Coordination or Inequality? Couple's Time Use and Labor Division in China

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Abstract

Taking advantage of the longitudinal panel data, we found three substantial trendings of Chinese married couple's division of housework: more traditional way of practicing domestic chores during the 1990s, and suddenly swifting to more equally share of work in 2000s, and again falls into traditional or coordinated way of labor division in late 2000s. Another noticiable finding goes to the crosssectional geographical distribution of labor division in Mainland China, for which suprisingly, the Western China are more equal in respect to housework sharing in weekdays and weekends.

Introduction

Couple's efforts to benefit the family should be respected equally, no matter it's in form of bringing money back home or homemaking. Donahoe (1999) clarified that women's work contains not only income generating, but familial unpaid work, for instance, household chores and caregiving as well. The pattern of labor division varies across different cultural settings. For instance, in Japan, Korea and the United States, although women do the majority of housework, total workload of the couple seems almost equal if hours at work and home are calculated equally (Tsuya,Bumpass and Choe, 2000). Given the total workload being equal, the utility maximization theory documents that the couple coordinate as a whole, and that work should be allocated to the spouse with more specialized skills and knowledge (Shu, Zhu and Zhang, 2012), and the failure to manage family with appropriate gender resources rather than unequal share of housework cause a sense of unfairness (Zuo and Bian 2001).

With the wisdom of coordination within couple and joint household benefit

maximization, gender coordination seems to be the preferred answer over gender inequality for the unequal division of housework. Gender coordination, represented by husband-breadwinner-wife-homemaker model, appears prevalently in East Asia. Based on facts in Wuxi County, a highly commercialized region near Yangzi River, Kung and Lee (2010) documented that in pre-1949 China, women's lower labor market participation is due to rational maximization of household total income rather than any cultural norm of men farming and women weaving, because though with lower farming rate, women earn almost the same as their husbands by doing off-farm work. Even in HongKong Lesbians family, the division of labor is not equal between the spouses, neither does the equal share signify an elimination of gendered roles but just a sign of oppression to male chauvinism (Wong 2012).

However, due to economic transition from planned to market economy, employment and income differences between genders, employers tend to perceive women with family responsibilities as less productive, and also that maternal profits make employing female workers expensive (Zhang, Hannum and Wang, 2008). In HongKongs tranformation into East Asian Miracle, HongKong women were in disadvantaged position and involuntary retreat to full-time homemaking and depends on their husbands (Chiu and Lee 1997). The unfavorable labor market makes women uncompetitive and women have to go back home to pick up domestic chores again. Drawing on couple's time use patterns in 2008, Zhou and associates (2010) shows that women are responsible for maintenance activity, which covers the consumption of goods to serve household biological and physiological needs, while men are responsible for financing the daily use of the household.

We take the housework division case in China for three reasons: (1) Gendered housework division in this sense signifies the preference of traditional values, or the husband breadwinner and wife homemaker pattern (Qian and Qian, 2014), which is enhanced by practicing it from one generation to another. China should be on our wishing list if we hope to see the power of gender difference. (2) A trend towards collection rather than individualism family philosophy. Women labor participation in China is above the world average level (50% in 2013, TheWorld Bank), though the figure dropped nearly 9% from 1990 (73%) to 2013 (64%). However, this outstanding women labor participation is not the outcome of voluntary entering into labor market, but rather a strong enforcement by the communist party to realize women liberation, like what they implemented in Eastern European countries (Croll 1983: Stacev 1983; McMahen 1994; Chen 2005). In recent two decades, it sees a dramatic women retreating from labor market (9%) and returning to family. Then the question comes as if the return to family serves as a sign of defending the traditional family style. (3) Chinese gender ideology is perhaps based on the dimension of coordination more than equality.

The main research question is under what gender ideology do Chinese couples

arrange labor and time, coordination or equality? Under this general concern, three sub questions are to be explored. With the cultural norm that women do majority of the housework in China, how does Chinese couple's time use pattern change over the recent two decades (1990-2011)? How does the couple's time use pattern change through their life time? Let the leisure time be flexible varied, how does couple's time use differ in work days and holidays?

Forward and setback of Chinese gender equality

Women's liberation and gender equality has been embraced by the Chinese Community Party ever since its inception by founding All-China Women's federation to promote women's status in many administration levels. In 1955, the All China's federation in Guizhou advocated to apply equal income on both genders within cooperative society, which was soon admired by the party leader Mao Zedong, commenting that women could hold half of the sky (fu nv neng ding ban bian tian). After the introduction of responsibility system (baochan daohu) to boom the postwar economy, Chinese government put a direct reference of women employment as liberation.

