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# The Varying Display of "Gender Display"

# A Comparative Study of Mainland China and Taiwan

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Abstract: In the literature on household work, "gender display" refers to the hypothesis that in order to compensate for their deviation from gender norms women who outearn their husbands tend to do more household work than women whose earnings are similar to those of their husbands. Much of the prior literature on this topic has debated whether or not gender display exists in the United States and other developed countries. However, the extent to which the gender display hypothesis is confirmed may depend on social context. Capitalizing on comparisons of mainland China and Taiwan, this study reexamines the gender display hypothesis in terms of varying social contexts. Our results show that (1) there is some evidence for gender display in rural China and Taiwan, but not in urban China, and (2) the evidence for gender display is more pronounced in Taiwan than in rural China. These results reveal not only that gender display is context-specific, but that the contextual variation of gender display may depend more on gender ideology than on macro-level economic development.

During recent decades, the revolution to "liberate women" has been one of the most significant social forces affecting modern society. In the last five decades, and in many countries, women have increased their participation in paid work, narrowed or reversed their education gap relative to men, and improved their presence in almost all high-status occupations. However, one aspect of women's lives has failed

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to keep pace with other positive changes: housework. Despite women's substantially improved positions in education and the labor force, household work has remained predominantly "women's work," especially less enjoyable routine tasks, such as cleaning and laundry (Bianchi et al. 2000; Bianchi, Robinson, and Milkie 2006; Blair and Lichter 1991; Gershuny 2000; Hook 2010; Robinson and Godbey 1997). While some recent studies show that men are now sharing more housework with their wives than previously, such that gender differentials in household work are narrowing (Gershuny 2000; Hook 2006), this has resulted in little reduction in women's housework time. Although housework division is only one aspect of marriage, gender inequality in households puts women at a disadvantage relative to their husbands in terms of labor force outcomes (Becker 1985; Budig and England 2001), marriage satisfaction, psychological well-being, and other aspects of life quality (Coltrane 2000).

In an effort to understand women's domestic labor, a number of individualand household-level hypotheses have been tested. Among them, gender display seems to be attracting the most attention, referring to the hypothesis that women who outearn their husbands tend to do more household work than women whose earnings are similar to those of their husbands. Although gender display has been tested with data from various sources and with different research strategies, with fixed results, it has seldom been considered within a comparative framework. In recent years, research on the quantity and determinants of women's unpaid work time has gradually adopted a comparative approach by considering contextual factors such as economic development. However, due to data limitations in past studies (Fuwa 2004; Hook 2006; Hook 2010; Heisig 2011; Knudsen and Waerness 2008), gender display has not been investigated thoroughly taking a contextual approach. Furthermore, past research on whether this hypothesis is true has been based mainly on data from relatively stable Western societies. Yet the extent to which gender display is confirmed may depend largely on social context, since gender relations are constantly altered by societal changes. We know that China has undergone significant societal changes in recent decades, including a sharp decline in fertility resulting from the Chinese government's aggressive family planning policy (Xie 2011). In this article, we situate our empirical work in contemporary mainland China and Taiwan and reexamine the gender display hypothesis in terms of varying social contexts.

A unique feature of this study lies in our conceptualization and operationalization of social contexts. Previous comparative studies of gender display have suffered from an inability to tease out the full complexity of macro-level factors. Economic development, gender inequality, and certain government welfare policies are common macro-level factors that past studies have emphasized (Diefenbach 2002; Fuwa 2004; Hook 2010; Heisig 2011; Knudsen and Waerness 2008; Ruppanner 2008). For example, in addition to indicators of gender equality in terms of education, occupation, wages, and other factors, ideology on gender relations in a society should also be taken into account. If, as is commonly assumed, gender display

consists of wives' compensatory actions for their deviance from gender norms in earnings, these actions are likely to be influenced by what is deemed culturally appropriate, that is, macro-level gender ideology. In this article, we assess empirical evidence bearing on the gender display hypothesis across three societies that share an identical cultural tradition in common but vary in terms of the prevailing gender ideology: Taiwan, rural China, and urban China.

For this study, we analyze data from the 2004 and 2006 Panel Studies of Family Dynamics, a recent household survey with comparable instruments in mainland China and Taiwan. We consider how wives' contributions to family income affect their housework time across Taiwan, rural China, and urban China. Our results show that (1) there is some evidence for gender display in rural China and Taiwan, but not in urban China, and (2) the evidence for gender display is more pronounced in Taiwan than in rural China.

#### Theoretical Motivation

While it is common knowledge that married women do more housework than married men, theoretical explanations for this tendency are diverse. Three major theoretical perspectives on domestic labor allocation have dominated related work in the past: (1) time availability, (2) gender ideology, and (3) relative resources.

The time availability perspective suggests that housework is reasonably divided on the basis of the availability of family members (Blood and Wolfe 1960; Coverman 1985; England and Farkas 1986; Hiller 1984). Thus, a couple's time spent on housework should correspond to their working time and family composition. Shelton (1992) shows that time constraints (measured by employment status, marital status, and so on) explain a large part of the variation in domestic work. The relationship between time constraints and household labor is more pronounced for women than for men. Becker's (1991) microeconomic theory points out another type of time availability, which is based on the individual's altruism in the family and the combined family utility function. In Becker's analysis, spouses agree on a division of labor between market and household work that maximizes utility output for the whole family. After becoming wives and mothers, married women tend to do better in performing domestic tasks and thus undertake more nonmarket work, while men's comparative advantages in earnings lead them to concentrate on market labor. Hence, with time, a division of labor develops, with women specializing in domestic work and men specializing in labor market work (Coverman 1985; Presser 1994).

