Coding Instructions for Sociomatrices
Help with the Rice Harvest, 2000 Household Interview
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This memo describes how the sociomatrices for help with the rice harvest are constructed for the 2000 household data.

Relevant Questions from 2000 Household Interview:

Question 6.20 asks whether the household cultivated rice last year. For households that did cultivate rice, there are three questions that give information about help received:

Question 6.84, for "old" households: help received from people who lived in the household in 1984 and/or 1994 but do not currently live in the household.
"About harvesting rice last year, were there people in your household in 1984 and/or 1994 that do not currently live in your house who helped with the rice harvest?"
  For these people:
    Household roster # (CEP00)
    Type of labor (wage, free, labor exchange)

Question 6.85, for both "old" and "new" households: help received from people living in the village.
"Did anyone from this village help to harvest rice in the last year?"
  For these people:
    Household id#/Village #
    Number of people
    Type of labor (wage, free, labor exchange)

Question 6.86, for both "old" and "new" households: help received from outside the village (in another village, district, or province).
"Did anyone from another village come to help harvest rice in the last year?"
  For these people:
    Village/District/Province #
    Number of people
    Type of labor (wage, free, labor exchange)

Relations and Sociomatrices

There are two relations for different aspects of help with the rice harvest. Each relation is coded in a separate set of sociomatrices:

I. The number of individuals from the location (household, village, district, or province) who provided help

The number of helpers is accumulated for persons coming from the same location (household, village, district, or province). The values of the ties in the sociomatrix are counts of the number of individuals from each location who provided help to the household.

II. The type(s) of labor arrangement for help received from the location (wage, free, or labor exchange).

The values of the ties in the sociomatrix represent specific combinations of types of labor (wage, free, exchange) received from the location.

0 no help received from that location
1 all helped for wages
2 all helped for free
3 all exchanged
4 some helped for wages and some helped for free
5 some helped for wages and some exchanged
6 some helped for free and some exchanged
7 some helped for wages, some helped for free, and some exchanged
9 is used for missing data

Sociomatrices are organized at the village level. There are 51 villages, corresponding to the 1984 villages. In all sociomatrices the rows are the households responding to the survey and the columns are the locations from which help could be received. Ties are recorded as help provided to household from other households in the village, other villages in Nang Rong district, other districts in Buriram province, or other provinces in Thailand (including ties abroad).

For each of the two relations (the number of helpers, and the labor arrangements) there are four sociomatrices:

X^v: household by household, for help received by households in village v from other households in village v
Y^v: household by village, for help received by households in village v from other villages within Nang Rong district
Z^v: household by district, for help received by households in village v from other districts in Buriram province
W^v: household by province, for help received by households in village v from other provinces outside Buriram province, including help from outside Thailand

Since there are two relations and ties from four kinds of locations (household, village, district, province), there are 2 x 4 = 8 matrices for each village.

Coding Help from Unknown Locations or Abroad

There are four kinds of anomalous data that arise when help was received from sources with unknown location or from abroad. These are coded in extra columns in either the household by household sociomatrix or the household by province sociomatrix. The household by household matrix has one extra column and the household by province matrix has three extra columns.

1) Help from within the village but the household id is unknown. This is coded as one extra column in the household by household matrix

2) Help from abroad. This is coded in the 1st extra column in the household by province matrix.

3) Help from outside the village but the location is unknown. This is coded in the 2nd extra column in the household by province matrix.

4) Help from an unknown location that could be either inside or outside the village (it was impossible to track down the location of the helper). This is coded in the 3rd extra column in the household by province matrix.

Diagonal Entries

Diagonal entries in the household by household sociomatrix (the tie from a household to itself) are equal to zero (0).

Missing Data:

If the household reports receiving help from a location, but the number of persons who helped is missing, the count of the number of persons from that location is incremented by 1 in the sociomatrix that counts the number of people who provided help.

If the household reports receiving help from a location, but the type of labor is missing, the missing value code of "9" is used in the sociomatrix for labor arrangements unless a labor arrangement is specified for another helper from that location in which cases that arrangement is coded.

