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Signs of change: evidence on women's time use, identity, and subjective well-being in rural Bangladesh

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We develop an analytical framework based on the work of Akerlof and Kranton (2000) and use it to examine how identity – proxied by agreement with statements reflecting patriarchal notions of gender roles – affects the trade-off between the time women spend on household and care work and their subjective well-being. Analyzing household survey data from rural Bangladesh, we find that longer hours spent on household work are associated with lower levels of subjective well-being among women who hold egalitarian notions of gender roles, while the reverse is true for women who hold patriarchal notions of gender roles. Importantly, this pattern holds only when women strongly identify with patriarchal or egalitarian notions of gender roles. These findings provide insights into how social expectations govern gender roles and, specifically, how gender inequalities persist, at least in part, due to men's and women's internalization of traditional gender norms.

Keywords: Time Use, Gender, Identity, Subjective Well-Being, Rural Bangladesh.

Introduction

The increased participation of women in the labor market and the persistence of social expectations governing gender roles have sharpened the focus on the distribution of household and care work in social and labor policy debates.[1] The unequal division of household and care work and the attempts by women to meet the demands of both their jobs and family obligations impose significant costs on women's well-being and livelihoods. Notably, household and care obligations constrain the type of jobs women undertake, while also reducing their time for education, leisure, self-care, and social activities. The strain on women's time increases with poverty (Bardasi and Wodon 2010), and often poorer women are forced to make difficult sacrifices, such as lengthening their workday or engaging in simultaneous work activities for prolonged periods of time (Deere 1990; Floro and Pichetpongsa 2010; Szeto and Cebotarev 1990). This can have debilitating effects on women's health, causing stress, chronic fatigue, or lack of sleep (Baruch et al. 1987; Floro and Pichetpongsa 2010; Zaman 1995).

Concerns over women's unpaid work burden are particularly salient in societies with entrenched patriarchal norms. As Walby (1989) points out, inequality in the domestic division of labor enables men to expropriate women's labor, impacting women's livelihoods in terms of reduced time in the labor force and lower access to decent work. Gender relations are, however, not static – even in highly patriarchal societies. In many parts of the world, economic restructuring and growth, as well as migration, advancements in communications, and institutional and policy reforms, have fueled women's willingness to challenge traditional gender roles (Kabeer 2000). Designing programs to promote gender equality and women's empowerment requires a more nuanced understanding of the tensions and risks faced by women as they navigate social expectations and ascribed gender roles in order to take advantage of new opportunities.

Although Bangladesh has traditionally been characterized by a system of patriarchy that limited women's mobility outside their homes and restricted their property rights (Agarwal 1994; Cain et al. 1979; White 1992), significant socioeconomic shifts in recent years have given rise to novel notions of men's and women's roles and responsibilities within society (Kabeer, 2000). As White (1992) notes, there persist in Bangladesh "contested images" of gender that permit women and men to shift and choose their identities in accordance with personal circumstances and interests. Women in Bangladesh thus defy a homogenous categorization based solely on sex, and instead embrace a heterogenous one, differentiating among themselves on the basis of class, age, and marital status. Each woman's ability to respond to new opportunities depends on her unique circumstantial and experiential standpoint (Kabeer, 2001).

In this paper, we investigate how identity – broadly defined as a person's self-image or sense of self – shapes the relationship between the performance of traditional gender roles and subjective well-being (henceforth SWB). Using rural Bangladesh

as a case study, we examine how women's perceptions of their role both inside and outside the household affect how they think about and experience different types of work. We develop an analytical framework, based on the work of Akerlof and Kranton (2000), in which a woman's identity, namely the degree to which she internalizes the traditional roles ascribed to women in a patriarchal society, functions as an intermediary between the work she performs within the household and her SWB. Within this framework, we argue that the satisfaction or enjoyment that women derive from the fulfilment of their traditional duties (i.e., spending time on domestic chores and care work) depends on the degree to which they accept and conform to the patriarchal norms and social expectations regarding gender roles.[2] Spending long hours on household work is predicted to increase the SWB of women who *agree* with patriarchal notions of gender roles and, conversely, to decrease the SWB of women who *disagree* with patriarchal notions of gender roles.