The gender ideology perspective claims that housework division is a symbolic enactment of gender relations. Thus, according to this view, time spent in the market vs. time spent in the household is not a simple trade-off between men and women (Greenstein 1996; South and Spitze 1994), but is rooted in gender ideology. From the gender display perspective, housework is not neutral, as it defines and expresses gender-specific expectations. Recently, sociologists of gender have combined gender ideology with the theoretical construct of "doing gender" (West and Zimmerman 1987). It is argued that an individual's behavior is affected by the expectations of others, to which the individual tries to render him- or herself accountable by "doing gender." This claim is confirmed by some past studies. Scholars find that despite a clear egalitarian trend in attitude toward the gender division of labor, the correlation between abstract gender role norms and actual gender division of housework is low (Badgett, Davidson, and Folbre 2002; Bittman and Pixley 1997). Besides, whatever independent variables (work time, income, etc.) are used, most of them seem to affect women's housework time far more than they affect men's (Brines 1994; Greenstein 2000).

The relative resources perspective is based on exchange theory, which assumes that the spouses bargain over the distribution of resources within marriage (Blood and Wolfe 1960; Heer 1963; Manser and Brown 1980; McElroy and Horney 1981). This perspective contends that the division of housework reflects, to some extent, the power relation between the husband and the wife. In other words, the relative amount of resources household members bring to the family determines the allocation of domestic work (Brines 1994). Resources such as education and income thus help to reduce housework. Since women are often economically dependent on their husbands, according to this view, it stands to reason that they would do more housework (Brines 1994; Greenstein 1996, 2000). Another version of the relative resources perspective involves exchange-bargaining theory. This theory focuses on how resources affect the "struck bargain." Assuming that all persons dislike housework and would avoid it if possible, the theory predicts that higher earnings lead a spouse to do less housework. In contrast with the time-availability perspective, exchange-bargain theory mainly focuses on relative earnings; thus, the spouse with the higher earnings will have the power to get the other spouse to do more housework no matter how long he or she works in the labor market (Bittman et al. 2003).

Unlike the previous two perspectives, however, the relative resources perspective is always under debate, the issue being whether the wife's increasing share of income could help continuously decrease her housework time. If not, this phenomenon will be called "gender display," which refers to the hypothesis that when women outearn their husbands, they will do more housework than those whose earnings resemble those of their husbands in order to compensate for their deviation from gender norms. Essentially, gender display is related to both the relative resources perspective and the gender ideology perspective. On the one hand, it admits that wives' relative incomes are powerful in reducing their housework time to some extent. On the other hand, it also reveals that relative resources work for women only up to a point, beyond which their relative resources increase, rather than reduce, their housework. This reversal is commonly attributed to gender ideology. Traditional gender or family ideology prescribes that men shoulder the main responsibility for earning money and that women focus on domestic work. Thus, if a wife "violates" the traditional gender norms, especially in terms of earning more money than her

husband, she may need to do something to compensate for this violation. For such women, undertaking more housework or giving up bargaining power in reducing housework is one way to neutralize the unbalanced gender relation within the family, a phenomenon labeled as the gender display hypothesis.

The gender display hypothesis was first operationalized by Brines (1994) with a quadratic specification of the relationship between a measure of the husband's versus the wife's relative income and the wife's housework hours. Since then, many scholars have replicated Brine's findings in many developed countries such as the United States and Australia (Bittman et al. 2003; Evertsson and Nermo 2004; Greenstein 2000). However, some recent studies have challenged such findings (Gupta 2006 and 2007; Gupta and Ash 2008; Killewald and Gough 2010). Critics of the gender display hypothesis argue that the wife's own earnings are a much better predictor of her time spent in household labor, as it is economically rational for her to reduce housework time when her earnings increase. More money allows her, with diminishing returns, to purchase market substitutes for domestic labor. However, this mechanism predicts monotonic declines in housework time as the wife's earnings increases, regardless of the wife's share of income. Hence, some scholars argue that gender display simply does not exist after a proper control for the wife's absolute income (Gupta 2006 and 2007; Killewald and Gough 2010). After applying a spline function specification for the wife's absolute income, Killewald and Gough (2010) show that the nonlinear effect of the wife's share of income is a methodological artifact due to the nonlinear effect of the wife's absolute income.

However, earlier studies debating whether gender display exists suffered from a serious limitation. They invariably focused on a single country and thus did not take social context into consideration. As Blumberg (1984) suggests, individual women's power is "nested" in the gender power relationship at the societal level. In this article, we take a different approach and do not ask whether gender display exists in a society. Rather, we apply a comparative framework and examine the relative plausibility of gender display in different social contexts. If gender display reflects broader social forces affecting gender inequality at the societal level, we should observe varying manifestation of gender display across societies.

There is an emerging focus on how social contexts might influence the effects of individual characteristics in determining housework allocation. Context is conceptualized in terms of various factors, such as welfare and other state policies, gender equality level, economic development, and cultural norms (Fuwa 2004; Lewis 1992; Orloff 1993; Pfau-Effinger 2005; Sainsbury 1996). Studies show that in less egalitarian countries, the effects of women's characteristics on housework are reduced (Fuwa 2004; Knudsen and Waerness 2008). For instance, in societies where women are more involved in the paid labor market, men are more involved in the housework and there are fewer conflicts about housework between spouses. Scholars attribute such differences in housework division across different societies to societal shifts in gendered behavior (high labor participation of women and high gender equality level), but not necessarily to household-level bargaining (Hook 2006; Ruppanner 2010). Moreover, Hook (2010) has found that institutional arrangements and policy configurations such as longer parental leaves for fathers and better child care programs may also help reduce the time women spend doing time-inflexible housework.

