

Sociology 601
Homework 10
Due December 8, 2009

Agresti and Finlay Chapter 11:

[For questions 11, 12, and 17 use the “homeprice” data on the class website data page. Table 9.4 on page 329 in your text describes the variables.]

11 a-f

12 a-c

14 a (*i-xiv*) ; b, d

17 a-b

19

34

36 evaluate the statements in a, b, c, h

38

Chapter 12:

14

17

18

Chapter 14:

21 a-c

22 a-d

Supplemental Questions

Table 2, attached, shows the relationship between income and weekly hours of housework. The authors are interested in determining the extent to which the individual contributions to household income and labor force participation affect levels of housework among husbands and wives. Answer the questions below based on this table.

Description of variables:

Dependent variable.—Our major dependent variable is time spent in domestic work. More specifically, it includes food and drink preparation and meal cleanup; laundry, ironing, and clothes care; tidying, dusting, scrubbing, and vacuuming; paying bills and household management; lawn, yard, pool, and pet care; and home maintenance and car care. For comparability with the major U.S. studies, we excluded child care and shopping. For ease of interpretation, daily hours were converted to hours per week.

Independent variable.—A measure of relative income contributions is needed to isolate the effects predicted by exchange-bargaining theories. We use a measure proposed by Sorensen and McLanahan (1987) and used by Brines (1994). The wife’s annual income is subtracted from the husband’s, then divided by the total of their two incomes, leading to a scale score of 1 where the husband provides all the income, 0 when each contributes equal shares, and -1 when the wife provides all the couple’s income. For simplicity, we have rescaled this into a variable correlated perfectly with these two earlier studies but ranging instead from 0 to 1 and indicating the proportion of income contributed by the husband. Following Brines (1994), Gupta (1999b), and Greenstein (2000), we enter the linear and squared form of the husband’s proportion of family income to see if the effect of spouses’ relative

contribution to income was nonlinear in a way consistent with gender deviance neutralization. (We also entered the cubed form, but it was never significant.)”

Reference categories - for the dummy variables are as follows:

- For child age, the oldest age group is excluded
- For education, less than high school is excluded
- For employment, unemployed is a flag meaning the husband is looking for work (compared to those actually working). Out of the labor force is a flag for husbands or wives that do not have paid work and are not looking for it (e.g. “stay at home”), compared to those working.
- “Evenly split self-employment income”, “Saturday,” and “Sunday” are controls specific to the data. Do not worry about interpreting them.

Questions

- A) Explain the findings of the effects of husband’s share of income on weekly hours of housework for husbands and wives.
- B) Discuss the quadratic term used in this analysis. What shape is the curve? How is it different for husbands and wives?
- C) Calculate the inflexion point for husband’s share of income and weekly hours of housework.
- D) Choose another variable that indicates a possible interaction effect. Discuss the main effects for this variable for husbands and wives separately (using the coefficients given). Discuss the direction of the potential interaction effect – e.g., how is the effect of XX on weekly hours of housework different for husbands and wives? (Hint: the larger the t-value for the gender different the more likely it is a significant difference. Choose a relationship that shows a larger “Gender Difference T” value.)

TABLE 2
OLS REGRESSION OF AUSTRALIAN HUSBANDS' AND WIVES' WEEKLY HOURS OF
HOUSEWORK ON HUSBAND'S SHARE OF COUPLE'S INCOME AND CONTROLS

Variable	Husbands	Wives	Gender Difference T
Husband's share of income (scaled 0-1)	3.853 (5.243)	-21.653* (5.969)	3.21
Husband's share of income ²	-2.783 (4.433)	21.781* (5.041)	-3.66
Combined weekly income*	-.001 (.001)	-.0004 (.001)	-.74
Saturday (1 = yes)	7.281* (.800)	2.438* (.911)	3.99
Sunday (1 = yes)	9.201* (.812)	3.456* (.925)	4.67
Number of children:			
Less than two years old .....	.297 (.786)	-1.744 (.898)	1.71
Ages 2-4	1.384* (.672)	1.044 (.769)	.33
Ages 5-9 .....	.665 (.447)	1.99* (.510)	-1.95
Ages 10-14 .....	.164 (.425)	.417 (.484)	-.39
Husband's usual weekly hours of paid work	-.097* (.022)	.004 (.25)	-.40
Wife's usual weekly hours of paid work .....	.069* (.023)	-.19* (.027)	7.32
Respondent has:			
University degree (1 = yes)	1.27 (.826)	-1.195 (1.039)	1.86
Trade qualifications (1 = yes)	-.316 (.664)	-1.499 (1.689)	.65
High school diploma (1 = yes)	-1.039 (.948)	-.466 (1.014)	-.41
Respondent's age .....	.16* (.037)	.337* (.042)	-3.16
Husband unemployed (1 = yes)	5.43* (2.611)	-1.63 (2.976)	1.78
Husband out of labor force (1 = yes)	8.8* (3.955)	-1.576 (4.493)	1.73
Wife out of labor force (1 = yes)	-.278 (.985)	-2.709* (1.120)	1.63
Evenly split self-employment income (1 = yes)	-1.54 (1.406)	6.498* (1.599)	-3.78
Constant	4.894 (2.533)	15.842 (2.850)	-2.87
R ² .....	.12	.16	

NOTE. — $N = 2,244$. SEs are in parentheses.

* The average weekly income of both husband and wife given in Australian dollars.

* $P \leq .05$.