We empirically test these predictions using household survey data from rural Bangladesh and two estimation methods: ordinary least squares (OLS) and generalized maximum entropy (GME) regression. Our key explanatory variable is women's average level of agreement with several statements reflecting patriarchal notions of gender roles. We find that, among women who strongly *disagree* with patriarchal notions of gender roles, higher levels of household work are associated with *lower* levels of SWB. However, among women who strongly *agree* with patriarchal notions of gender roles, higher levels of household work are associated with *higher* levels of SWB.

This paper makes several contributions. We add to work on identity economics, which establishes individual identity as an important driver of economic behavior and social interaction. By showing how identity relates to the work women engage in and how this, in turn, affects their well-being, we enhance the understanding of women's labor participation in Bangladesh, which was shown in previous studies to be negatively correlated with the expression of traditional gender norms (Ahmed and Sen 2018; Bridges et al. 2011; Heintz et al. 2018; Roy et al. 2015) and add new layers to the growing literature on women's empowerment in Bangladesh (Anik and Rahman 2021; De Pinto et al. 2020; Seymour 2017; Sraboni et al. 2014; Sraboni and Quisumbing 2018).

The rest of the paper is organized as follows. Section 2 develops the analytical framework, taking into consideration the social context of rural Bangladesh. Section 3 details our empirical approach. Section 4 describes the data and presents a descriptive analysis of gender differences in SWB, attitudes toward gender roles, and time allocation. Section 5 discusses the empirical results. A summary and discussion of policy implications conclude the paper.

Analytical framework and social context

Drawing on psychology, economists have recently begun to embrace the notion of identity as useful for understanding the role of social expectations in a person's behavior.[3] In the seminal paper on the topic, Akerlof and Kranton (2000) provide a framework that incorporates identity into a utility-maximizing model of behavior. This framework has subsequently been used to explain several economic phenomena, e.g., educational outcomes (Akerlof and Kranton, 2002), workers' effort and organization (Akerlof and Kranton 2005; 2008), women's self-help group participation (de Hoop et al. 2014), and women's observance of *purdah* norms in Bangladesh (Ahmed and Sen 2018). The intuition behind the framework we develop below is that women's internalization of gender norms in Bangladesh guides their behavior in multiple ways, some of which may not be obvious. The Akerlof-Kranton (AK) model provides us with a convenient mechanism for disentangling the different channels through which identity might affect women's behavior.

The AK model is based on the idea that a person's behavior is guided by how she perceives herself as belonging to groups or social categories, based on the extent to which her characteristics and activities conform to the ideal behaviors and attributes set forth by society for individuals similar to her. Formally, the utility U of person j depends on her identity I_j, her own actions $\mathbf{a}_j$, and other people's actions $\mathbf{a}_{-j}$:[4]

$$U_j = U_j(\mathbf{a}_j, \mathbf{a}_{-j}, I_j). \tag{1}$$

Person j's identity in turn depends on the social categories $\mathbf{c}_j$ to which she belongs and to the extent to which her attributes ε_j and actions $\mathbf{a}_j$, as well as others' actions $\mathbf{a}_{-j}$, correspond to the ideal characteristics and behaviors associated with social prescriptions $\mathbf{P}$:

$$I_j = I_j(\mathbf{a}_j, \mathbf{a}_{-j}, \mathbf{c}_j, \varepsilon_j, \mathbf{P}). \tag{2}$$

Another way to think about the function $I_j(\cdot)$ is that it gives the social status accorded to person j, based on her self-perceived social categories and the extent to which her behavior fits society's expectations of what a person like her should be and do. Hence, a woman who values being a "good housewife" and spends long hours on household work will experience an enhanced payoff and derive greater utility from this work.[5] This payoff also depends on the degree to which other members of society approve or disapprove of her behavior. Behaving as society deems appropriate for a woman (being a "good housewife" in the above example) results in social approval, which further enhances her utility. Deviating from socially ascribed rules of behavior reduces a woman's utility, due to social disapproval or, in extreme cases, ostracism. Individual behavior in the AK framework is thus determined by how these respective payoffs compare to one another, which can vary across individuals. Hence, women with strong incentives may still choose to challenge traditional norms, despite potential backlashes and social repercussions.