These comparative studies on housework division, however, suffer from a major limitation: cultural context has not been well defined and appropriately controlled for. When comparing different societies, past studies ignore or find it difficult to consider cultural differences, a confounding macro-level factor. In this comparative study, we wish to control for potentially confounding macro-level factors such as culture.

### Social Contexts of Mainland China and Taiwan

Our empirical work is situated in contemporary mainland China and Taiwan. By the household registration (*hukou*) system, society in mainland China has been partitioned into two distinct parts: rural and urban (Wu and Treiman 2007). It is necessary to treat rural Chinese and urban Chinese as two separate populations, giving us three cases to study within a comparative framework. Before proceeding to the data analysis, we will provide a broad sketch of the macro-level social backgrounds of mainland China (both the rural and urban) and Taiwan, within which the effects of individual characteristics might be nested. In doing so, we will focus on three factors: gender equality level, economic development, and political interventions relating to gender equality. Note that Taiwan and China share a common culture, as they originated from the same Confucian culture (Thornton and Lin 1994; Whyte, Hermalin, and Ofstedal 2003; Wu 2009).

# Gender Equality Level

As Blumberg (1984) suggests, the degree of male domination may influence the bargaining process between the husband and the wife within a household. Consequently, women's relative economic power in bargaining with their husbands about housework division is a function of individual-level relative resources and macrolevel male domination in society (Blumberg 1984; Blumberg and Coleman 1989). To measure a society's gender equality level, the Gender Empowerment Measure (GEM) is the most frequently used and widely accepted index, ranging from 0 to 1, with the higher values reflecting higher gender equality. Based on data provided by the United Nations Development Program in 2006, the GEM of mainland China is 0.533, and the GEM of Taiwan is 0.726. This suggests that men and women are more equal in Taiwan than in mainland China, at least in terms of gender empowerment. For the comparison between rural and urban China, although we do not have a specific measurement of GEM, it is clear that the gender equality level is much higher in urban China where women earn more and have relatively higher social

status. As suggested by past studies, wives' individual characteristics have more bargaining power in societies where the gender relation is more equal. According to this perspective, we predict that relative resources will be most effective in Taiwan and least effective in rural China, with urban China between the two. Thus, gender display seems more likely to exist in rural and urban China than in Taiwan.

# Economic Development

One possible consequence of economic development is a shift to the reallocation of resources and authority on a rational rather than an ascriptive basis, that is, an erosion of patriarchy and thus a rise of women's power within the family (Jackson 1998). As a result, women's economic resources might have more bargaining power in the more developed societies. Moreover, economic development usually leads to more widespread use of advanced technologies, including those in the home. Therefore, the burden of housework might be lightened, and the housework division mechanism between the husband and the wife might also change. After 1949, mainland China and Taiwan were separated into two societies that were relatively isolated from one another, and their economic development diverged as well. While the economy in mainland China stagnated from the 1950s to the 1970s, Taiwan experienced rapid economic growth following successful land reform and the development of an export-oriented manufacturing industry. As a result, around 1980, the per capita Gross National Income in Taiwan was more than ten times that in mainland China. Beginning in 1978, mainland China began to implement the Reform-and-Open Policy by introducing a market economy. Although the economic gap between mainland China and Taiwan has narrowed in recent years, the per capita Gross National Product of Taiwan is still about three times higher than that in mainland China. Overall, the level of economic development is higher in Taiwan than in mainland China.<sup>3</sup> Between rural and urban China, it is evident that the level of economic development is much higher in urban China, where the average per capita income is about twice that in rural areas. Past studies have shown that the difference between rich and poor women's housework time falls with economic development (Heisig 2011). From this, we predict that the influence of relative resources will be strongest in Taiwan and expect to find less gender display in Taiwan than in mainland China.

# Political Intervention on Gender Ideology

The two aforementioned macro-level factors lead us to hypothesize that gender display is less likely to exist in Taiwan than in mainland China. However, a negative answer to this hypothesis implies that macro-level factors other than gender equality level and economic development may be at work, disrupting the pattern. To allow for this possibility, we further consider differences between Taiwan and mainland China in political ideologies relating to gender.

Since the founding of the People's Republic of China (mainland China), the revolution to "liberate women" has been one of the most significant social forces (Leung 2003). Chinese women have been encouraged to behave like men in becoming economic providers for their families. Government propaganda stated that improving women's economic and social status would also help them to improve their status within the family. Numerous slogans emphasizing the power of women have been widely popularized in China over the last sixty years (Cheng 1997). For instance, "Women can hold up half the sky" was one of the most famous of Chairman Mao's slogans in the 1950s. Furthermore, fixed wages for each level of worker were set so low that the husband's income alone could not support a whole family. Thus, Chinese women have been compelled to work as family breadwinners. Such propaganda has been quite successful, and its influence has persisted even during the reform and open era. Compared to married women in rural China, married women in urban China have been more deeply imbued with the ideology that they should earn money for the family and maintain equal status with their husbands within the family.

