

# Operationalization of Contextual Variables

## **I. Introduction**

With the exception of infant mortality all contextual variables were constructed through aggregation of individual level data from the microdata sample of the respective censuses. The unit of aggregation was the second level geographic area in each country (provinces in the Philippines and Thailand, districts in Peninsular Malaysia, and Kabupaten in Indonesia). Combining of areas, described elsewhere in this chapter, was undertaken in situations in which there were insufficient cases to obtain a reliable estimate of the contextual variable. In most situations 100 cases was the minimum number accepted in order to create a contextual variable. In the following section we describe the steps undertaken to construct and evaluate contextual indicators of the main concepts employed in the analysis.

## **2. Construction of Contextual Variables**

For each of the three contextual concepts -- womens status, value of children, and marriage -- a number of empirical indicators, outlined below, were constructed. The indicators differed in there empirical base and in terms of the age groups on which they were based. For example 28 indicators of women status were constructed for each census. Half of these indicators were based on measures aggregated from the sample of women aged 15-49 while the other half were aggregated from women aged 15-34.

The evaluation, and selection, of which indicators to use was based on two procedures. First bivariate correlations were preformed between all indicators of a concept. The units of analysis were women aged 15 to 49. The results of this analysis allowed an assessment of the validity of the indicators. The results from such comparisons showed that indicators based on different age groups were very highly correlated (usually at levels of 0.95 and over). The second step in the evaluation of the empirical indicators was to correlate the contextual variables with individual measures of cumulative and current fertility. Other things being equal we chose those indicators that were most highly correlated with fertility. It should be noted that in most instances inter-correlations between variables were high, and the correlations between the contextual variables and individual levels of fertility were similar. The main exception

were the measures of women status based on differences between characteristics of husbands and wives. In general these indicators were not highly correlated with the indicators of women's status based solely on women's characteristics and they exhibited lower correlations with fertility than did the women based contextual variables.

### **3. Indicators of Contextual Concepts**

Listed below are the indicators constructed for each of the three primary contextual concepts. They were constructed for both 1970 and 1980, in a few instances some indicators could not be constructed because of the lack of data, while for the Philippines the ages used in the construction of the child labor force indicator was changed as the lowest age for which labor force information was available in the 1980 Philippine census was 15.

#### **i. Women's Status**

1. Proportion Women 15-49 with Education greater than Primary level.
2. Proportion Women 15-49 with Education greater than High School level.
3. Mean Educational Level of Women aged 15-49.
4. Median level of Education of Women aged 15-49.
5. Proportion Women 15-34 with Education greater than Primary level.
6. Proportion Women 15-34 with Education greater than High School level.
7. Mean Educational Level of Women aged 15-34.
8. Median level of Education of Women aged 15-34.
9. Proportion Women 15-49 working in Non-Agricultural Sector.
10. Proportion Women 15-49 working in Non-Agricultural Sector and not working as Family Workers
11. Proportion Women 15-49 working in Non-Agricultural Sector and not working in Sales or Service Sector
12. Proportion Working Women 15-49 working in Non-Agricultural Sector.
13. Proportion Working Women 15-49 working in Non-Agricultural Sector and not working as Family Workers in Sales or Service Sector.

14. Proportion Working Women 15-49 working in Non-Agricultural Sector and not working in Sales or Service Sector.
15. Proportion Women 15-34 working in Non-Agricultural Sector.
16. Proportion Women 15-34 working in Non-Agricultural Sector and not working as Family V
17. Proportion Women 15-34 working in Non-Agricultural Sector and not working in Sales or !
18. Proportion Working Women 15-34 working in Non-Agricultural Sector.
19. Proportion Working Women 15-34 working in Non-Agricultural Sector and not working as Family Workers in Sales or Service Sector (1970 only).
20. Proportion Working Women 15-34 working in Non-Agricultural Sector and not working in Sales or Service Sector.
21. Mean Husband Wife age difference (Women aged 15-49).
22. Proportion of couples where Wife's Age is greater than Husband's Age (For women aged 15-49).
23. Mean Husband Wife age difference (Women aged 15-34).
24. Proportion of couples where Wife's Age is greater than Husband's Age (For women aged 15-34).
25. Mean Difference of Husband's and Wife's Logged Level of Education (Women aged 15-49).
26. Proportion of couples where Wife's Education is greater than Husband's Education (For women aged 15-49).
27. Mean Difference of Husband's and Wife's Logged Level of Education (Women aged 15-34).
28. Proportion of couples where Wife's Education is greater than Husband's Education (For women aged 15-34).

## **ii. Value of Children**

1. Proportion of Children Aged 10-14 in the Labor Force.
2. Proportion of Children Aged 10-18 in the Labor Force.
2. Proportion of Children Aged 7-15 attending school.

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3. Proportion of Children Aged 13-18 attending school.

### **iii. Marriage**

1. Proportion of women aged 15-24 who are single.
2. Proportion of women aged 25-29 who are single.
3. Proportion of women aged 15-29 who are single.

## **4. Contextual Indicators Chosen for Inclusion in Analysis**

Based on the results of the evaluations described above the following indicators were selected for inclusion in the study.

1. Proportion Women 15-34 working in Non-Agricultural Sector.
2. Proportion Women 15-34 with Education greater than Primary level.
3. Proportion of Children Aged 7-15 attending school.
4. Proportion of Children Aged 10-14 in the Labor Force.
5. Proportion of Women aged 15-24 who are single.

For each geographic area the appropriate value of the contextual indicators for 1970 and 1980 were attached to each woman's record in a pooled microdata set. The pooled sample, for each country, contains, the records for women aged 15-49 from the 1970 and 1980 microdata samples. To facilitate processing, systematic random samples of the 1970 and 1980 Philippine censuses and the 1980 Indonesian census, were included in the respective pooled samples.