

WOMEN AND FOOD : PRODUCTION,
PROCESSING AND MARKETING
(AN INDONESIAN CASE) (★)

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I. INTRODUCTION

In the framework of planning for social economic development, which has as its goals the attainment of a just and prosperous society concern for the problems faced by rural women in Indonesia has increased.

With a total land area of 1,904,000 square kilometres, Indonesia in 1980 (population 147.4 million) had a population density of 77 per square kilometre, with Java and Madura being the most densely populated islands : 691 per square kilometre on about 7 % of the country's total land area.

The rural population in 1984 is estimated in 1980 at 133 million or about 80 % of Indonesia's total population. Females made up 50.3 % of the rural population (Population Census, 1980).

Rural women in Indonesia, participate in the development process. They grow, process, market, store and prepare food. They earn income through the sale of handicrafts and agricultural products and especially in Java through wage labour as well. They care for children and other family members. They are active in community as in family life (WHITE - 1976 ; HART - 1978 ; PUDJIWATI SAJOGYO - 1983).

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The largest proportion of the female labour force is still in the agricultural sector : 9.1 million out of 16.9 million women employed in 1980. Their participation in agriculture has been declining, from 60.6 % in 1971 to less than 53.8 % in 1980 which is part of general trend of decreasing proportion of agricultural workers (1971-1980 : 63 % to 56 %).

The next important source of women employment (1980) includes trade, finance, and other services : 33.1 % or 5.6 million women, followed by manufacturing (12.4 % or 2.1 million). A larger proportion of the female labor force has entered trade and other services rather than manufacturing as the former include many small, informal economic activities which require little capital and few specialized skills and have low levels of productivity.

In the next five years (1984-1988) some 9 million people will be added to Indonesia's labour force, about one third women workers : quite a challenge for traditional planning on how to create work opportunities.

II. AGRICULTURAL TYPES

Indonesian agriculture shows two main types of farming : the wet paddy (with modernized irrigation and multiple cropping) and upland shifting cultivation in forested areas or secondary growth. The first type is mainly found in Java, Madura and Bali (which have dense population), while the second type found on the other islands. Dependent on manual labour both types have about the same farm size per worker, male and female, and in pre-war days also about the same level of productivity : 1 kilogram milled rice per hour labour input.

The shifting cultivation type has since the 1920s adapted elements of "semi-permanent tree crop gardens" with rubber, coffee, coconut, pepper, commercial crops for a world market. On this basis farmers' levels of living in the latter pattern have been higher than level achieved by Java's farmers who are mainly food crop producers. The big "plantation" system was introduced some 100 years ago with the help of the colonial government as enclaves in a predominantly peasant agriculture. This sector - mostly Dutch capital - has been largely nationalized in 1958.

According to the agricultural census data of 1973, the present structure consists of :

- 1) a top stratum of big plantations (state corporations) on 1.1 million hectares, forest exploitation by state corporation on 1.7 million production forests (teak) in Java and several hundred big companies having "forest logging rights" over 36 million hectares in the other islands.
- 2) a layer of medium sized (500 ha.-units) plantations managed by private companies on another 1.1 million hectares.
- 3) the backbone of peasant farming is some 7.7 million units of "family farms" on 11.7 million hectares : average farm size is 1.2 hectares in Java and 1.8 hectares on the other islands.
- 4) a large bottom layer of marginal farmers (smaller than 0.5 hectares per unit) consisting of some 6.0 million households, mostly in Java (5.2 million units) on over 1.5 million hectares of land (average size, 0.25 hectares per unit). The majority in this stratum are in fact farm-labour households. If landless households engaged in farm-labor were added, this bottom layer in 1980 is estimated at 7.2 million households.

III. WOMEN'S PARTICIPATION IN AGRICULTURAL PRODUCTION, ESPECIALLY IN RICE PRODUCTION

To analyse the role of women from the point of "work", one can take as a basis the division of labour within the nuclear family, which is the smallest related unit within the kinship system according to norms that are inherent in the community (PUDJIWATI SAJOGYO - 1983).

