

PN-APPW-168  
9364111.02  
1512-47740

## 6 Wives at work: patterns of labor force participation in two rice-farming villages in the Philippines

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### Introduction

The evolution of farming systems from shifting agriculture to plow cultivation, which characterizes rice-farming areas in Southeast Asia, has been associated with the defemalization of agriculture (Boserup 1970). While shifting agriculture in African villages and in some tribal communities in Asia leaves nearly all tasks of food production to women, the entry of the plow and draft animals has brought about a shift in the major producer role to men. Under plow cultivation men have increasingly taken over farm operations although women can continue to engage, alongside men, in hand operations like transplanting, weeding, and harvesting and threshing. As some of these manual activities are mechanized, women are expected to be further marginalized in agricultural production.

This paper seeks to investigate the question of female participation in the production of food and other marketable goods in two Philippine villages, one of which has experienced widespread mechanization of key rice-farming operations. Although men are generally considered as the family's breadwinner, wives are often compelled to supplement male earnings to ensure the survival of the family. They accomplish this in

various ways which fit into their housewifely chores, thereby disguising the degree of women's involvement in the village and family economy. Because of the pressures which are brought to bear on married women, the paper focuses on this group's labor supply decisions and how these are influenced by their family's access to mechanized rice-farming technology.

This paper consists of three parts. A brief exposition of the assumptions and the thrust of the analysis, and a description of the data used for this paper constitute the first section. This is followed by a description of the nature of married women's participation in market production and the principles which seemed to govern their market involvement. The last section discusses the patterns of married female labor force participation resulting from the access which women's families have to a rice farm and other productive resources, particularly farm machines.

### Analytical thrusts and data source

The effect of farm mechanization on female workers has been studied in the context of changes in labor utilization of rice farms, with female labor lost in the general categories of 'hire', 'family', or 'total' labor (Cordova 1980). The present analysis departs from this labor-demand perspective and, instead, explores the relationship which access to farm machines bears on labor supply decisions of married women.

### *Thrusts of the analysis*

Married female labor supply can be assumed to be determined along with that of other family members in an effort to maximize household welfare (Mincer 1962, Gronau 1980). The model expects the supply of labor to increase with a rise in wage rate, unless the income effect of the wage change outweighs its substitution effect.

In view of peasants' concern to ensure the survival of the family (Scott 1976, Hart 1978), the labor supply behavior of married women may be interpreted as geared toward fulfilling the survival requirements of their respective families (Tilly and Scott 1978 used the same argument for women in pre-industrialized Europe). Thus, married women would supply more or less of their labor according to how far their family diverges from its subsistence requirements. Moreover, their labor supply response to a change in the wage rate and family income (or earnings) could deviate from the expectations of the household labor supply model because of their foremost desire to help the family attain some (subsistence) standard of living.

A change in production technology like mechanizing certain operations is assumed to affect labor supply of married women through its influence on the chances of survival of these women's families. Farm mechanization is further assumed to operate at two levels. The first is through the family's direct access to resources like land (and irrigation); the other is through the demand for female labor in the village rice farms, which has already been found to be modified with the use of farm machines. While the former refers primarily to a push effect, the latter operates mainly as a pull effect. If other factors are constant, the more resources the women's family has, the lower is the likelihood for her to be found in the labor force; or if found in the market, the shorter are the hours she is bound to observe. Similarly, women in villages where mechanized rice-farming technology dominates are expected to have lower labor force participation and shorter hours worked than otherwise.

### *Data base used*

In 1979, two rice-farming villages in Camarines Sur were chosen for a study of market participation and time allocation of married women. These communities provided two farming systems with rice as main crop. One village (Ayugan) was a community where the majority of rice farms were found to be irrigated and operated using power tillers during land preparation and the crop threshed by machine. The other village (Gatbo) had rice farms where land preparation was generally accomplished with the use of plow and carabao, and threshing was undertaken either through the *hampusan* (literally, flailing or whipping the palay stalks against a threshing board) or the *ginik* (treading on the palay stalks) method. Although a number of farms were irrigated by diverting water from nearby springs, the irrigated area contracted by about half during the dry season.

A sample of 100 households with currently married women in residence was selected for each village using simple random method. The combined sample was associated with a sampling error of 6 per cent, with level of confidence set at 95 per cent. In each sample household, the married woman served as the respondent. Table 6.1 presents the distribution of the sample.