Row labels

Row labels for households in all sociomatrices will be formed using the 2000 village number followed by the house number (variable HHID00; 9 digits).

Column labels

Households
        Same format as row labels (9 characters)

9999999 for the extra column (n + 1st column, n = # of households in the village) for help from within the village, household id unknown

Villages
    2000 village numbers (6 characters)
Districts
    2000 district numbers (2 characters)
Provinces
    2000 province numbers (2 characters)
Extra columns in the household by province matrix
        col __ : 98 for help from people living abroad
        col __: 99 for help from outside village, location unknown
        col __: 97 missing data, location unknown (help might be from inside or outside village)

Data Format

line 1: 1984 village number (51 villages)
line 2: number of rows in the sociomatrix
line 3: number of columns in the sociomatrix
line(s) 4: list of row labels, separated by spaces
line(s) 5: list of column labels, separated by spaces
remaining rows, one for each household in the village: sociomatrix entries separated by spaces

Differences Between 1994 and 2000 Sociomatrices

For the 1994 help with the rice harvest data, three sets of sociomatrices were constructed: whether help was received, the number of helpers, and the type(s) of labor arrangement. Since whether or not help was received can be derived from the number of helpers, this set of sociomatrices is not constructed for the 2000 data.

The 1994 data included information about the number of days of help provided. This was not included in the 2000 household survey, so there are no sociomatrices for this relation for the 2000 data.

The diagonal entries in the household by household sociomatrix (tie from a household to itself) are equal to zero in the 2000 sociomatrices. For the 1994 rice harvest sociomatrices, the diagonal entry coded whether or not the household grew rice.

In 1994 the number of helpers from a location counted people named in several different questions: former household members who returned to help (question 6.84) and other people from in the village or from another village who were named as helpers (questions 6.85 and 6.86). This has the possible problem of double counting former household members. For the 2000 sociomatrices, the total number of helpers from a location similarly includes both former household members and other people named as helpers,

but in 2000 the number of additional people from a location is reduced by the number of former household members from that location who were named as helpers, before accumulating them in the total.

Coding Instructions:

I.   Number of People Who Helped

The instructions for coding ties are in two parts, those that pertain only to "old" households and those that pertain to both "old" and "new" households. Both sets of instructions are used to construct the sociomatrices for this relation.

The number of people providing help is accumulated for persons coming from the same location (household, village, district, or province).

The value of the entry in the sociomatrix is a count of the number of individual helpers that the household (in the row of the sociomatrix) reports came from the location (in the column of the matrix). If multiple people come from the same location they are accumulated into the total.

Relevant questions

Question 6.20. If the response to Question 6.20 is "yes" then the household planted rice and they are asked whether they received help with the rice harvest.

Question 6.84. For "old" households that cultivated rice, question 6.84 asks whether there were other people who had been in the household in 1984 and/or 1994 but not currently living in the house who helped with the rice harvest.

Questions 6.85. For both "old" and "new" households that cultivated rice, question 6.85 asks whether anyone in their village helped with the rice harvest. If the response is "yes" then the household id # and village # are recorded.

Question 6.86. For both "old" and "new" households that cultivated rice, question 6.86 asks whether anyone from another village helped with the rice harvest. If someone helped, their village / district / province # is recorded

1.   For "old" households

Question 6.84 asks whether there were other people who had been in the household in 1984 and/or 1994 but not currently living in the house who helped with the rice harvest. If the response to question 6.84 is "yes" then the household roster # (CEP00) for the person is recorded.

This person's location is in Question 1.8 or 1.9b

For code 2 people, find their location in DHHID00 (verified destination household for code 2 people).
For code 2 people, if the person is in temple, code the location as unknown but in the village.

For code 3 people, find their location in 1.9b (X9B2VILL, X9B2DIST, X9B2PROV, X9B2COUN)

Notes:
For comparability with 1994 coding,
    If CEP=99, then code as an unknown location.
    If there are duplicate CEP codes, use one and ignore the other.
    If CEP does not match form 1, then code as an unknown location.