In the case of Taiwan, the situation is quite different. Although women are also encouraged to participate in work, no political ideology encourages women to be family breadwinners. Studies show that the traditional Chinese gender division of labor has not changed in Taiwan: in most Taiwanese families, men are the only economic providers, and a woman's duty is to care for and educate children along with doing housework (Chien 2004). In short, compared to the mainland, Taiwan has experienced less political intervention into family traditions and gender ideology in ways that might affect the wife's power of relative resources and reduce a woman's housework time. Since gender display is a phenomenon largely caused by the wife's gender ideology in relation to traditional family roles, the macro-level ideological environment may have overriding influence over macro-level economic development and gender equality in affecting gender display.

Comparing Taiwan and mainland China, this study evaluates the relative importance of wives' relative resources in reducing their housework time, as well as the relative plausibility of gender display across the two different societies. There are two concrete aims. The first aim is to test whether there is any cross-society difference in the pattern of the association between relative resources and housework time. If such a difference does, in fact, exist, our second aim is to try to explore which macro-level factor is plausible as an explanation for this difference.

### **Data and Measure**

## Data

For this study, we analyzed data from the Panel Study of Family Dynamics (PSFD) in Taiwan (2006) and in three southeast coastal provinces of mainland China (2004): Shanghai, Fujian, and Zhejiang.<sup>4</sup> The respondents in Taiwan and mainland

China were interviewed face-to-face using almost the same survey instruments. Using a stratified multistage random sampling procedure, PSFD selected only one respondent per household. The questionnaire collected detailed socioeconomic information about the interviewed individual and his or her spouse, as well as other family members. Our analysis is based on married couples. In examining relative resources and time availability, we confined the sample to working couples with total incomes larger than 0. After deleting observations with missing variables, the final sample consisted of 832 couples from Taiwan, and 1,973 couples from mainland China.

# **Variables**

Dependent Variables: Daily Hours of Housework and the Gender Gap

The key dependent variable is the wife's housework time. Due to the structure of the interview, almost half of all survey items, including wife's housework time, were reported by the husband (for a discussion of possible bias, see Kamo 2000). For ease of interpretation, daily minutes were converted to hours per week. We are interested in the wife's housework time, because the husband's housework time does not vary much.

## Income-Related Variables

To measure relative economic resources between the wife and the husband, we follow Bittman et al. (2003) in using the proportion of a couple's total earnings that the wife contributes. Since the PSFD asked respondents to report their own and their spouse's monthly earnings from their current jobs, it includes the earnings from regular wages, bonuses, gardening, raising livestock, fishing, and business, as well as from other types of work. We use both the linear and the squared forms of the wife's proportion of the couple's total earnings to ascertain whether the effect of the spouse's relative contribution to total earnings is nonlinear in accordance with the gender display hypothesis. On average, wives in Taiwan contribute 37.5 percent of couples' total earnings, while wives on the mainland contribute 39.6 percent. Distributions of wives' earnings contributions are similar across the three macro settings. In rural China, 22.45 percent of women's earnings are equal to or greater than those of their husbands, as opposed to 21.03 percent in urban China. In Taiwan, women's proportion of earnings is slightly greater at 25.12 percent.

The wife's share of the couple's total earnings is the ratio of the wife's earnings to the couple's total earnings. We include both the numerator and the denominator terms as controls in our analysis. As previous literature suggests (Cohen 1998; de Ruijter, Treas, and Cohen 2005; Heisig 2011; Spitze 1999), total household income facilitates a couple's access to domestic technologies, prepared food, paid help, and labor-saving machines such as vacuum cleaners, all of which may be used to reduce housework time. Further, holding the husband's earnings constant, the wife's absolute earnings could still decrease her housework time by allowing her to purchase more advanced household technology or domestic help without bargaining with her husband.

### Control Variables

We control for paid work time of both spouses. As with time spent in domestic work, we measure time spent in a paid job in hours per week. Controlling for paid work hours also allows us to examine time availability theory and Becker's (1991) efficiency hypothesis. We include education as a control variable, indicated by respondents' years of schooling. Past studies have found that wives with higher education do less housework, while husbands with higher education do more, suggesting that education might, to some extent, capture the attitudinal effect (Berardo, Shehan, and Leslie 1987; Coverman 1985; Farkas 1976; Goldscheider and Waite 1991). We use both the linear and the squared forms of age as a continuous variable, as some early studies suggest that time spent in domestic labor increases as the spouses become older, peaking in midlife (South and Spitze 1994). Since workload and demands may vary across different occupations, we also include occupation in five broad categories: (1) professional, (2) manager, (3) clerk, service worker, or commercial staff, (4) farm worker, and (5) industry worker. To allow for regional variation, we add indicator variables for Fujian and Zhejiang provinces, in contrast to Shanghai. Finally, we include variables about household composition as control variables, mainly to indicate the presence of children in the household: the total number of children ages 0 to 16, the number of young children under age 6, and the number of girls over age 12. Past research has pointed out that older girls are likely to help their mothers with housework (Goldscheider and Waite 1991), and in China this phenomenon may be even more pronounced, especially in rural areas, where girls often begin to perform housework at ages younger than 12.