Several factors suggest that the AK framework can shed light on the situations faced by women in patriarchal societies like Bangladesh. Several studies find that Bangladeshi women who challenge traditional gender roles by engaging in work outside

their homes often face social sanctions, including personal shaming, increased emotional stress, or even intimate partner violence (Ahmed et al. 2001; Feldman 2001; Kabeer et al. 2011; Schuler et al. 1996; 1998). The potential for these negative repercussions, however, varies widely within Bangladesh and is determined by household circumstances and community norms. For instance, Koenig et al. (2003) find that women's autonomy and membership in credit and microfinance groups are associated with higher risks of intimate partner violence only in the most culturally conservative areas of Bangladesh, while Heath (2014) finds that working for pay is positively correlated with intimate partner violence in rural Bangladesh only among women who marry at a young age or have low levels of education.

As noted in the introduction, women in Bangladesh are heterogenous and may have past histories or face current circumstances that lead them to be more or less likely to challenge socially prescribed behaviors. In poor households, for instance, women who face the choice of maintaining proper social decorum or meeting subsistence needs often opt to behave in socially "unacceptable" ways by working outside the home, e.g., in agricultural day labor or in garment and shrimp processing factories (Zaman 1995; Kabeer 2001; Hossain et al. 2004; Mottaleb and Sonobe 2011).

Additional evidence of the heterogeneity of women's identities comes from several qualitative studies conducted in Bangladesh. Devine et al. (2008) finds that Bangladeshi women, when asked to describe their personal well-being, emphasized the critical importance of managing the household, raising children well, and supporting aging parents, while also noting the importance of financial independence and mobility. Likewise, a 2006 nationally representative survey on gender norms in Bangladesh conducted by the World Bank provides evidence of women's evolving views on gender roles and social relations. In their responses, many young women spoke of aspirations for financial independence ("standing on one's own feet") and marriage to educated men (World Bank, 2008). Other women expressed aspirations for delaying marriage in favor of the completion of higher degrees: "My mother was married off when she was studying in class eight. Maybe I will get married after a BA degree" (World Bank, 2008, 50). Moreover, egalitarian views about the education of boys and girls seem to be gaining ground in Bangladesh, where nearly 75 percent of men and women surveyed thought that girls should have as much education as boys (World Bank, 2008).

To explicitly allow for heterogeneity in women's identities in our analytical framework, we assume that women assign themselves to specific social categories, depending on their personal beliefs and attitudes toward gender roles. Those whose personal beliefs and attitudes toward gender roles reflect patriarchal values are considered to have "patriarchal attitudes" and belong to group $c_p \in \mathbf{C}$. Women whose personal beliefs and attitudes do not reflect patriarchal values are said to have "egalitarian attitudes" and belong to group $c_e \in \mathbf{C}$. Further, we assume that the beliefs and attitudes to which a woman subscribes are known only to herself and are not directly observable by other members of the community. This assumption is based on the intuition that one may hold certain personal beliefs but choose not to act on them. For example, a woman may choose to comply with traditional gender norms in order to be perceived as behaving according to social expectations, even if she herself does not fully endorse these norms.

For simplicity, our framework focuses on one specific manifestation of patriarchy: the unequal division of household work between men and women in rural Bangladesh (Hossain et al. 2004; Zaman 1995). Social prescriptions, thus, enter our framework in terms of a woman's actions in relation to the traditional intrahousehold division of labor, defined as the amount of time a woman spends on household work and indicated as $w_j \in \mathbf{a}_j$.