Once their location is identified, each person will be added to the count of the number of individuals from that location who provided help to the household. The value of the tie from household i to location j should be incremented by 1 for each helper from location j.

The location of the person is either 1) another household in the village 2) another village in Nang Rong, 3) another district in Buriram, 4) another province, or 5) abroad.

a. Another household in the village

If the location is another household in the village then the tie is recorded in the household by household sociomatrix.

j = the position of the household in an ordered list of households in the village

$$x^v_{ij} = x^v_{ij} + 1$$

> (comment: household i says that someone from household j in the village helped harvest rice, so the tie is incremented by 1 in the household by household sociomatrix)

b. Unknown location in the village

If the location is unknown but it is inside the village then 1 is added to the total in the extra column in the household by household matrix

$$x^v_{i(n+1)} = x^v_{i(n+1)} + 1$$

> (comment: the additional column in the household by household sociomatrix will count the number of helpers from in the village but with unknown household id)

c. Another village in Nang Rong

If the location is another village in Nang Rong district then the tie is recorded in the household by village sociomatrix.

j = the position of the village in an ordered list of villages

$$y^v_{ij} = y^v_{ij} + 1$$

> (comment: household i has named someone from village j as the source of help harvesting rice so the tie from i to j is incremented by 1)

d. *Another district in Buriram*

If the location is in another district then the tie is recorded in the household by district sociomatrix

j = the position of the district in an ordered list of districts

$$z^v_{ij} = z^v_{ij} + 1$$

> (comment: household i has named someone from district j as the source of help harvesting rice so the tie from i to j is incremented by 1)

e. *Another province.*

If the location is another province then the tie is recorded in the household by province matrix

j = the position of the province in an ordered list of provinces

$$w^v_{ij} = w^v_{ij} + 1$$

> (comment: household i has named someone from province j as the source of help harvesting rice so the tie from i to j is incremented by 1)

f. *Abroad*

If the location is abroad then 1 is added to the total in the 1st extra column in the household by province matrix.

$$w^v_{i(q+1)} = w^v_{i(q+1)} + 1$$

g. *Unknown location outside the village*

If the location is outside the village but the location is unknown 1 is added to the total in the 2nd extra column in the household by province matrix

$$w^v_{i(q+2)} = w^v_{i(q+2)} + 1$$

h. Unknown location (impossible to find a location for the person)

If the help is from an unknown location that could be either inside or outside the village (in other words, it was impossible to find a location for the person), then 1 is added to the total in the 3rd extra column in the household by province matrix.

$$w^v_{i(q+3)} = w^v_{i(q+3)} + 1$$

2. For both "old" and "new" households

Question 6.85 asks whether anyone in the village helped with the rice harvest. If the response is "yes" then the household id # and village # are recorded along with the number of people who helped.

Question 6.86 asks whether anyone from another village helped with the rice harvest. If someone helped, their village / district / province # is recorded along with the number of people who helped.

Note on possible double counting:

For the 1994 rice help networks the number of helpers named inside the village and outside the village were accumulated into the total count of helpers from each location. These people were added to the total in addition to any former household members from that location who had been mentioned as providing help. This procedure has the problem of possibly double counting former household members. To avoid that possibility, when counting the number of helpers from a location for the 2000 networks, the total number from a location (questions 6.85 and 6.86) will be reduced by the number of former household members from that location who were reported as providing help(question 6.84), before adding it to the count of helpers from that location . The total count of helpers from a location should not be less than the number of former members who were reported as helpers from that location. The number of households for which helpers might be double counted is relatively small – 15 for help within the village and 29 for help outside the village (see Rick O'Hara's memo of 9/23/02).

Help from inside the village

a. Another household in the village

If the response to question 6.85 is "yes" then the household id # and village # are recorded along with the number of people who provided help. The tie from household i to household j should be incremented by the number of people who provided help.