The research data were generated by visiting the same panel of respondents three times during the 8-month survey period. The survey rounds were timed to coincide with significantly different periods of the agricultural cycle. The first visit was accomplished in late March until the middle of April with the intent of capturing the relatively slack rice-farming period in the two villages. Gathered during this survey round was background information on the respondents and

Table 6.1 Distribution of sample families by irrigation and farm-mechanization status of the rice farms they cultivated: Ayugan and Gatbo (1979)

Irrigation and farm-mechanization status	Ayugan		Gatbo	
	1978/79 dry season	1979/80 wet season	1978/79 dry season	1979/80 wet season
Irrigated farms operated				
with machines	55 (80) <sup>a</sup>	59 (88)	8 (12)	6 ( 9)
without machines	4 ( 6)	3 ( 4)	29 (43)	40 (59)
Non-irrigated farms operated				
with machines	8 (12)	3 ( 4)	11 (16)	5 ( 7)
without machines	2 ( 3)	2 ( 3)	20 (29)	17 (25)
Total no. of rice-farming families in the sample	69	67	68	68
Total no. of non-farming families in the sample	31	29	32	28
Total no. of sample families	100	96 <sup>b</sup>	100	96 <sup>b</sup>

<sup>a</sup> The figures in parentheses pertain to the percentage of sample families belonging to an irrigation and farm-mechanization status to the total number of rice-farming families included in the sample.

<sup>b</sup> By the third survey round, the sample size has been reduced to 96 per village for any of the following reasons: death of the married female respondent, out-migration of the family after the first survey round, or death of the woman's spouse which thus rendered her a widow and was therefore considered not qualified to belong to the currently-married female sample.

their respective families, and labor force participation and time allocation data for the week immediately preceding the interview date. The second interview was conducted in June; this coincided with the land preparation, transplanting, or weeding phases in a number of farms in the two areas. The last survey round took place in late September through mid-October; this captured the harvesting and/or threshing of the bulk of the rice crop planted during the 1979/80 wet season. The last two survey rounds generated information on the respondents' labor market activities and time allocation during the week previous to the interview date.

A comprehensive analysis of the research results is contained in Illo (1983). Only the data which are directly relevant to the discussion of married women's market participation and farm mechanization are presented in this paper.

### Village women: wives and workers

The married women studied in 1979 were between the ages of 18 and 68 years, with the average female respondents in their mid-thirties when interviewed during the first survey round. Formal years of education ranged from nil to 14 years, and average education was estimated at about 5 years or a year short of the complete elementary education. These women had been married for an average of 15 to 16 years to men who were of about the same age and educational attainment.

The modal sample family in the two villages was composed of the couple and 5 to 6 children; the number of living children, however, ranged from nil to 11 (in Gatbo) and 13 (in Ayugan). Of the children in the average family, at least 2 were aged 6 years or younger, and about 4 would live with their parents until they themselves marry and form their own families. The age composition of the majority of the sample families in the two areas implies that while there were children to care for, there were also older children who could either relieve the woman of part of child care responsibilities or engage in market production to help increase family income.

Despite the presence of adult children, the women often undertook production of home goods and services alone. They prepared meals, washed the household laundry, cared for the younger children (particularly the infants), and kept the house and yard clean. Moreover, they sometimes produced the vegetables they cooked, and the poultry which they might serve once in a while. When necessary, they gathered firewood and fetched water from the nearest spring (in the case of women in Gatbo) or well or pump (in Ayugan). On the whole, married women spent between 37 and 44 hours a week in home production; those with preschool-aged children, from 52 to 63 hours a week.

At the same time that village wives continuously kept house for their families and looked after the welfare of their spouses and children, they also engaged in an array of activities which would either produce marketable commodities or earn them some income. The percentage of women with non-zero market production time varied from one period of the year to another, but never did the figure fall below 64 per cent in Ayugan and 86 per cent in Gatbo. In at least 5 per cent of the sample families, the wife was in the labor force while the man was either ill or could not find work in the village. The more common arrangement, however, had both the woman and her spouse involved in market production. This was particularly true in Gatbo where at least 8 of every 10 sample families had a working man and wife team, in Ayugan, the proportion was about 6 of every 10 sample cases.

