartoyo, 1984). This implies that both farm laboring and non agricultural employment provide sources of income mainly in of peak periods.<sup>32</sup>

We have noted some major contrasts in the lowland and upland villages with respect to landlessness, tenancy and sources of family income. Higher landlessness, less equal distribution of sawah land and greater family labor involvement in wage labor (both within and outside agriculture) character-

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<sup>31</sup> It is quite likely that a different pattern would obtain in predominantly dry land agricultural villages, with total sectoral shifts being of greater significance.

<sup>32</sup> This 'counter seasonality' pattern is discussed in Husein Sawit and Djoko Triono (1984), from analysis of survey data on labor allocation strategies of families engage in farm laboring activities in five of the villages.

ized most of the lowland villages. Nevertheless, although the patterns of tenancy differed between the two groups of villages (landless in the lowland, small owners in the upland, leasing land in), rates of tenancy were relatively similar and despite the smaller average size of holdings in the upland, distribution of cultivated land was not markedly more equally distributed than in the lowland.

Within the lowland and upland groups, considerable intervillage variations occurred in ownership, tenancy and employment structure. Owing to the small sample of villages surveyed we should be wary of drawing conclusions for all Java on lowland-upland differences in these phenomena.

Only a relatively small number of variables covered in the recensus questionnaire have been analyzed in this paper. As noted, tenancy patterns tend to be determined by a complex range of factors and subject to significant changes over relatively a short time span. Nevertheless, we need at least to incorporate in the analysis basic household characteristics in seeking to explain differentials in participation in the tenancy market, and the interactions between the tenancy and labor markets. Other materials from the recensus still to be analyzed includes the terms of tenancy contracts, relationship between owner and tenant, and characteristics of both; migrations patterns and occupation of migrants are also worth examining further, especially in the context of income generated in rural as against urban areas.<sup>33</sup>

What are the major dimensions of community change

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<sup>33</sup> This subject has been analyzed separately by Colter (1984).

which might be investigated through comparisons with the baseline study? It is unlikely that we will encounter major changes in sawah ownership distribution over a 6-7 year period, but changes in tenancy interrelating with household labor market strategies are likely to be of some significance.<sup>34</sup> Finally, the previous preliminary report (Wiradi, Manning and Sri Hartoyo, 1984: Ch. IV) showed a significant decline in farm laboring occupations balanced by expansion in non agricultural jobs; the key issue here is how these changes have influenced the relative economic status of various ownership and cultivation classes. Analysis of the resurvey data indicates substantial increases in the share of income of hours worked in higher earnings non agricultural activities in the sample for all land owning classes (Saefudin and Yuni Marisa, 1984). Comparison of the recensus and baseline census data (using ownership of consumer goods as an indicator) can throw light on the extent to which these changes are general to the communities as a whole. Relevant questions include what age-sex groups and experiencing upward economic mobility, what type of occupations and in which locations are substantial gains being made, and how has this affected the distribution of wealth within the communities. Such analysis will enable us to separate out the gainers and losers overtime pertaining to the complex patterns of employment observed in this paper.

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<sup>34</sup> Preliminary analysis of the baseline data suggests no clear pattern of change among villages in the distribution of tenancy contracts; we have not at this stage related this data to changes in source of income and occupation.