# Results

We present the bivariate OLS regression in Table 1. For the urban China sample, both the linear and the squared form of the wife's share of income are insignificant at the 0.1 level. It should be noted that the coefficient of linear form would be significant at the 0.001 level if we omitted the squared term from the model.<sup>5</sup> This suggests that without any control, urban Chinese wives' housework time continuously declines as their relative incomes increase. For the rural China sample, we could see that both the linear and the squared forms of wives' share of income are significant at the 0.01 level. According to the signs of the coefficients, we can see that without any controls, gender display appears plausible in rural but not in urban China. If we consider only the difference between urban and rural China, we may infer that this difference is due to the macro-level factors of economic develop-

Table 1 Bivariate Model of Wife's Housework Time for Mainland China and Taiwan

	Mainland China		Taiwan
Variables	Rural	Urban	
Wife's share of income	-25.694***	2.871	-40.184***
	(5.366)	(9.832)	(7.814)
(Wife's share of			
income) <sup>2</sup>	15.754***	-13.515	47.515***
	(6.080)	(11.160)	(10.150)
Constant	26.726***	16.623***	22.832***
	(1.163)	(2.128)	(1.552)
Observations	1,489	484	832
$R^2$	0.036	0.02	0.031

*Notes:* \*\*\*p < 0.01; \*\*p < 0.05; \*p < 0.1. Standard errors are in parentheses.

ment and gender equality level emphasized in the previous studies, since these factors are both higher in urban than in rural China. However, when we turn to the Taiwan sample, we can see that gender display seems to exist there as well. This pattern is surprising, as the literature and theory on housework division strongly suggest that women's power is greater in more economically developed and more equal-gendered societies. That is, according to macro-level differences in economic development and gender equality, gender display should be more likely to exist in mainland China than in Taiwan, and more likely to exist in rural than in urban China. However, the crude results from bivariate analysis seem inconsistent with this conjectured pattern.

To explore whether such an inconsistent pattern is due to the omission of other relevant variables, such as those measuring the household's economic condition, we present the income model in Table 2. In comparison with Table 1, we can see that the coefficients of the wife's share of income have not changed much, especially in terms of the signs. This implies that even if we take both the wife's absolute income and the couple's total income into account, our results still contradict the pattern predicted by the previous literature concerning economic and other macrolevel factors. Instead, they are more consistent with the macro-level variation in political ideology on gender across the three samples.

Table 3 shows the full model.<sup>6</sup> After including a series of control variables, we observe that the general pattern for the effect of the wife's share of income in the three samples—urban China, rural China, and Taiwan—changes only a little.

Table 2

Income Model of Wife's Housework Time for Mainland China and Taiwan

	Mainlan	d China	Taiwan
Variables	Rural	Urban	
Wife's share of income	-29.993***	-4.897	-33.043***
	(5.491)	(10.310)	(8.127)
(Wife's share of income)2	21.012***	-3.828	45.735***
	(6.066)	(11.580)	(10.080)
Wife's total income	-0.726*	-0.18	-0.002*
(1,000 RMB/NTD)	(0.413)	(0.531)	(0.013)
Couple's total income	-0.584***	-0.372*	-0.0019**
(1,000 RMB/NTD)	(0.243)	(0.218)	(0.014)
Constant	28.824***	19.466***	22.964***
	(1.254)	(2.476)	(1.847)
Observations	1,489	484	832
$R^2$	0.066	0.037	0.051

*Notes*: \*\*\*p < 0.01; \*\*p < 0.05; \*p < 0.1. Standard errors are in parentheses.

Figures 1 and 2 show the predicted hours of the wife's housework per week by the wife's share of income in mainland China and Taiwan respectively. The dotted line in Figure 1 represents the relationship in urban China. Since neither the linear nor the squared form of the wife's share of income is significant at the 0.1 level, the relationship depicted here is only suggestive and is subject to large sampling error. Such results suggest that in urban China, wives continuously decrease their housework time so long as their share of income increases. In other words, the relationship between the wife's share of income and the wife's housework time follows exactly what the relative resources perspective predicts. Thus, no gender display exists in urban China.

The results of the rural China sample are represented by the solid line in Figure 1, showing a nonlinear relationship between the wife's share of income and the wife's housework time The wife's housework time decreases by about eight hours per week over the range extending from her complete dependence on her husband to her contributing two-thirds of the couple's total income, at which point it reaches the minimum. This trend is consistent with the relative resources perspective. However, the right one-third of the solid line shows a pattern consistent with the gender display hypothesis. It suggests that wives in rural China tend to increase their housework time to compensate for their gender deviance when their income grows to more than twice that of their husbands.

Table 3 Full Model of Wife's Housework Time for Mainland China and Taiwan

	Mainlan	Taiwan	
Variables	Rural ( <i>N</i> = 1,489)	Urban (N = 484)	(N = 832)
Wife's share of income	-24.922***	3.731	-16.895*
	(5.373)	(10.780)	(9.008)
(Wife's share of income) <sup>2</sup>	18.712***	-9.953	28.272***
	(5.903)	(11.900)	(10.860)
Wife's total income (1,000RMB/RMB/NTD)	-0.423	-0.242	-0.0646*
	(0.443)	(0.532)	(0.035)
Couple's total income (1,000RMB/RMB/NTD)	-0.299*	-0.195	0.003
	(0.238)	(0.233)	(0.014)
Education (reference gr	oup: Middle school)		
Primary school	-0.291	0.574	-3.177*
	(0.723)	(1.605)	(1.819)
High school	-2.439*	-0.320	-4.537***
	(1.303)	(1.191)	(1.522)
College	-3.411	-1.171	-5.542***
	(3.160)	(1.706)	(2.121)
Working time	0.0163	0.0133	-0.0514*
	(0.0159)	(0.028)	(0.029)
Wife's age	0.132***	0.162**	0.240***
	(0.0498)	(0.075)	(0.066)
Occupation (reference group: professional)			
Manager	0.946	5.511**	-0.168
	(4.285)	(2.784)	(2.131)
Clerk, service worker, and commercial staff	0.477	-0.454	1.953
	(2.245)	(1.418)	(1.559)
Farm worker	3.023	8.295**	1.531
	(2.192)	(3.325)	(2.732)
Industry worker	-1.097	0.908	-0.486
	(2.210)	(1.606)	(1.900)
Total number of children	0.0615	0.422	0.666
	(0.422)	(0.834)	(0.624)
Number of children	0.81	0.343	0.821
≤ 6 years old	(0.860)	(1.498)	(0.962)
Number of daughters ≥ 12 years old	0.129	-0.396	0.525
	(0.401)	(0.913)	(1.159)