The preponderance of working-wife cases in Gatbo appears to be associated with the generally lower family earnings in the area. The

average annualized earnings of Gatbo families stood at ₱5,951, which was but 61 per cent of that estimated for Ayugan families (₱9,683). With annual minimum food requirements in 1979 valued at about ₱8,000 for a family of six, about 81 per cent of Gatbo families, as compared with 57 per cent in Ayugan, may be considered 'absolutely' poor (Ilo 1983).

The variation in average family earnings between the two villages and among families within each community may be partly traced to the access which families have to productive resources. In Ayugan, farming families generally had irrigated land where crop turnaround could be facilitated with the use of farm machines. Consequently, the divergence between the earnings of farming families and those of landless households had been dramatic; the latter's average earnings were only about half of the former's (see Table 6.2). In contrast, a majority of farming

Table 6.2 Average annual family earnings, by family's access to productive resources: Ayugan and Gatbo (1979)

Category of family by access to resources	Ayugan	Gatbo	Overall
<b>Access to riceland<sup>a</sup></b>			
Farming	₱11,394 ( 69) <sup>b</sup>	₱ 6,655 ( 68)	₱ 9,042 (137)
Non-farming	5,875 ( 31)	4,454 ( 32)	5,153 ( 63)
<b>Access to other productive resources (for farming families)<sup>c</sup></b>			
Irrigated, mechanized farm	12,348 ( 55)	10,593 ( 8)	12,125 ( 63)
Non-irrigated but mechanized farm	8,182 ( 8)	8,521 ( 11)	8,379 ( 19)
Irrigated but non-mechanized farm	7,604 ( 4)	5,231 ( 29)	5,520 ( 13)
Non-irrigated, non-mechanized farm	5,590 ( 2)	6,118 ( 20)	6,070 ( 22)
<b>Overall</b>	<b>₱ 9,683 (100)</b>	<b>₱ 5,951 (100)</b>	<b>₱ 7,817 (200)</b>

<sup>a</sup> Using one-way analysis of variance, average annual family earnings in Gatbo and for the two villages combined did not vary significantly with the family's access to riceland. In Ayugan, however, annual family earnings varied according to access to riceland at 0.05 level of significance.

<sup>b</sup> The figures in parenthesis refer to the number of sample families belonging to the particular access category.

<sup>c</sup> Annual family earnings varied significantly (at 0.001 level) by the family's access to productive resources other than riceland in Ayugan, Gatbo, and in the two villages combined.

families in Gatbo were either operating non-irrigated land or cultivating irrigated farms without sufficient resources (as roughly indicated by the low incidence of mechanization) to maximize the returns to rice farming. Probably because of the minimal advantage which farming households enjoyed over landless families in this village, annual earnings did not vary significantly with families' access to riceland. In Gatbo more than in Ayugan, therefore, families seemed to differ in economic status very minimally: most were poor, or few were a little less poor.

#### Market production activities

What constitute market production activities? These may be broadly interpreted as pertaining to activities which generate income for the worker and her family as well as to those which produce marketable (though not necessarily marketed) goods. These market activities then cover wage work along with tasks related to growing of rice and other crops, livestock and poultry raising, backyard gardening, and running a *sari-sari* (variety) store and other economic enterprises. Crop production operations include work in the field (e.g. planting or transplanting, weeding, and harvesting and threshing, and supervision of hired farm labor), and auxiliary tasks like tending work animals and preparing and bringing food to workers in the family farm.

Of the possible market activities, unpaid work in agricultural enterprises of the household other than rice farming accounted for the largest proportion of married female workers in Ayugan and Gatbo (see Table 6.3). Probably because of the low time requirement of these activities, working wives had sometimes combined their backyard gardening and livestock or poultry raising with wage employment. At other times, married women from farming households actively engaged in rice-farming activities while keeping their gardens and a brood of chickens or one pig.