In the cultivation of *sawah*-rice (wetpaddy) especially in Java, which is considered as one of the most labour intensive of all crops, (some 800 person-hours per hectare) the practice has been since a long time for males to do the hoeing, ploughing, harrowing and the construction or repair of dykes ; and for females to do the transplanting, weeding and harvesting with the *ani-ani* (handrazor). However, since "high yielding varieties" of paddy (HYV's), have been widely introduced (late 1960s), the use of the *ani-ani* has been replaced by sickles with lower input levels of female labour. Female activities (planting, weeding and harvesting) are traditionally rewarded with a share in the harvested amount (*bawon* : 1/4 to 1/5 or to 1/8 shares) which is a

highly appreciated source of income. With population growth the ~~labor~~ ratio has been pushed to lower levels following the local supply and demand of labour, with faster growth in supply. Specific social relations between harvester and wetpaddy-owners are also decisive : the nearer the blood and residential ties, but also the higher class positions the higher the share in the harvest (STOLER - 1975).

Along with the change in harvesting tools (from *ani-ani* into sickles), there has been a decrease in practicing the traditional labour-harvestshare system. Wetpaddy farmers just before harvest time, sell the crop to a *penebas*-trader who is a middlemen : coming with own labour (smaller in number) and using a sickle instead of the *ani-ani*, because new HYV shatter more easely, *penebas*-traders have pushed harvest-shares down. This means also, that a more limited number of farm-labourers (male and female) are getting employed.

Other changes in women's employment came with the larger-scale adoption of small rice hullers (motor-driver) since late 1960's affecting earning of female labourers engaged in handpounding of rice on Java (COLLIER - 1974). In the past, a small farmer typically would hand-pound the rice for his family's consumption, while the rice to be sold would be in the form of *stakl paddy* or *gabah* (unhusked rice). This hand-pounding would be done by family members, for small daily amounts, and by female wage labourers if larger amounts were needed, for a special occasion. The many small rice traders then employed a large number of female labourers to hand-pound rice into *beras* (dehulled rice). The work-capacity of a handpounding woman was an average 3.9 kg *gabah* per hour, producing 2.4 kg milled rice.

For 1974 Collier did submit an estimate of some "40 % of total rice crop" in Java, that was processed with hand pounding. This contrasts with an estimate of a high 80 % of rice crop hand-pounded, in late 1960's. The principle reason for the sharp shift to rice hullers was their lower cost. A hand pounding wage-labourer, with a wage level of 10 % of the product plus a meal, was getting a 2.7 times higher income (\$ 1.45 per 100 kg milled rice in 1973) than the cost of milling rice with the small rice huller (\$ 0.54 per 100 kg, including the value of the products kept by the miller).

If in 1974 total rice crop in Java for 40 % was hand pounded (or 2.4 million tons of rice), this meant work to hand pounding labours for

an equivalent of 100 million women-days (8 hours/day), with earnings of (estimate) \$44 million.

The shift from 40 % to 80 % hand pounded rice of Java's rice crop in the 1969-1974 period, has probably pushed out some 1.5 million women handpounders, working 2 months in a year. In their place, in 1974 workers who are males, in rice huller's mills received (estimated) earnings of only \$4 million a year.

While at earlier phases (up to 1970) it has been more of a "fertilizer" revolution (Indonesia is now producing most of its fertilizer needs), recent trends do show that it has become a wetpaddy revolution, centered on the HYV, pushed by a national organization reaching out to small farmers' in their irrigated fields and hamlets.

In the process most benefits have been reaped by rice farmers in regions with the best, modern irrigated fields, while upland agricultural regions have lagged. In the last 14 years rice production has more than doubled, in 1982 reaching 23 million tons for 136 million people. The yield increases were mainly due to improved irrigation facilities and the adoption of new farm technologies. This technological change has affected work opportunities in farming for rural women, especially hired labour.

More women have entered into non-agricultural work.

IV. EMPLOYMENT IN FOOD PROCESSING AND TRADE

In 1980, one third of the labour force in manufacturing industry was female labour.

If we compare employment in food processing industry in 1974/1975 and 1979, one can see several trends :

- a) In 1974/1975 the number of workers in manufacturing industries was 4.9. million out of which the majority worked in household industries : 79.5 % or 3.9. million. The latter could be called the informal sector. In 1979 with fewer workers (4.5 million) the largest drop of number of workers had occurred in household industries : it dropped to 2.8. million or 62.1 % of total workers in industry. This means that in the process of modernization of manufacturing industry more of the smallest units (households unit establishments) have been pushed out.