Despite the great efforts the federation has paid, the tortuous development of gender equality in China depends more on the political and economic environment (Robinson 1985). The short golden period of gender egalitarian ends in 1957 when ACWF shifted from mobilizing women to work as a way to achieve liberation to emphasizing two-diligences policy, namely diligently, thriftily build the country, and diligently, thriftily manage the family (Wang, 2006), a conservative solution to family-work conflict of women under socialist construction. Soon later, this seemingly setback policy was then broken by the great female labor demand in Great Leap Forward in 1958. With the political vision to liberate women from housework to devote themselves to socialist production, the ACWF, the nation's first official feminist group turned back to its previous task of eliminating feudal remnants of inequality between men and women (Wang, 2006). Thanks to the market transition movement, the increasing nonagricultural work changes couples gap of housework hour, when wives shift from agricultural to non-agricultural work, the gap of housework share declines (Chen 2005).

Although feminism has thrived during these two decades, on the grass-root level, the appeal of return to family has also grown rapidly. Since both are new arrivals, it's hard to tell which is the trend. Return to family storm has been welcomed by a lot of fans, and the retreat from labor market and return to family has been lasted for decades, ever since the governmental call for high women labor market participation to achieve women liberation. Due to the diversified forces in trending women's role in work and family, all through the 1990s, housework remains women's domain and the gender gap in housework does not seems to decline (Chen 2005).

Gendered Role in Chinese Context

Under the Confucian patriarchy culture, while suffering from prevalent oppression, Chinese women are not encouraged to break the patrinymic, patrilocal, patrilineal and patriarchal family structure to decide their own life (Stacey 1975). Using data from China Urban Labor Survey and China Adult Literacy Survey, Zhang, Hannum and Wang (2008) illustrated that gender gaps in employment and earnings are strongly correlated to marriage status, that wives and mothers are disadvantaged group due to their vastly time investment in household chores. Early through the market transition, gender gap in earning persists, that even eliminating the effects of human capital, political capital and labor force placement, women still earn 10 percent less than their male peers in 1988 and 1995 (Shu and Bian, 2003).

In the 1990s, a married couple performs jointly like a chopstick both in productive and reproductive area in a few tasks, which is a typical example that couple promotes gender-blind ideal and minimize gender difference in Lancang, southeast China (Du 2000). Though the evidence seems fairly fragmented, we did find some hints in previous studies indicating that gender display (Liu, Tong and Fu, 2015), or traditional gender role is not only held by men, but also argued by women who agree that housework is only womens business (Zuo and Bian, 2001). Zuo and Bian (2005) argues that Chinese couples are cooperated unity who pursue rational harmony rather than egalitarian bargaining. From the interviews Zuo and Bian (2005) have done in the 1990s in Beijing, we learn that even women emphasize that men should be outside the house and earn money, rather than to be around helping with domestic work. The more work women burden on is not only because her husband got away from housework to emphasize masculinity, but could due to womens emphasize of their feminity by managing the household.

An interesting argument we could put in Chinese context is this wife-takecare-of-all model, including doing housework at home, sometimes even means high status of the wife within the household. Shu and associates (2015) argue that wives earning capabilities have no effect on their economic decision making power. Being trusted and relied on thanks to their carefulness and austerity. wife is granted great power to control all household income and manage the consumption. The logic is that household collective property should be gathered and controlled by the most careful and trustful member, which is usually the wife. So it's really hard to conclude that wives are of lower bargaining power even though they are income disadvantaged. Wifes household management is a package solution that range from money control to all domestic chores with no clear distinguish between these two tasks though they are significantly different in gender equality meaning. The gender egalitarian ideology could still be at its beginning stage in current Chinese society, instead, the common willing of the couple to embrace the family is cherished a lot, especially the great contribution and sacrifice of women is widely valued as virtue, which is another issue but serve as an alternative to gender egalitarian ideology.

Hypothesese

Husbands and wifes hourly income.

Hypothesis 1a: In household where husband earn higher hourly income, the wife does more housework than the husband. (coordination hypothesis) Hypothesis 1b: Even if wifes hourly income is higher than the husbands, the husband still not share more housework than the wife. (inequality hypothesis)

Husbands and wifes work time

Hypothesis 2a: If the husband work for longer time than the wife, the more share of housework will be burden by the wife. (coordination hypothesis)

Hypothesis 2b: Even if the wife works for longer time than the husband, the husband might not be more likely to bear more housework than the wife. (in-equality hypothesis)

For the above two sets of hypotheses, we are also interested in the trending of the significance income and work time have on couples housework time all through 1990 to 2011. As the following, we then explore the family life course variance in determining couples share of housework within their marriage life span.