Meanwhile, the 20 or so wives who worked for wages during the research period were found to be involved in different tasks in rice farms, stripping of abaca, or harvesting sugarcane. However, there tended to be a concentration of female workers in harvesting and threshing of rice crops in March and April, and again in September and October (see Table 6.4); in June, a number of working wives joined transplanting teams. A comparison of the wage employment of married women in Ayugan and Gatbo underscored two points. Firstly, overlaps in rice-farming activities seemed to occur in a community like Ayugan where farms have access to irrigation facilities, realize at least two crops in a year, and planting schedules are staggered rather than uniform for all. Secondly, shortfalls in labor demand from rice farms could be covered by other crop farms' demand. This would tend to obtain when

Table 6.3 Distribution of married female workers by type of activity: Ayugan and Gatbo (1979)

Type of activity	Ayugan			Gatbo		
	April	June	Oct.	April	June	Oct.
Wage employment	28 (44) <sup>a</sup>	21 (36)	27 (34)	24 (28)	20 (22)	20 (23)
Unpaid work in own rice farm	8 (12)	19 (33)	11 (14)	17 (20)	19 (21)	14 (16)
Unpaid work in own business	6 (9)	9 (16)	9 (11)	16 (19)	11 (12)	7 (8)
Unpaid work in other agricultural enterprises of the household	39 (61)	36 (62)	61 (77)	77 (90)	90 (99)	87 (99)
No. of sample married women working during the survey week <sup>b</sup>	64 (64) <sup>c</sup>	58 (59)	79 (82)	85 (86)	91 (94)	88 (92)
No. of sample non-working married women	36	40	17	14	6	8

<sup>a</sup> The figures in parenthesis pertain to the percentages of women in a particular activity to total married women working during the survey week.

<sup>b</sup> The figures in the table need not total to the data given at the foot of the table owing to women holding different types of employment.

<sup>c</sup> The percentage figures in parenthesis pertain to the labor force participation at the particular survey period.

a semi-upland village like Gatbo had a diversified cropping system, thus wage employment opportunities particularly for landless workers would not depend exclusively on low-cropping intensity rice farms.

Although the village economy might dictate the degree of involvement of women in the formal labor market, family circumstances like poverty appear to unveil strategies and mechanisms through which women could help support their family. Production activities which are commonly referred to as petty gainful occupations provide the meat of such strategies. The higher participation of women from a poorer village like Gatbo in growing vegetables and fruit trees, and in tending pigs which could be sold later presents itself as a refutable evidence of informal market work as a response to poverty.

#### *Hours worked and return to labor*

On the whole, working wives spent between 23 and 28 hours per week in market production (see Table 6.5). Because female wage workers

Table 6.4 Distribution of married female wage workers by activity: Ayugan and Gatbo (1979)

Activity	Ayugan			Gatbo		
	April	June	Oct.	April	June	Oct.
Non-farming	4	4	5	1	—	—
Teaching	3	3	3	—	—	—
Dressmaking	—	—	—	1	—	—
Paid laundrywoman	1	1	2	—	—	—
Farming	24	17	22	23	20	20
Transplanting	3	8	3	2	11	—
Weeding	1	2	—	—	2	—
Harvesting and threshing	11	4	17	13	—	19
Other rice-farming tasks	6	—	—	—	1	—
Stripping of abaca	—	—	—	5	4	1
Harvest of sugarcane crop	—	2	1	3	2	—
Other agricultural activities	3	1	—	—	—	—
No. of sample married female wage workers	28	21	27	24	20	20

were also involved in other unpaid productive activities, their total weekly market time consistently exceeded that reported for women who never worked for wages, regardless of village and survey round. Moreover, a comparison of working hours only in wage employment (Table 6.6) and the cumulative workperiod of non-wage earners (Table 6.5) indicated that indeed women, on the average, were bound to work longer hours when working for wages than otherwise. The additional hours from non-wage activities spent by female wage workers were about 4 to 6 hours per week in Ayugan; but in Gatbo, the added market time ranged from 12 to 18 hours per week.

The hourly wage rate slightly fluctuated between survey rounds. Averaging for the two villages, wage rates were about ₱1.40 per hour during the first and third survey periods and ₱1.08 in June. Meanwhile, mean hourly returns to labor ranged between ₱1.36 in June to ₱1.64 during the other two survey periods (see Table 6.5). At least three things, however, can be pointed out in connection with the average hourly payments to female labor estimated for Ayugan and Gatbo. First, wage rates in Ayugan appeared to consistently exceed those paid in Gatbo regardless of task. For instance, transplanters seemed to be paid about twice as much in Ayugan as in Gatbo while harvesters (working in September or October) were estimated to have received almost ₱0.60 more than their peers in Gatbo for every hour worked. Second, working wives in Gatbo who never worked for wages in a particular survey round consistently reported (average) hourly returns