Formally, the relationship between person j's utility and the time she spends on household work may be represented as follows:

$$\frac{dU_j}{dw_j} = \overbrace{\frac{\partial U_j}{\partial a_j}\frac{da_j}{dw_j}}^{health\ \ effect} + \overbrace{\frac{\partial U_j}{\partial a_j}\frac{\partial I_j}{\partial a_j}\frac{da_j}{dw_j}}^{attitude\ \ effect} + \overbrace{\frac{\partial U_j}{\partial a_j}\frac{\partial I_j}{\partial a_{-j}}\frac{da_{-j}}{dw_j}}^{response\ \ effect} \quad (3)$$

The right-hand side of Equation 3 captures each of the three channels through which the time person j spends on household work affects her utility: (1) the effect of w_j on her physical health (health effect); (2) the effect of w_j on her utility stemming from her personal attitudes toward gender roles (attitude effect); and (3) the effect of w_j on her utility determined by others' responses to her behavior (response effect).

The first term (health effect) on the right-hand side of Equation 3 reflects the impact of household work on person j's physical health, independent of any identity-related effects. On one hand, an increase in household work may enhance a person's health through increased production (e.g., cooked meals, well-fed children, etc.).[6] Once a critical threshold level is overcome, however, the mental and physical stress of working long hours may outweigh the positive effects of increased production. Moreover, since time is a finite resource, an increase in household work necessarily requires a reduction in other activities, such as paid work, sleep, or leisure.

The second term (attitude effect) captures the effect of household work on person j's utility stemming from how she perceives these activities. Whether person j experiences this time favorably or unfavorably depends on the extent to which her personal beliefs about gender roles conform to the traditional gender division of labor, i.e., whether she has patriarchal or egalitarian attitudes. For women with patriarchal attitudes, spending fewer hours on household work leads to negative emotions, such as anxiety, shame, or humiliation. For women with egalitarian attitudes, instead, less time spent on household work is associated with positive emotions, such as satisfaction and accomplishment.

The third term (response effect) reflects the impact on person j's utility of how others respond to the time she spends on household work. We expect this relationship to be positive. In other words, we expect longer hours of household work to generate praise or approval for person j, while we expect shorter

Health effect	Attitude effect	Response effect
Increase or decrease in w_j	Increase in w_j (patriarchal attitudes); Decrease in w_j (egalitarian attitudes)	Increase in w_j

Table 1 Predicted effects of household and care work on women's utility.

hours to bring about scorn, public humiliation, or even violence against her.

Table 1 summarizes the expected sign on each of the three effects. The overall impact on a woman's utility will depend on the relative magnitude of each effect. Applied to the context of Bangladesh, where social expectations often lead women to shoulder heavy work burdens, we expect a decrease in household work to positively affect women's health by enabling them to spend more time on paid work or social/leisure activities. For women with patriarchal attitudes, however, such benefits may be offset by feelings of guilt associated with spending fewer hours on household work, since this runs counter to patriarchal notions about the intrahousehold division of labor. Hence, it is possible that the gains in utility a woman experiences from a decrease in household work, which may lead to better health and an improved work-life balance, might be partially or completely offset by losses in utility caused by identity effects. In this sense, a woman's internalization of traditional gender norms may conceivably lead her to behave in such a way as to reinforce existing gender inequalities.