Data and Methodology

We analyze two sources of data, a longitudinal dataset of Chinese Nutrition and Health Survey (CHNS) from 1991 to 2011, and a widely covered baseline data of Chinese Family Panel Studies (CFPS) in 2010, two ongoing panel data sets organized and prepared by prestigious academic institutions. The former covers 4,400 households with a total of 26,000 individuals covering nine provinces, while the later covers 15,000 families and 30,000 individuals in 25 provinces in Mainland China. Both sources provide data on division of housework for each member within the household. On the stage of data preparation, for the CHNS, we first merge several data files of roster, education and time use of variables we need, and got 62528 observations active in all the three data files. Then we did a husband-and-wife match to a female with her current husband living in the household and got 27313 couples matched one to one from the previous stage, followed by some basic data cleaning to exclude nonsense answers, eg. spending less than 10 minutes cooking everyday, etc. By matching couple's time use data, we are allowed to measure income, education and time use in both individual level and household level, and to explicitly looking into the couple's income, education and time use gap over time.

Meanwhile, similar data preparation were treated to CFPS where we got 11163 couples matched in the survey year 2010 in 25 provinces in China. With the CHNS data, we hope to see long-term trends of time division of working and housework time, while we expect to contest time constraints with gender theory by running models separately for weekdays and weekends using CFPS. In weekends, time constraints are alleviated for both men and women, while there might still be gender difference in housework division due to social context of gender stereotype. Another advantage of CFPS is that it covers 25 provinces, municipalities and autonomous regions, which provides among the first reliable opportunities of mapping geographical differences in housework division on national level. To draw the housework division map of China, we apply several GIS shape files of Chinese administrative division available at the National Geometics Center of China , and combine it with our data framework of gendered housework division.

Premilinary Results

In the first table, we found three periods of labor division trending, from 1991 to 2000, from 2004 to 2006, and from 2009 to 2011. In the 1990s, men and women retreated from labor market, reduced their working time and shared housework in a traditional way. From 2004 to 2006, the division of housework turned to be more equal, because the husband shoulder on more housework from the wife. From 2009 to 2011, Chinese couples picked up specialization in labor division again. After controlling for age, education and income, for both men and women, relative working time has a substantial negative effect on housework time of both genders across the period from 1991 to 2011.

What turns to be surprising from our result is that wives shorten their time share in housework more than their husbands, when wives increase her share of work time of the couple's total time. However, this may due to non-linearity between relative working time and relative housework time. A possible solution is to make dummy variables for the two type of time-use, to see what happens if husband share more, the couple equally share, or wife share more, respectively.

What's more, from 1991 to 2000, wife's share of housework increased and husband's share declined, from 2000 to 2004, wife's share decreased while husbands contribution to domestic work increased, and from 2006 to 2011, wifes share increase with husbands drop. In general, Chinese couples experience a threestage trend of housework division during the recent two decades: first slightly drives to traditional share at meanwhile, a retreat from labor market for both genders occurs, then the couple dramatically turns to more equal share given wifes working hours increased, and then slides to a more traditional share again due to wife's further retreat from labor market.

	Wifes work time		Husbands work time	
	relative	absolute	relative	absolute
age	0.950^{***}	5.174^{***}	-0.664***	0.991^{**}
	(-0.095)	(-0.442)	(-0.095)	(-0.308)
age2	-0.012***	-0.046***	0.007^{***}	-0.003
	(-0.001)	(-0.005)	(-0.001)	(-0.003)
education	-0.418***	-0.703	0.457^{***}	1.314^{***}
	(-0.120)	(-0.560)	(-0.121)	(-0.391)
Education gap (hus-wif)	-0.061	0.524	-0.397***	-0.716*
	(-0.103)	(-0.478)	(-0.106)	(-0.341)
Income contribution	-5.978***	-20.966***	-0.473	0.529
	-0.905	-4.221	-0.563	-1.818
Work time contribution	-6.242***	-13.856^{***}	-3.698***	-8.357***
	(-0.809)	(-3.774)	(-0.625)	(-2.018)
Period effect (Ref.:1991)				
1993	2.815^{***}	-14.686^{***}	-3.009***	-21.182***
	(-0.591)	(-2.757)	(-0.594)	(-1.918)
1997	3.204^{***}	-111.436^{***}	-3.336***	-46.950***
	(-0.621)	(-2.896)	(-0.625)	(-2.018)
2000	1.663^{**}	-125.832***	-1.682**	-47.519^{***}
	(-0.644)	(-3.004)	(-0.649)	(-2.095)
2004	-4.646***	-119.527^{***}	6.360***	-29.432***
	(-0.807)	(-3.764)	(-0.809)	(-2.611)
2006	-3.363***	-128.457^{***}	5.508^{***}	-32.555^{***}
	(-0.826)	(-3.855)	(-0.827)	(-2.668)
2009	3.707^{***}	-118.848***	-1.297 +	-42.572***
	(-0.762)	(-3.555)	(-0.768)	(-2.478)
2011	2.254^{**}	-128.751***	0.448	-43.432***
	(-0.807)	(-3.764)	(-0.813)	(-2.624)
constant	66.427^{***}	131.535^{***}	31.945^{***}	32.003^{***}
	(-2.448)	(-11.422)	(-2.561)	(-8.264)
Ν	26234	26234	26230	26230