Table 6.5 Estimated average market production time (in hours per week) and hourly payment (actual and/or imputed) to female labor, by women's wage employment status: Ayugan and Gatbo (1979)<sup>a</sup>

Survey round and village	Working for wages			Non-wage workers			All workers		
	Hours	RWPH <sup>b</sup>	RHWR <sup>c</sup>	Hours	RHWR	RHWR	Hours	RWPH	RHWR
March-April									
Ayugan	26	₱1.59	₱1.59	12	₱2.03		18	₱0.68	₱1.84
Gatbo	44	1.12	1.27	24	1.58		30	0.31	1.49
Overall	35	₱1.37	₱1.44	20	₱1.74		25	₱0.46	₱1.64
June									
Ayugan	40	₱1.46	₱1.35	27	₱1.24		32	₱0.51	₱1.28
Gatbo	41	0.70	0.91	24	1.57		28	0.16	1.42
Overall	41	₱1.08	₱1.13	25	₱1.45		28	₱0.30	₱1.36
September-October									
Ayugan	35	₱1.67	₱1.66	15	₱1.52		22	₱0.59	₱1.57
Gatbo	41	1.10	1.16	20	1.83		25	0.25	1.68
Overall	37	₱1.43	₱1.45	18	₱1.73		23	₱0.41	₱1.64

<sup>a</sup> Included here were women workers who were covered by the three survey rounds. However, 3 female workers who were employed as public schoolteachers during the research period were excluded.

<sup>b</sup> RHWR was estimated by dividing the total labor payment (wages plus replacement costs in own enterprise) for the reference week by the number of hours worked during that period.

<sup>c</sup> RWPH was derived by dividing total wages (cash and non-cash) which female workers received during the reference week by the number of hours spent in wage employment for that period.

Table 6.6 Estimated average time (in hours per week) spent by married female workers in particular market activities: Ayugan and Gatbo (1979)

Type of activity	Ayugan						Gatbo		
	March-April	June	Sept. - Oct.	March-April	June	Sept.- Oct.			
Wage employment	22 (28) <sup>a</sup>	34 (21)	29 (27)	27 (24)	24 (20)	28 (20)			
Unpaid work in own rice farm	10 ( 8)	28 (19)	29 (11)	18 (17)	22 (19)	25 (14)			
Unpaid work in own business	29 ( 6)	46 ( 9)	25 ( 9)	21 (16)	30 (11)	28 ( 7)			
Unpaid work in other agricultural enterprises	7 (39)	6 (36)	5 (61)	16 (77)	12 (90)	11 (87)			
No. of sample female workers during the round	64	58	79	86	91	88			

<sup>a</sup> The figures in parentheses pertain to the number of women engaged in the particular market activity.

to their labor compared with those who fitted in wage work with their other production tasks. In contrast, there was little variation in the mean overall payment to working wives by wage employment status. Lastly, lower average returns to labor seemed to be associated with longer workweek. This pattern was observed particularly in Gatbo and, to a limited extent, in Ayugan. In the latter, the negative wage-hours relationship was apparent only in March and April.

#### *Wives' contribution to family earnings*

The lengthening of the workperiod when returns to labor had declined could be interpreted as an attempt to guarantee that only the most minimal deterioration in the family's level of living would result when a relative downturn occurred in the village economy. The goal of working wives seemed modest — to help the family secure its present economic gains. And on the average, the women appeared to have succeeded. In Gatbo, total family weekly earnings averaged between ₱145 and ₱147; in Ayugan, ₱230 to ₱240 (see Table 6.7).