- b) In 1974/1975, in food industry there were 1.8 million workers out of which 76.9 % were in household units. The number of food industry workers has risen in 1979 to 2.0 million out of which a lower 66.1 % were in household units. Thus, modernizing trends were also clear in food industry with fewer workers (% wise) in household units.
- c) In 1974/1975, out of 3.9 million workers in household units 35.4 % were in food processing industries (largest share) in which value added per worker (per year) was equivalent to 321 kilogram rice per person per year. This was higher than the average value added of all household industry (255 kg rice equivalent/per person per year).

In 1979, out of 2.8 million household industry workers 48.7 % were in food processing. With a large number (about 1.1 million persons or 28 %) pushed out of household industry, the food processing household industry was most stable : with less than 3 % drop in number of workers.

In 1979, the value added in household food industry was then equivalent to 581 kg rice per person per year, which was lower, compared to the average value added in household industry (equivalent to 621 kg rice/person per year). This shows that value added per worker in other-than-food industry (household units) has risen much sharper. This is another sign, that food industry of the household unit size has made relative smaller progress in productivity rise.

This picture of the trends in manufacturing industry employment should be compared to the trend in sex composition of its labour force. Compared to 1971 (Population Census) in 1980 the sex composition of labour force in industry overall has grown in favor of male labour as part of the modernizing process (M. Oey - 1984). Ratio of male to female labour force in industry in 1971 was 165 males per 100 females, compared to 1980 : 197 males per 100 females.

Urban industries, with a much higher male dominance, show an opposite trend : relatively fewer males (323) in 1980 than in 1971 (387).

In rural industries, which is mostly small household industries, the trend of male dominance is growing : in 1980, 161 males, while in 1971 there were 120 males per 100 females.

This shows that modernizing industry means favoring more male than female labour.

In the case of employment in trade, data from National Socio-Economic Survey (*SUSENAS*) in 1979, indicate that 11.2 % of the total

rural households in Java (15.6 million) were involved in economic activities of trade. Out of 1.768.947 households involved 53.2 % were in food trade, followed by trade in prepared food, drinks and cigarettes (30.1 %).

In the case of trade in prepared food, drinks and cigarettes, the total number of female traders (household units) is larger while in food trade it is dominant. If trade in the two commodities are combined, the total number of female traders handling food items in 1979 was a little larger than that of male traders. The preparation of food to be sold which involves processing activities (cooking, etc.) goes well with the women's role in the family because of the women's greater involvement in housework ; the trade activities in prepared food seem particularly relevant to women's work, especially in rural Java.

V. CONCLUSIONS

Several important points have emerged for consideration :

- a. Recent Indonesian studies about the role of women in development present an array of observations and analysis that have provided us a more differentiated view of women's work at various specific socio-economic levels. In all strata rural women have greater involvement in housework, child care and related work. In order to service, women in poor households engage in a much greater diversity of income-earning occupations than others.
- b. Different settings of the environment (ecosystem) and social milieu provide a set of variations in women's roles in their respective rural communities.
- c. The introduction of modern technology have favored more male workers than female workers, in farming as well as in other work.

ABSTRACT

This paper describes how modern technology has favored male rather than female workers, in farming as well as in other jobs : replacement of ani-ani (handrazor) by sickles with lower female labour inputs, adoption of small rice-hullers affecting earnings of female labourers. This technological change has altered the work opportunities in farming for rural women, especially as regards hired labour, and more women have entered into non-agricultural work.

RÉSUMÉ

Cette communication montre comment la technologie moderne a favorisé les travailleurs plus que les travailleuses, que ce soit dans l'agriculture ou dans d'autres activités : remplacement de l'ani-ani (rasoir manuel) par la faucille, exigeant un apport moindre de main-d'oeuvre féminine, adoption de petits décortiqueurs de riz, réduisant les gains des ouvrières. Ces modifications technologiques ont diminué les possibilités des femmes rurales à travailler dans l'agriculture, notamment les ouvrières saisonnières, de sorte qu'un nombre croissant de femmes entrent dans le secteur non agricole.