Table 1: Fixed effects of couple's relative and absolute work time (1991-2011)

To follow up, we delve into a cross-sectional dataset (CFPS, 2010) to see the newest pattern in more details, separating the effects of relative work time by weekdays and weekends. We assume that if the labor division ideology follows the coordination hypothesis, the share of housework should be equal during weekends, since the work-family conflict has been eliminated at weekends. Otherwise, the Chinese couple share domestic chores in an unequal way, because the work time and income persist to the bargaining power to get rid of chores even in weekend. In Table 2, we explored that for both genders, the absolute and relative housework time decline given rising share in couple's total work time. Though wives' absolute housework time decline more steeply than the husbands when suffering from an increased share of work time, the husbands' share of housework is more reactive to rising share in work time than do the wife's. This means that husband's housework time shrink more than the wife's given one unit of share increase in one's relative work time.

	Wifes housework time Absolute		Husband's housework time	e Relative
		Relative Absolute	Absolute	
residence status	-0.286***	-0.032***	-0.106	0.005
	(-0.093)	(-0.011)	(-0.073)	(-0.012)
Years of education	0	0	-0.029***	-0.004***
	(-0.007)	(-0.001)	(-0.006)	(-0.001)
Education gap: W-H	-0.003	0	-0.022***	-0.003***
	(-0.005)	(-0.001)	(-0.006)	(-0.001)
Inome (log)	-0.019***	-0.004***	-0.012*	-0.001
	(-0.005)	(-0.001)	(-0.007)	(-0.001)
Family Life-cycle				
Couples mean age	0.022^{***}	0.001^{**}	-0.003	0
	(-0.003)	0	(-0.003)	(-0.001)
Child bearing	0.296**	0.053^{***}	-0.236*	-0.063***
	(-0.141)	(-0.017)	(-0.133)	(-0.021)
Children left home	0.485***	0.072***	-0.17	-0.062***
	(-0.139)	(-0.017)	(-0.131)	(-0.021)
Retirement	0.167	0.037^{*}	-0.227	-0.053**
	(-0.175)	(-0.021)	(-0.165)	(-0.026)
No. children under 16	0.130^{***}	0.007	0.008	0.003
	(-0.047)	(-0.006)	(-0.044)	(-0.007)
Relative working time	-2.003***	-0.132^{***}	-1.756***	-0.194***
	(-0.094)	(-0.011)	(-0.075)	(-0.012)
Partners housework time	0.184***	-0.108***	0.188***	-0.046***
	(-0.013)	(-0.002)	(-0.011)	(-0.002)
Constant	1.558***	0.806***	2.018***	0.541***
	(-0.167)	(-0.02)	(-0.166)	(-0.027)
Observations	6027	6027	6027	6027
Adjusted R-squared	0.144	0.469	0.141	0.151
R-squared	0.146	0.47	0.143	0.152

Table 2: Couple's housework time in weekdays: 2010

What's more, by regressing absolute time on relative working time, we encounter selection effects of positive assortative mating among individuals of similar characteristics and taste of life in the marriage market, meaning that hard-working women married to an also-hard-working men. However, lazy ones might seek for hard-working partner intentionally to fulfill the position at home, so the consequence is not quite clear. In our case, it seems that the positive assortative effect exists, partner's housework time is positively associated with one's own time for housework. In order to avoid endogeneity, we introduce percentage of housework shared by both parties, and found that partner's time dedicated at work reduce their share in housework significantly, and husband's time seems more helpful in reducing wifes share than the other way round.

The pattern of housework share varies across family life cycle, which include child bearing, children left home and retirement. Also, number of children under 16 and the mean age of couple is included as indicators of family maturity. Although we cannot capture the division pattern of at discrete-time point, we illustrate the piecewise expected outcome of a group of couples at a certain family stage. For instance, we know that comparing to families without children, wife having child aged less than 16 living at home does more housework while her husband does less. This unequal division pattern continues after children left home and retirement, due to wifes absolute housework time increase and husbands relative share reduces. For the control variable, we find that rural wives suffer from longer housework time and heavier share in housework than do urban wives. Also, The smaller education gap between wife and husband, the more time husband dedicates to housework thus bridging the housework time gap.