The estimates of the contribution of working wives to family earnings suggest the following points. Women from poorer families (in Gatbo) tended to affect family earnings more dramatically than those from less poor households (in Ayugan). The contribution of Gatbo working wives, for instance, accounted for 26 to 31 per cent of family earnings. In comparison, the labor earnings of Ayugan married female workers were but 14 to 18 per cent of the total earnings of their respective families. Although working wives realized about the same

Table 6.7 Estimates of working wives' contribution to weekly family earnings: Ayugan and Gatbo (1979)

Survey round and village	Ave. hours worked	RHWR <sup>a</sup>	RTLPAY <sup>b</sup>	FWEARNRB <sup>c</sup>	TFWE <sup>d</sup>	% of RTPAY to TFWE
March--April						
Ayugan	18	₱1.84	₱33	₱207	₱240	14
Gatbo	30	1.49	45	102	147	31
Overall	25	₱1.64	₱41	₱146	₱187	22
June						
Ayugan	32	₱1.28	₱41	₱189	₱230	18
Gatbo	27	1.42	38	107	145	26
Overall	28	₱1.36	₱38	₱139	₱177	21
September--October						
Ayugan	22	₱1.57	₱34	₱198	₱232	15
Gatbo	25	1.68	42	105	147	29
Overall	23	₱1.64	₱38	₱148	₱186	20

<sup>a</sup> RHWR pertains to the estimated hourly returns to labor. This was derived by dividing the total labor payment (wages plus replacement costs in own enterprises) for the reference week by the number of hours worked during that period.

<sup>b</sup> RTPAY refers to the total labor payment during the reference week.

<sup>c</sup> FWEARNRB pertains to the weekly family earnings net of the woman's contribution.

<sup>d</sup> TFWE refers to the total weekly family earnings inclusive of the working wives' labor earnings for the week.

level of earnings (as in June), the significance of their added income to family welfare was asymmetrical. To a poor family, the woman's contribution could have spelled the second or third full meal for the members; to a less poor household, the wives' earnings might have allowed an additional viand per day if not for each of the three meals during the day.

An examination of female labor earnings, taken in conjunction with hours worked and the earnings of their families net of their contribution, offers an explanation to the seemingly perverse negative hours-wage relationship observed in the previous section. Based on estimates of averages, the extension in workperiod recorded when hourly returns to labor declined tended to transpire when the latter was accompanied by a fall in family earnings exclusive of the wives' income. Otherwise (as in Gatbo between the March-April and June survey rounds), a reduction in hourly returns to labor was associated with shorter (*not* longer) hours worked. Controlling for the effects of family earnings, age composition of the family, village of residence, and other factors, working wives' market production time consistently declined with a rise in hourly returns to labor throughout the three survey rounds (Ilo 1983). These data lend support to the contention that indeed village women take on economic roles with the welfare of their family in mind. And what is an apparently perverse labor supply behavior of married women could in fact be rational when viewed in the context of family needs and poverty.

#### Women's work and access to resources

The shift in production technology which takes the form of substituting machines for labor connotes the presence of prior changes in the traditional production mode. In Ayugan, for instance, farm mechanization was observed to have occurred in rice farms which had been using high-yielding, early-maturing rice varieties, applying fertilizers, and warding off weeds by spraying the crop with herbicides. Moreover, the probability of adoption of farm machines has been shown to be higher where the farms already have access to irrigation facilities. With irrigation, second and third crops are possible, and mechanization has been rationalized as facilitating crop turnaround by mitigating the effects of labor supply shortfalls during critical stages of the production process.

The input package which precedes or accompanies mechanization of certain farming operations is theoretically geared toward increasing rice yields; accumulation of resources may result among families which have already been more progressive and more affluent than the rest. In view

of these, village families are differentiated along the most recent of a line of yield-increasing inputs – machines. With access to machines (and irrigation) interpreted as access to future higher earnings, the effect on economic decisions of the family and its members need not be limited to production and labor demand issues. Rather, it could be viewed as influencing labor supply behavior, with variations expected to occur along the dimension of access to productive resources. The questions which can be posed at this point are: have access to (irrigation and) farm machines so polarized resource classes that the patterns which were noted to be grounded on poverty concerns would only hold among women from lower resource-access groups, or are there principles other than poverty which could explain labor force participation patterns among different groups of women?

Working from the poverty hypothesis, it is first assumed that categories reflecting access to productive resources based on farm mechanization and irrigation embody relative poverty positions of families. Five resource classes are then created: these may be simplified into three types of households based solely on access of families to farm machines. Using either classification, landless families constitute a separate category.

Combining the two schemes, families may then be classified as follows.