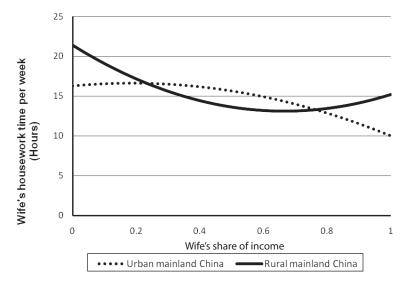
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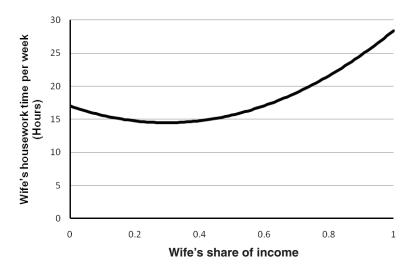
	Mainland China		Taiwan
Variables	Rural ( <i>N</i> = 1,489)	Urban (N = 484)	(N = 832)
Region (reference group: Shanghai)			
Zhejiang	1.564 (1.089)	-1.608 (1.257)	
Fujian	5.324*** (1.152)	1.121 (1.335)	
Constant	15.69*** (3.557)	9.923** (5.012)	10.07** (4.579)
$R^2$	0.146	0.086	0.098

*Notes:* \*\*\*p < 0.01; \*\*p < 0.05; \*p < 0.1. Standard errors are in parentheses.

**Figure 1.** Effects of Wife's Share of Income on Wife's Housework Time for Urban and Rural China



Note: The dotted line for urban is insignificantly different from the flat line.



**Figure 2.** Effects of Wife's Share of Income on Wife's Housework Time for Urban Taiwan

Figure 2 shows how wives' time spent in domestic work changes as their share of couple's income increases in the Taiwan sample. As with the rural China sample, we also find some evidence in support of the gender display hypothesis. In the Taiwan data, married women's housework time reaches its minimum when their contribution of the couple's total income is about one-third, which is a much lower threshold than that of their counterparts in rural China. In summary, we find similar results in the simple bivariate analysis and the multivariate model: wives' relative resources reduce their housework time in urban China, but the bargaining power of these resources is limited in rural China and even more so in Taiwan.

Are the differences across the three samples statistically significant? To answer this question, we present paired comparison results from the composition analysis (Xie and Shauman 1998) in Table 4. We use two approaches to examine whether the effects of wives' relative resources are different among the three samples: the "low" method and the "high" method. For each paired comparison, we begin with combining the two samples as well as constructing a dummy referring to the different samples, and both the "low" and "high" methods are based on the combined sample. For the "low" method, we first run the OLS regression with all the variables in the full model and their interactions with the sample dummy. Then we run another OLS regression with the same variables in the aforementioned model, except we take away the two interactions between the sample dummy and the two forms (linear and squared) of the wife's relative resources. Finally, we conduct an *F*-test with 2 as the first degree of freedom by using the *F* values obtained from the two hierarchical models. If the *F*-test is significant, it suggests that the effects of the wife's relative resources are statistically different between the two samples.

Table 4

Comparison of Effects of Wife's Share of Income Between Three Samples

	Method 1	Method 2
Comparison Group	"Low"	"High"
Urban China vs. Rural China	F(2, 1,951) = 2.33	F(2, 1,935) = 2.65
	Prob > F = 0.0972	Prob > F = 0.0709
Urban China vs. Taiwan	F(2, 1,296) = 6.35	F(2, 1,282) = 4.03
	Prob > F = 0.0018	Prob > F = 0.0180
Rural China vs. Taiwan	F(2, 2,301) = 7.92	F(2, 2,287) = 7.01
	Prob > F = 0.0004	Prob > F = 0.0009

For the "high" method, first we run the OLS regression with all variables in the full model and the sample dummy. Based on the previous model, we then run another OLS regression additionally including two interactions between the sample dummy and variables of the wife's relative resources. Similar to the "low" method, we also conduct an F-test between these two models, and the interpretations of the F-test results are the same with the "low" method. By conducting a series of F-tests of the paired comparison, we find that the effects of the wife's relative resources are statistically different between Taiwan and rural China, between Taiwan and urban China, and between rural and urban China.

In addition to the key explanatory variable, the coefficients of other variables in Table 3 are also worth noting. The coefficient of the wife's own absolute income is insignificant for both the urban and the rural China samples. This shows that the wife's housework is largely determined by bargaining with her husband rather than by her economic resources. However, in the Taiwan sample, the negative effect of the wife's absolute income is significant at the 0.1 level, which is consistent with the autonomy perspective. The coefficient of the couple's total income is significant only for the rural China sample, suggesting that households of urban China and Taiwan do not use their income to purchase technology or services to reduce household work. Similarly, education does not seem to reduce the wife's housework time in either the rural or the urban China samples. In Taiwan, the wife's education is overall associated with lower amounts of housework.