	Wifes housework time	Relative	Husbands housework time Absolute	Relative
	Absolute			
Residence status	-0.286***	-0.032***	-0.106	0.005
	-0.093	-0.011	-0.073	-0.012
Years of education	0	0	-0.029***	-0.004***
	-0.007	-0.001	-0.006	-0.001
Education gap: W-H	-0.003	0	-0.022***	-0.003***
	-0.005	-0.001	-0.006	-0.001
Inome (log)	-0.019***	-0.004***	-0.012*	-0.001
	-0.005	-0.001	-0.007	-0.001
Family Life-cycle				
Couples mean age	0.022***	0.001^{**}	-0.003	0
	-0.003	0	-0.003	-0.001
Child bearing	0.296**	0.053^{***}	-0.236*	-0.063***
	-0.141	-0.017	-0.133	-0.021
Children left home	0.485^{***}	0.072^{***}	-0.17	-0.062***
	-0.139	-0.017	-0.131	-0.021
Retirement	0.167	0.037^{*}	-0.227	-0.053**
	-0.175	-0.021	-0.165	-0.026
No. children under 16	0.130^{***}	0.007	0.008	0.003
	-0.047	-0.006	-0.044	-0.007
Relative working time	-2.003***	-0.132***	-1.756***	-0.194***
	-0.094	-0.011	-0.075	-0.012
Partner's housework time	0.184^{***}	-0.108***	0.188***	-0.046***
	-0.013	-0.002	-0.011	-0.002
Constant	1.558***	0.806^{***}	2.018***	0.541^{***}
	-0.167	-0.02	-0.166	-0.027
Observations	6027	6027	6027	6027
Adjusted R-squared	0.144	0.469	0.141	0.151
R-squared	0.146	0.47	0.143	0.152

Table 3: Couples housework time in weekends: 2010

In Table 3, we present the layout of correlation between the same set of covariates and couple's division of housework at weekends so as to compare it with the pattern in weekdays. Several differences are notable: First, married mother shares more housework than childless wife in weekdays, and the gap is larger during weekends. On the contrary, married father does less and the gender gap expands in weekends. After children left home, father still share less in weekends than childless husband, but the gap shrinks in weekends. A great progress for husband is that, with number of children under 16 increase, husband increases their share of housework in weekends, which is not significantly the case for them during weekdays.

The following two figures show wifes relative housework time, represented by



Womens percentage of housework in weekdays by province: 2010

wife's housework time divided by couples total housework time, in weekdays and weekends. The threshold of each level is similar distributed in the two figures thus comparable. There is a clear geographic distribution of equal and unequal share of housework in China. Generally, both in weekdays and weekend, wives living in east of China do larger share of domestic chores than those living in middle and west regions. This is surprising because the former is exactly the more economic developed region. The capital Beijing () stands out to be the most gender egalitarian region in the east.

When it comes to weekends, most of the provinces lower their level of wife's percentage of housework in the east part. And again, the south seems more gender egalitarian in respect of housework division than the north, exactly meet with the geographic and cultural division of South and North in China (Qin Mountain-Huai River threshold). However, Zhejiang (), Fujian () wives still share the similar and heaviest housework as they do in weekdays.



Womens percentage of housework in weekends by province: 2010

Conclusion and further improvement

Taking advantage of the longitudinal panel data, we found three substantial trendings of Chinese married couple's division of housework: more traditional way of practicing domestic chores during the 1990s, and suddenly swifting to more equally share of work in 2000s, and again falls into traditional or coordinated way of labor division in late 2000s. Another noticiable finding goes to the crosssectional geographical distribution of labor division in Mainland China, for which suprisingly, the Western China are more equal in respect to housework sharing in weekdays and weekends.

For further developing this paper, efforts should be paid in decomposing age effect in explaining the labor division trending from 1990s to 2010s, since we already noticed that the difference in labor division across years could be due to the various age structure of the sample. Also, for better testing the hypotheses, we should create dummy variables representing couple's work time and income situation, for instance, husband's work time more than wife's, husband's income higher than wife's, and vice versa. Potentially, by clustering couples into groups by the above-mentioned two variables, work time and income, we could shed light on the aggregate performance of these groups respectively on their division of housework at home, so as to describe Chinese couple's sharing pattern as either coordination or inequality.

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