Resources of family	Scheme A	Scheme B
Irrigated and mechanized rice farm	Class 1	Type A
Non-irrigated but mechanized rice farm	Class 2	Type A
Irrigated but non-mechanized rice farm	Class 3	Type B
Non-irrigated and non-mechanized rice farm	Class 4	Type B
No rice farm (landless)	Class 5	Type C

These classes roughly reflect gradations of poverty levels with Class 1 or Type A families as the least poor and Class 5 or Type C families as the poorest. Among the rice-farming families, Class 4 or Type B represent the poorest. Some support for these schemes is evident from the average family earnings figures summarized in Table 6.2.

Translating the poverty argument in terms of resource classes, the labor force participation of married women would be expected to decline as one moves from Class 5 (or Type C) to Class 1 (or Type A). The contention is that families with less resources would be more vulnerable to (product and labor) market fluctuations. To cushion the effect of market forces on the survival of the family, the participation

of married women in market production is bound to be higher the lower is the resource status of their respective families.

### *Some empirical evidence*

An examination of the labor force participation data summarized in Tables 6.8 and 6.9 suggests that women from Type A families did tend to join the labor force less often than those from Types B and C, except in September and October when participation rates varied very little according to access to resources. Between the two lower classes, however, slightly fewer landless women (from Type C families) were working relative to less poor women. But while it is true that landless women had lower participation rates than those belonging to Type B families, they nonetheless enter the wage labor market in greater number and worked slightly longer (by about 4) hours during the reference week (see Table 6.9). Not having any land to till, landless workers are forced to seek gainful employment to live. Rice, the staple food, has to be bought; crop sharing during harvest time appears to be a preferred arrangement and the activity has been shown to attract (and employ) a larger number of married female workers from landless

Table 6.8 Labor force participation rates of married women, by the irrigation and farm mechanization status of their family farm: Ayugan and Gatbo combined (1979)

Irrigation and farm mechanization status	March-April	June	September-October
Mechanized farms (Type A) <sup>a</sup>			
with irrigation	63	63	87
without irrigation	89	90	94
All mechanized farms	68	67	88
Non-mechanized farms (Type B)			
with irrigation	88	88	92
without irrigation	70	90	83
all non-mechanized farms	81	89	90
All farms	73	76	89
Non-farming (Type C)	80	75	83
Overall	75	76	87

<sup>a</sup> The information in parentheses refers to the access-to-resource category to which the women's families belong.

Table 6.9 Selected market participation data on working wives, by survey round and resource-access category: Ayugan and Gatbo combined (1979)

Survey round and selected market participation data	Farming families			Nonfarming families (Type C)
	Type A	Type B	Total	
<b>March–April</b>				
% with wage job	25	21	23	54
Mean hours worked for the week	17.1	28.8	22.2	30.0
Mean RHWR <sup>a</sup> (₱)	1.76	1.54	1.65	1.60
Mean RTLPAY <sup>b</sup> (₱)	30	44	37	48
<b>June</b>				
% with wage job	30	15	22	40
Mean hours worked for the week	34.8	24.9	29.6	27.9
Mean RHWR (₱)	1.32	1.49	1.41	1.26
Mean RTLPAY (₱)	46	37	42	35
<b>September–October</b>				
% with wage job	19	26	21	47
Mean hours worked for the week	21.8	23.0	22.3	24.7
Mean RHWR (₱)	2.03	1.79	1.94	1.92
Mean RTLPAY (₱)	44	41	43	47

<sup>a</sup> RHWR pertains to the hourly returns (wage plus replacement cost) for the woman's labor.

<sup>b</sup> RTLPAY refers to the woman's total labor earnings for the reference week.

families than transplanting or weeding. Apart from providing the female workers with rough paddy as payment, harvesting also yielded the workers higher earnings per hour worked than other activities. In the two villages studied, landless women could secure weekly labor earnings of about ₱48 during harvest time even when they kept relatively shorter work periods in times (like September and October) of higher returns to labor.

Women from farming families, in contrast, are assured that at least some part of their household's rice requirement need not be purchased, and that work in the family farm could keep them away from the wage labor market. Working wives from farming families could then opt to work in the family farm, raise crops other than rice, or engage in trading as an alternative to wage employment. A curious pattern, however, seemed to emerge in the involvement of these women in the

formal market. Like the landless women, those from families with non-mechanized farms (Type B) held wage jobs in greater number during the harvest months than during the transplanting and weeding period. Working wives from the highest resource class, on the other hand, tended to withdraw from the wage labor market when the wet season rice crops had to be harvested. A probable explanation of this phenomenon seemed to lie in what these landholding women did when they were not holding wage jobs.