The coefficient of the wife's working time in the labor market is not significant in rural and urban China, but it is statistically significant in Taiwan. The estimated negative effect of the wife's working time on her housework in Taiwan is however quite limited, as ten hours' increase in paid work per week will only reduce housework time by half an hour per week. These results suggest that the time availability perspective is not well supported in either mainland China or Taiwan.

We include variables related to children's characteristics. However, as shown in

Table 3, none of the coefficients is significant for all three samples. This might be due to the structure of the questionnaires in the PSFD. During the interview, the respondents were required to answer some questions related to child care, such as how much time they spend helping their children with homework and so on, and thus they might not include child-care time as part of housework.

In all three samples, age is positively associated with housework time. Each additional ten years lead to a 1.6-, 1.3-, or 2.4-hour increase for wives in urban China, rural China, and Taiwan, respectively. Occupation is also a significant factor in terms of how much time women spend doing housework in mainland China, though not in Taiwan. Finally, there are regional differences in rural China. Rural wives in Fujian province spend 3.5 more hours doing housework than their counterparts in Shanghai. This may reflect different local norms regarding gender roles.

We show a series of auxiliary analyses in Table 5. Based on the full model, five sets of variables are examined respectively, including: husband's educational level, family structure, gender and family ideology, hiring domestic helper, and the couple's health condition. In addition to the coefficients of linear and squared forms of the wife's relative income, the F-test and the incremental R-squared between each auxiliary analysis and full model are also shown in Table 5. We can observe that the coefficients of both the linear and the squared forms of the wife's relative resources do not change much. This suggests that the results discussed above are quite robust under alternative specifications.

# **Discussion and Conclusion**

Past research on household work leaves a debate unresolved concerning the effect of the wife's relative resources. Using different data sets and methods, some researchers have observed gender display, which shows the wife's relative resources to have limited bargaining power in reducing the woman's housework time (Bittman et al. 2003), while others argue that such a curvilinear effect of the wife's relative resources is an artifact due to the neglect of the wife's absolute income (Gupta 2007; Killewald and Gough 2010). In this study, we attempt to contribute to the debate on gender display by situating women's household work in different social contexts within which their bargaining power is nested, adopting a comparative perspective.

Does gender display really exist? The results of our study suggest that the answer may vary by social context. By comparing rural China, urban China, and Taiwan, we observe that the plausibility of gender display varies from one context to another. As some previous literature on the contextual study of housework shows (Hook 2010), a wife's bargaining power within the family could be influenced by the macro-level factors within which it is embedded. In general, our findings remind us that gender display needs to be considered within the contexts of economic development, gender equality, and the political ideology of a society. When married women decide—or bargain over—how much time they spend doing housework,

Table 5

Auxiliary Analysis Including Other Relevant Predictors

		Main	Mainland China	Taiwan
		Rural	Urban	
Including husband's	Wife's share of income	-23.955***	4.082	-17.057*
education		(5.417)	(10.739)	(9.073)
	Wife's share of income <sup>2</sup>	17.929**	-10.085	28.805**
		(5.936)	(11.850)	(10.948)
	F-test	F(4, 1,457) = 0.24	F(4, 460) = 2.95	F(4, 793) = 0.76
		Prob > $F = 0.914$	Prob > $F = 0.020$	Prob > $F = 0.551$
	Incremental R²	0.001	0.016	0.004
Including family	Wife's share of income	-23.622***	3.994	-16.899*
structure		(5.369)	(10.960)	(9.075)
	Wife's share of income <sup>2</sup>	16.910**	-9.914	28.432**
		(5.902)	(12.0962)	(10.943)
	F-test	F(10, 1459) = 2.78	F(10, 454) = 0.31	F(8, 807) = 1.07
		Prob > $F = 0.002$	Prob > $F = 0.979$	Prob > $F = 0.380$
	Incremental R <sup>2</sup>	0.016	0.0061	0.0095
Including ideology	Wife's share of income	-23.630***	2.902	-16.804*
		(5.337)	(10.953)	(8.967)
	Wife's share of income <sup>2</sup>	18.141***	-9.8707	26.855**
		(5.858)	(12.036)	(10.820)

	F-test	F(8, 1459) = 2.85	F(8, 456) = 0.46	F(6, 807) = 2.66
		Prob > $F = 0.004$	Prob > $F = 0.886$	Prob > $F = 0.015$
	Incremental R <sup>2</sup>	0.013	0.007	0.010
Including helpers	Wife's share of income	-25.138**	3.218	-16.838*
		(5.391)	(10.857)	(9.005)
	Wife's share of income <sup>2</sup>	18.622***	-10.010	28.290***
		(5.918)	(12.034)	(10.854)
	F-test	F(8, 1462) = 1.47	F(8, 457) = 1.26	F(1, 814) = 1.47
		Prob > $F = 0.163$	Prob > $F = 0.262$	Prob > $F = 0.226$
	Incremental R <sup>2</sup>	0.007	0.019	0.002
Including health condi-	Including health condi- Wife's share of income			-19.111**
tion				(980.6)
	Wife's share of income <sup>2</sup>			31.202***
				(10.993)
	F-test			F(7, 808) = 1.34
				Prob > $F = 0.229$
	Incremental R <sup>2</sup>			0.010

*Notes:* \*\*\*p < 0.01; \*\*p < 0.05; \*p < 0.1. Standard errors are in parentheses.

their decision is influenced not only by their financial resources and time availability, but also broader, macro-level factors.

