Unpaid work in Indonesia:
testing 'unitary' and 'bargaining' theories
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INTRODUCTION

This paper examines unpaid housework, from an economic perspective. In studying household behaviour, two schools of thought have dominated economic analysis in recent decades. Prevalent from the 1950s to 1980s were 'unitary' models, which assume household members all benefit equally from household income and other resources (Lundberg & Pollak, 1996: p. 141). An example of a unitary model is the 'New Home Economics' theory is associated with Gary Becker, which claims households maximise the happiness of all household members; a household maximises a joint utility function, which includes the leisure time of each household member (Lundberg & Pollak, 1996: p. 141). Becker (1965) assumes rational behaviour: this model does not imply prejudice in the household, such as an assumption that husbands should be the main earner in a household: if a wife can earn more than her husband, and if childcare costs make it uneconomic for both parents to be employed, then it is rational (for the household) that the wife should be employed, and the husband to do housework.

Since the demise of 'unitary' models, 'bargaining models' (based on game theory) have become the mainstream economic analysis of household behaviour. These models vary – for example, there are 'co-operative' and 'non-co-operative' models, which use different assumptions. An example of such mathematical models is Couprie (2002). All economic bargaining models attempt to explain the outcome of household decision-making in terms of the bargaining power of each household member: for a married couple, the wife's control over household decisions (such as, what to buy) spending is thought to depend on her actual and/or potential earnings. If a husband earns a large income but his wife does not, then the husband is predicted to have a high degree of control over household decisions. For example, in cooperative bargaining models, the utility obtained by husband and wife will depend on the income controlled by each spouse (Lundberg & Pollak, 1996: p. 148). This theory predicts that a wife's earnings, relative to her husband's earnings, are central to her ability to persuade her husband to do a larger share of housework.

Lundberg & Pollak (1996: p. 155) imply a difference between economists and sociologists: economists only study factors such as (actual and potential) earnings, whereas sociologists also consider social norms. The economists' assumption of rational behaviour, and symmetry between husband & wife (after controlling for earnings), seems at odds with observed patterns of time-use. In all countries for which we have found data, most paid work is done by men; and most unpaid (domestic) work is done by women (Couprie, 2002). Couprie (2002: p. 16) suggests "there seems to be a traditional share of time in the family which gives a greater role to the woman in household production". But Ott (1992: p. 196) suggests that

economists can develop new models which take account of factors such as 'affection' which are not part of economic rational behaviour.

DATA AND METHODS

It is possible to test 'unitary' models of the household by assessing if husband or wife obtain an equal share of household resources: "widespread evidence exists of intra household inequity in the distribution of resources, a failure which would appear to cast doubt on whether the household actually seeks to achieve joint welfare maximisation" (Akram-Lodhi, 1997: p. 39). There are problems in assessing if one household member benefits more than others from household resources – for example, if a household buys a car, this could be a priority for husband or wife or both. Rather than consumption, we study time spent on unpaid work to assess whether a husband is better off than his wife. We need to control for several factors: for example, if a man does more paid work than his wife, then it would seem 'rational' for the wife to do more unpaid housework than her husband (Becker, 1965: p. 512). We focus on households in which husband and wife do similar amounts of paid work. According to Fortin & Lacroix (1997: p. 933), the unitary model predicts that "only total exogenous family income, and not its distribution across household members, matters for labour supply and consumption". But perhaps a convincing rejection of the unitary model should also take account of earnings: an increase in a person's wage "would effect a reallocation of time of all other household members towards consumption activities in order to permit the former to spend more time at market activities" (Becker, 1965: p. 512). For example, in a household with a low-paid wife and a highly-paid husband, Becker's analysis might predict the wife to do more housework than her husband in case her husband is offered more paid work ('overtime'). We think a persuasive rejection of Becker's approach would be if husband and wife have the same earnings and do the same amount of paid work: if we still observe the wife doing more housework than her husband, it appears to contradict unitary models.

This paper uses data from the 'Work, Attitudes & Spending' survey of four Indonesian cities in 2001 and 2002. The WAS survey was carried out by University of Indonesia. I limit the WAS sample to married respondents, in households which did not (at the time of the interview) hire a maid or home help. I focus on just two types of domestic work: laundry/cleaning the home; and food preparation/cooking.

RESULTS

We begin by comparing unpaid work in the four cities in the WAS survey.