The withdrawal of female workers from Type B households from wage activities in June could be partly explained by their involvement in planting (by broadcast method) or weeding in the family farm. The decision not to work for pay in other farms could then be rationalized by a desire to minimize cash costs in their own farm. But come harvest time, the change of supplementing the rice harvest from the family farm by share harvesting in other rice farms seemed to provide the primary attraction for women from Type B households. And because these women were more likely residing in Gatbo than in Ayugan, the opportunities for earning larger shares in the harvest (by contracting the harvesting *and* threshing of the rice crop) were definitely greater. During this period, women from Type B families were able to earn, on the average, between ₱41 and ₱44 per week; this level of earnings was secured despite the shorter hours they kept in September and October than in March and April. Like landless women, they generally tended to supply fewer hours in the wage labor market when hourly returns to labor (hired for harvesting) rose.

Working women from Type A households joined the labor force in September and October in greater number but the percentage of wage workers was lower at this time than in previous survey rounds. Several factors could account for the observed pattern. With the harvesting of the wet season rice crop, a number of the families mustered enough resources to invest in livestock which got more women involved in tending one or two pigs. Some women helped supervise the harvesters in their family farm while others engaged in trading activities. More than other groups of women, working wives from the highest resource class had the capital for trading ventures. Most of the female traders were running variety stores; a few engaged in buying and selling of rice and other food products. Returns from trading, farm supervision, and livestock raising were evaluated by working wives to be at least 25 per cent higher than what they could earn for each hour worked in the harvesting of rice crops. Assured of their farms' meeting the rice requirements of the family, women from Type A families had little incentive for share harvesting. In contrast, when payment for hired labor was in cash (as in June), relatively more working women engaged in wage jobs *and* worked longer hours in spite of the lower hourly rates.

## Conclusion

The analysis of labor supply behavior of working women from families with differing resources underscores two related points. First, the concern to prevent a further deterioration in their family's standard of living when returns to labor are falling pervades among the village women. The persistence of the general tendency of women, regardless of resource status, to work longer hours when labor rates are falling leads to the second point. In villages like Ayugan and Gatbo, families are rarely distinguished as 'rich' or 'poor', but as being in different states of need (or poverty). The classification of families based on access to productive resources need not therefore be correlated with variations in the basic response of married female workers to changes in the hourly returns to labor. However, differential access to resources, particularly as it indicates the family's chances of fulfilling its rice consumption requirements, offers an explanation for some observed patterns in women's participation in the labor market.

Taking the involvement of working women in wage activities, the following principle seems to be suggested. Where the family is not likely to meet its rice needs either because of the family farm's suboptimal production or because the family has no land to till, married women are wont to hire out their services for the harvesting of rice crops; sharing in the harvested paddy provides the main attraction of this activity. In contrast, women from families whose farm could supply the household with its rice needs (as in the case of Type A families) rarely join paid harvesting teams; instead, they engage in what they view as more profitable, self-employed work. The few working wives from Type A families who seek paid agricultural employment desire to earn cash which can be used to meet non-food needs of the household.

The preceding discussions stress the use of family's access to farm machines — and, by assumption, all previously introduced yield-increasing production inputs — to set alternative family scenarios so as to delineate differences, if any, in married women's labor supply decisions. Nonetheless, the research results suggest that mechanising certain rice-farming operations would affect village women differentially. Landless (female and male) workers are the most vulnerable group; the less poor farming women, the least vulnerable. Where threshing has been mechanized (as in Ayugan), the workers' share in the harvested paddy declines but their total take-home pay could increase relative to other (non-mechanized) communities. Because threshing is accomplished by a smaller (all-male) team, the harvesters can opt to cover more farms; the limit to such strategy is the degree of competition the workers face in their own and in adjoining villages. And because working wives from landless households need at least the

customary total amount of paddy which they had taken home even before the advent of portable threshers, they understandably tend to work longer (and in more farms) for lower hourly (cash-equivalent) wage rates. As the study of the two Philippine villages reveals, the focus of married women's energies is the family; their constant worry, providing the children with the basic needs. Their pre-occupation cannot confine them to purely homemaker's functions; such is not their way.

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