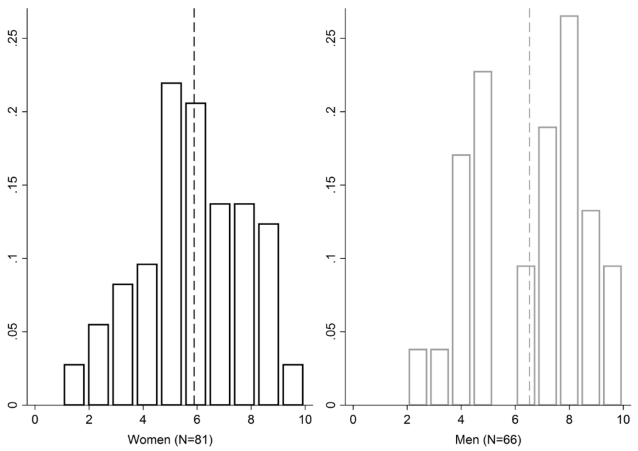
Data

Our study primarily utilizes data collected in early 2014 under the guidance of one of the authors from 107 households in 10 rural villages in three divisions of Bangladesh (Barisal, Dhaka, and Khulna).[7] Sample households were randomly selected among previous participants of the 2011–2012 Bangladesh Integrated Household Survey (BIHS) (Ahmed 2013), a nationally representative survey of rural Bangladesh conducted by the International Food Policy Research Institute.[8] Teams comprising male and female enumerators visited each selected household and conducted one-on-one, private interviews with the self-identified, primary adult male and female decisionmakers: a male enumerator interviewed the man (usually the household head), and a female enumerator interviewed the woman (typically the wife of the household head). Information was collected on respondent's characteristics, household demographics, time use, SWB, and attitudes pertaining certain behaviors. In total, 107 women and 88 men were interviewed. We restricted the sample to exclude individuals with incomplete data due to data collection errors and included only currently married individuals, since the norms dictating the intrahousehold division of labor are likely to be much stronger in such households.[9] This results in a total sample size of 81 women and 66 men.

For the time use module, enumerators prompted respondents to provide information on all of their activities during the past 24 hours in 15-minute increments. To ensure better recollection and minimize recall errors, enumerators guided respondents through the recollection of the activities of the previous day using, at first, broad questions (e.g., "How much time did you spend working yesterday?") and then proceeding to more specific queries (e.g., "What sort of work did you perform yesterday?") (Seymour, Malapit and Quisumbing, 2020). Moreover, the interviews were structured around easily recognizable events, such as calls to prayer. Special care was paid to capture overlapping episodes of childcare by using diagnostic questions administered immediately after the time use module. Following the time diary portion of the interview, respondents were asked if they had spent any time during the previous day looking after their children. If yes, enumerators were instructed to go back and correct the time diary. Moreover, as part of a series of questions designed to gather additional information on each episode of the activities conducted during the previous day, respondents were asked if any children (0 to 6 years of age) were present. Additional information on each episode of activity, including respondents' emotional experiences, was elicited immediately after the time diary portion of the interview.

Key variables

Our analytical framework suggests different ways in which women's identities – how women perceive themselves and their place in society – affect the types of work they engage in and how this work translates into well-being. In technical terms, the framework illustrates the relationship between a person's identity and her behavior in terms of utility. The remainder of this section explains how we measure subjective well-being, our chosen proxy for utility, and identity, and provides perspective on gendered patterns of time allocation in rural Bangladesh.



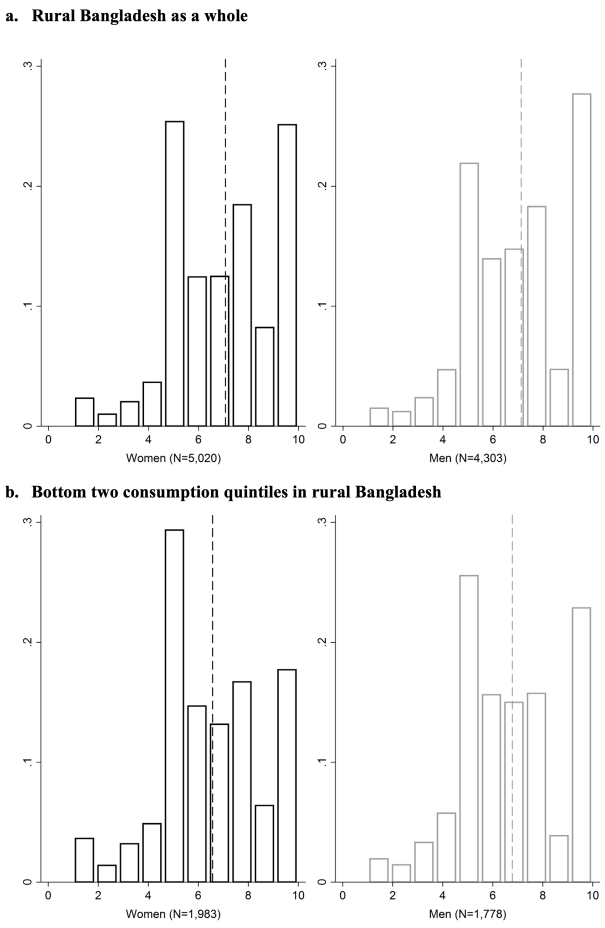
Source: Authors' calculations based on primary data collected in 2014.
Note: Bar graphs show overall life satisfaction by gender, based on the question: "Overall, how satisfied are you with life as a whole these days?" Responses were given on a 10-point Likert scale, ranging from 1 ("not at all satisfied") to 10 ("completely satisfied"). The dashed lines indicate mean values. *T*-test performed comparing mean values of men and women indicates that the gender difference is statistically significant at the 90 percent confidence level.