Gender equality and economic development are two macro-level environmental factors that have usually been seen as influencing a wife's bargaining power within the family. Scholars have found that the higher the economic development and gender equality levels, the more equally the housework will be divided between the husband and the wife, and the stronger the bargaining power of the wife's individual characteristics (e.g. income, education, etc.). However, most past studies have neglected the political environment, especially in terms of its interventions concerning gender ideology. In our empirical analysis, we find that the wife's relative resources are the most powerful in urban China and the least powerful in Taiwan, with rural China in between. Although our results may still be subject to interpretation in terms of supporting or rejecting the gender display hypothesis, the contextual variation in the effect of wives' relative resources is evident. By comparing urban China, rural China, and Taiwan, we find that the influence of a political intervention surpasses the influence of economic development and gender equality in amplifying or limiting the effect of a wife's relative resources. Thus, what is particularly interesting in this comparative study is that the cross-society variation found in the study suggests the importance of a different macro-level factor—political environment.

Future work is still needed to explore the varying effects of individual-level or even meso-level attributes (e.g. work unit) in determining the unpaid labor of both women and men. In addition, more attention should be shifted from Western developed countries, which have not experienced great social changes in the recent past, to developing countries that are now experiencing dramatic economic, social, and cultural changes. That is, we should study not only contextual differences by space, but also contextual differences over time. Such comparative studies will be made possible by the emergence of longitudinal data on detailed family dynamics now underway in many countries. Such integrative studies that capitalize on both societal and temporal variations will enable us to better understand the complexity of housework division from a comparative perspective.

#### Notes

- 1. We will have further discussion on the "gender display" hypothesis later.
- 2. GEM is constructed from the combination of the percentage of parliamentary seats held by women, the percentage of administrators and managers who are women, the percentage of professional and technical workers who are women, and women's share of earned income compared to that of men.
- 3. In this article, our data for mainland China are from three provinces: Shanghai, Fujian, and Zhejiang. Although these three provinces are more developed than the rest of China, they are still behind Taiwan (see Chu, Xie, and Yu 2011).
- 4. For more information of the survey, please refer to the Social Research Data Archive of Academic Sinica (https://srda.sinica.edu.tw/).
  - 5. We run the model only including the linear form of the wife's share of income for

the urban China sample, and the coefficient is significant at the 0.01 level, with the negative sign.

- 6. To make sure our results are comparable to previous studies, we also extend our sample to include housewives and househusbands. The results from applying the full model on the extended samples are quite similar to those obtained from the restricted samples suggesting that the new findings of "gender display" hypothesis are not due to our different sampling strategy.
- 7. The values were computed from the regressions in Table 3, assuming that the wife has a primary school education; that the occupation of the woman is professional; that the wife is living in Shanghai province for the mainland China sample. Other variables (wife's absolute income, couple's total income, wife's usual hours of paid work, wife's age, total number of children of the couple, number of daughters over age 12 of the couple, and number of children under 6) were set at their mean from Table 1. The values assumed for variables (other than the proportion of income contributed by the wife) affect the level but not the shape of the relationship depicted in Figure 1, since we prefer the regression model which does not include interaction with the husband's share of income.

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**Appendix Descriptive Statistics of Main Predictors for Mainland China and Taiwan** 

	Mainland China		Taiwan
	Rural	Urban	
Variables	N = 1,489	N = 484	N = 832
Wife's housework time	19.524	15.165	15.704
	(11.729)	(10.536) a	(13.466)
Wife's share of income	0.391	0.412	0.375
	(0.167)	(0.161)	(0.163)
Wife's total income (RMB/NTD) <sup>b</sup>	581.564	1,384.835	31,923.960
	(995.409)	(1,617.380)	(27,779.960)
Couple's total income (RMB/NTD)	1,610.649	3,434.116	84,590.410
(,	(2,556.092)	(3,335.225)	(60,571.060)
Wife's age	41.069	40.310	42.198
	(9.129)	(8.052)	(9.602)
Wife's working time	47.528	44.597	48.142
	(19.797)	(17.433)	(15.864)
Total number of children	0.911	0.754	1.061
	(0.827)	(0.623)	(1.024)
Number of children ≤ 6 years old	0.154	0.163	0.288
0.0	(0.377)	(0.376)	(0.594)
Number of daughters > 12	(0.077)	(0.0.0)	(0.00.)
years old	0.693	0.380	0.213
Wife's occupation (%)	(0.874)	(0.576)	(0.490)
Professional			
	2.22	21.28	14.9
Manager	0.6	3.51	7.09
Clerk, service worker, and commercial staff	13.03	47.31	52.88
Farm worker	55.34	2.69	6.61
Industry worker	28.81	25.21	18.51
Education (%)			
Primary school	65.21	13.430	17.79

(continues)

# Appendix (continued)

	Mainland China		Taiwan
	Rural	Urban	
Variables	N = 1,489	N = 484	N = 832
Middle school	27.33	30.370	12.38
High school	6.38	36.160	54.69
College	1.07	20.040	15.14
Region (%)			
Shanghai	8.330	26.030	
Zhejiang	46.940	39.050	
Fujian	44.730	34.920	

*Notes:* a. Standard deviations are in parentheses. b. Income is measured by RMB for mainland China respondents, and measured by NTD for Taiwan respondents. 1 RMB is worth about 4 NTD.

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