Since the person is in the village, the count of number of helpers is recorded in the household by household sociomatrix

j = the position of the household in an ordered list of households in the village

$x^v_{ij} = x^v_{ij}$ + the number of people from household j who provided help

> (comment: household i reports the number of people from household j who helped harvest rice, so the value of the tie in the household by household sociomatrix is increased by that number of people)

b. Unknown location in the village

If the location is unknown but they are in the village then

$x^v_{i(n+1)} = x^v_{i(n+1)}$ + the number of people with unknown location who provided help

> (comment: the additional column in the household by household sociomatrix will count the number of people with unknown location who helped with the rice harvest. If the number is unknown, the count will be incremented by 1.)

Help from outside the village

Question 6.86 asks whether anyone from outside their village helped with the rice harvest. The household id # and village # are recorded along with the number of people who provided help. The tie from household i to location j should be incremented by the number of people who provided help.

c. Another village in Nang Rong

If the location is another village in Nang Rong district then the number of helpers is recorded in the household by village sociomatrix.

j = the position of the village in an ordered list of villages

$y^v_{ij} = y^v_{ij}$ + the number of people from village j who provided help

d. Another district in Buriram

If the location is another district then the number of helpers is recorded in the household by district sociomatrix

j = the position of the district in an ordered list of districts

$z^v_{ij} = z^v_{ij}$ + the number of people from district j who provided help

e. Another province

If the location is another province then the number of helpers is recorded in the household by province matrix

j = the position of the province in an ordered list of provinces

$w^v_{ij} = w^v_{ij}$ + the number of people from province j who provided help

f. Abroad

If the location is abroad then the total in the 1st extra column in the household by province matrix in incremented by the number of people from abroad who helped.

$w^v_{i(q+1)} = w^v_{i(q+1)}$ + the number of people from abroad who provided help

g. Unknown location outside the village

If the location is outside the village but the location is unknown the number of helpers is added to the total in the 2nd extra column in the household by province matrix. If the number of helpers is unknown the total is incremented by 1.

$w^v_{i(q+2)} = w^v_{i(q+2)}$ + the number of helpers with unknown location outside the village

h. Unknown location (impossible to find a location for the helpers)

If the help is from an unknown location that could be either inside or outside the village (it was impossible to find a location for the helpers) the number of helpers is added to the total in the 3rd extra column in the household by province matrix. If the number of helpers is unknown the total is incremented by 1.

$w^v_{i(q+3)} = w^v_{i(q+3)}$ + the number of helpers with unknown location that could be either inside or outside the village

II.   Types of Labor

The types of labor arrangements with people providing help is accumulated for all persons coming from the same location (household, village, district, or province)

Instructions for coding the type(s) of labor arrangement parallel the instructions for coding the number of people who helped, except that the value in the sociomatrix indicates the specific combination of types of labor arrangements received from a location. These are coded as:

> 0 no help received from that location
> 1 all helped for wages
> 2 all helped for free

3 all exchanged
4 some helped for wages and some helped for free
5 some helped for wages and some exchanged
6 some helped for free and some exchanged
7 some helped for wages, some helped for free, and some exchanged
9 missing data

The value of the entry in the sociomatrix codes the combination of types of labor arrangements that the household (in the row of the sociomatrix) reports receiving from the location (in the column of the matrix). Types of labor should be accumulated across all helpers from the same location.

Sociomatrices

Ties will be recorded in four sociomatrices: household by household within the village; household by village; household by district; and household by province.

Relevant questions

Question 6.84. "Old" households were asked about the type of labor from people who were in the household in 1984 and/or 1994 but not at the time of the interview (question 6.84).

Questions 6.85 and 6.86. Both "old" and "new" households were asked about the type of labor arrangement for people from within the village who provided help (question 6.85) and people from outside the village (other village, district, or province) who provided help (question 6.86).

Missing Locations and Help from Abroad.

Help from people inside the village but with unknown household id is coded in the extra column in the household by household sociomatrix.
Help from abroad is coded in the 1st extra column in the household by province matrix.
Help from outside the village but with unknown location is coded in the 2nd extra column of the household by province matrix.
Help with unknown location that could be either inside or outside the village is coded in the 3rd extra column of the household by province matrix.