Figure 1 Overall life satisfaction by gender.

Subjective well-being (SWB)

Utility is approximated by information on two facets of SWB: evaluative and experienced well-being. Evaluative well-being pertains to how people assess their lives, either with respect to a particular domain or to overall life satisfaction; experienced well-being captures the emotions people experience from moment to moment in their daily lives.[10] In order for SWB to be a valid proxy for utility, people should tend to cease participation in activities yielding low levels of SWB (Ferrer-i-Carbonell, 2011), and, indeed, several studies find this to be the case (Clark 2001; Guven et al. 2012; Phipps et al. 2001).[11]

We measure evaluative well-being in terms of overall life satisfaction based on the question: "Overall, how satisfied are you with life as a whole these days?" Responses were given on a 10-point Likert scale, ranging from 1 ("not at all satisfied") to 10 ("completely satisfied"). Figure 1 shows the distribution of responses among sampled men and women. On average, women report statistically significantly lower levels of life satisfaction than men (5.9 vs. 6.5, respectively). Overall, this is similar to global evidence on gender differences in SWB, which points to small disparities in men's and women's life evaluations, though patterns vary substantially by region (Fortin et al. 2015; Meisenberg and Woodley 2015).



Source: Authors' calculations based on 2011–2012 BIHS data.
Note: Bar graphs show overall life satisfaction by gender, based on the question: "How would you rate your satisfaction with your life overall?" Responses were given on a 10-point Likert scale, ranging from 1 ("not at all satisfied") to 10 ("completely satisfied"). The dashed lines indicate mean values. *T*-test performed comparing means values of men and women indicates that the gender difference is statistically significant at the 99 percent confidence level in Panel A and insignificant in Panel B.

Figure 2 Overall life satisfaction by gender in the 2011–2012 BIHS.

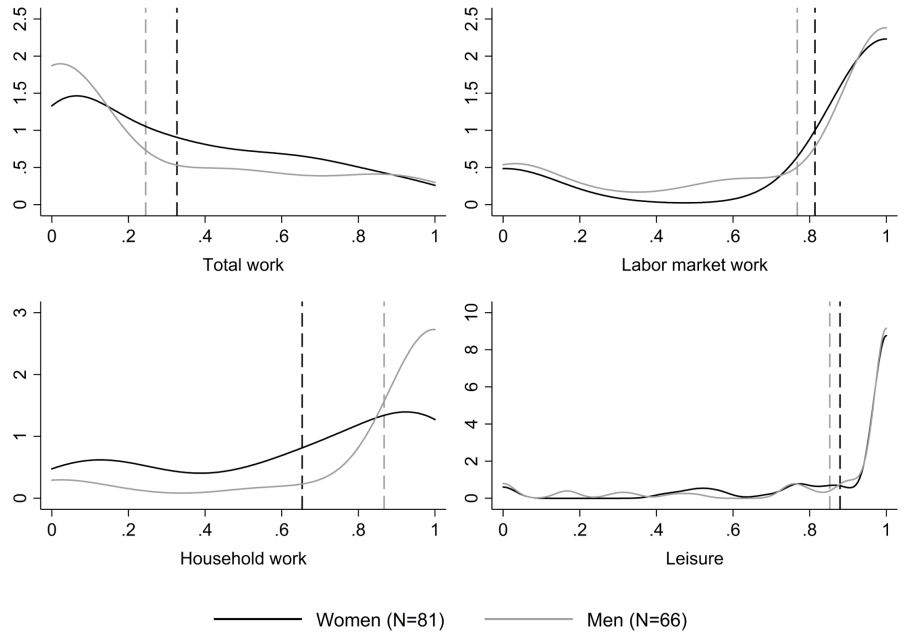
These findings are partially corroborated by data from the BIHS, based on a similar question to the one used to measure life satisfaction in our analysis (i.e., "How would you rate your satisfaction with your life overall?"). Panel A in Figure 2 shows overall distributions for men and women in rural Bangladesh, and Panel B shows the distributions for only households in the bottom two quintiles (based on annual per capita consumption expenditure). While men and women in rural Bangladesh report overall similar average levels of life satisfaction, as in our findings, this changes when only households in the bottom two consumption quintiles are considered, with women reporting statistically significantly lower average levels of life satisfaction than men (6.6 vs. 6.8, respectively). Other studies have also documented analogous low life satisfaction scores in rural Bangladesh. Among others, Asadullah and Chaudhury (2012) use data from a 2008 nationally representative survey with a question and response structure similar to our survey and find that the average life satisfaction in rural Bangladesh – with women and men considered jointly – was 5.6 (out of 10), which is close to what is reported in our sample.