Table 1: husband's unpaid work by city.

city:	preparing/cooking food	laundry/cleaning the house
Palembang	1.0% (243 cases)	0.5% (253 cases)
Jakarta	4.4% (319 cases)	5.3% (368 cases)
Bandung	3.7% (193 cases)	5.2% (298 cases)
Surabaya	0.7% (169 cases)	7.5% (244 cases)

The four cities differ in the fraction of domestic work carried out by the husband. For for laundry/cleaning, the proportion varies between 0.5% (in Palembang), and 7.5% (in Surabaya). Likewise, the fraction of time spent preparing/cooking food differs, between 0.7% (Surabaya) and 4.4% (Jakarta). These differences are statistically significant at the 1% level, for both columns of Table 1 (based on ANOVA tests). However, we think the sample-sizes are too small for us to consider such differences to be reliable. Perhaps future research (based on larger samples) could investigate the possibility that there are cultural differences between these parts of Indonesia.

There is some evidence that men's contribution to housework varies between countries. Couprie (2002: p. 13) reports that in the UK, men do 27% of domestic work – this maybe because UK women tend to do more paid work than Indonesian women.

Table 2: husband's unpaid work by year of interview.

		preparing/cooking food	laundry/cleaning the house
year:	2001	2.6% (488 cases)	5.6% (672 cases)
	2002	2.8% (436 cases)	3.4% (491 cases)

Table 2 compares data for the two years of the WAS survey. There is little difference between the proportion of cooking time by men between the two years; the small difference is not statistically significant, according to a ANOVA test. However, there is a noticeable difference between years for the right-hand column, laundry & cleaning, and this difference is statistically significant at the 1% level (based on an ANOVA test). We are unable to explain this difference; it may be due to the fairly small samples.

I now turn to a test of the theory (by Becker, and others) of 'New Home Economics'. In our view, the following two tables represent a persuasive test of their theory.

Table 3: Time spent on laundry & cleaning the home, by employment status

		husband employed	
		no	yes
wife employed	no	4.8% (119 cases)	3.1% (680 cases)
	yes	11.4% (46 cases)	6.7% (269 cases)

Table 4: Time spent on food preparation/cooking, by employment status

		husband employed	
		no	yes
wife employed	no	1.9% (103 cases)	2.7% (516 cases)
	yes	2.0% (38 cases)	2.9% (220 cases)

The message we take from Tables 3 and 4 is that men do little housework, whatever the employment positions of men and women. Even in the case of households with an unemployed wife but employed husband, men only do 11.4% of laundry/cleaning, and even less, just 2.0%, of food preparation & cooking. If households behave rationally, as Becker and others claimed, then we might expect the proportion of housework done by men to be well over 50% in such circumstances. Hence, Tables 3 and 4 seem to reject the 'New Home Economics' view.

I now turn to a simple test of household bargaining models. In Tables 5 and 6, we represent wife's bargaining power by wife's earnings (as a percentage of husband plus wife's earnings). This is far from a perfect test: for example, we do not attempt to estimate a wife's earnings potential if she is unemployed at the time of interview. In effect, we assume that if a wife currently earns nothing, she has no bargaining power – this would be an appropriate assumption if she was unable to obtain paid work, but inappropriate if she chooses not to be employed (for example, because her wages would be too low to pay for childcare).

Table 5: Time spent on laundry & cleaning the home, by wife's relative earnings

husband's relative earnings	up to a third	10.4% (71 cases)
	1/3 to 2/3	6.3% (166 cases)
	over two-thirds	3.8% (775 cases)

Table 6: Time spent on food preparation/cooking, by wife's relative earnings

husband's relative earnings	up to a third	1.8% (62 cases)
	1/3 to 2/3	2.7% (131 cases)
	over two-thirds	2.8% (593 cases)

Tables 5 and 6 suggest that if a woman earns more, she tends to do less housework. In the top row of tables 5 and 6, we see households in which the wife is the main earner – she earns at least two-thirds of the combined income of husband & wife. But in the case of laundry/cleaning (Table 5), the husband's share of unpaid work is still only 10.4% (whereas we might expect him to do well over 50%, if households are as rational as bargaining models assume). In the case of Table 6, we see almost no link between husband's relative earnings and his contribution to cooking: in fact, we see men doing even less unpaid work in the top row than in the other tow rows.

CONCLUSIONS

It appears that the Indonesian households we studied do not behave 'rationally', according to either of the two definitions of 'rational' we examine: the 'New Home Economics' view, or economic 'bargaining models'. This finding calls conventional economic analysis into question.

The results of time-budget studies in other countries show that men's participation in housework depends on his power in the household – and his control over the household's economic resources (Ott, 1992: p. 14). Our findings confirm this, but we

find that a husband's earnings only <u>partly</u> explain the household division of unpaid labour. The surprising findings in our results is just how little difference a wife's earnings makes to domestic work: we find women do most unpaid work, whatever the wife's employment position. This calls into question both the 'unitary' models, and the (more recent) 'bargaining' models.

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