We measure experienced well-being in terms of the proportion of time a person experienced as pleasant during the previous day. Specifically, we calculate the duration-weighted average level of pleasantness reported across all activities a person engaged in during the previous day, based on a series of five questions about five different emotions (happiness, sadness, tiredness, pain, and stress) with respect to each episode of activity ("How often did you feel ___?"). Adapted from Kahneman and Krueger's (2006) U-index, this measure is formally defined for person j as:

$$P_j = \frac{\sum_k M_{jk} h_{jk}}{\sum_k h_{jk}} \tag{4}$$

where M_{jk} is an indicator that equals 1 if episode k of duration h_{jk} is pleasant and 0 otherwise. Responses were given on a 10-point Likert scale, ranging from 1 ("did not experience the feeling at all") to 10 ("experienced the feeling all the time"). We consider an episode unpleasant if the most intense emotion reported for that episode was negative (sadness, tiredness, pain, or stress) and pleasant if the emotion was positive (happiness).

Figure 3 presents kernel density estimates of the proportion of time sampled men and women reported as pleasant for several different categories of activities. Considering both paid and unpaid work activities together, women reported, on average, a lower proportion (67 percent) of the previous 24 hours as pleasant compared to men (76 percent), though the difference is not statistically significant. Similarly, when considering paid work or leisure activities alone, we do not observe statistically significant gender differences.



Source: Authors' calculations based on primary data collected in 2014.
Note: Kernel density estimates of the proportion of time experienced as pleasant by gender and type of activity. See Table 4.2 for a list of the activities included in each category. The dashed lines indicate mean values. *T*-tests performed comparing mean values of men and women indicate that only the gender difference in household work is statistically significant (at the 99 percent confidence level), while the gender differences in the other activities are statistically insignificant.

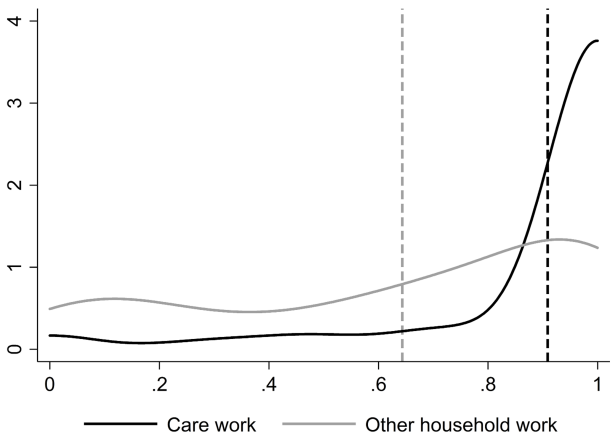
Figure 3 Proportion of time experienced as pleasant by gender and type of activity.

When only household work is considered, however, the gender difference is stark: women reported, on average, experiencing 65 percent of their time as pleasant compared to 87 percent for men. This result stems largely from the negative feelings associated with domestic activities, such as cooking, cleaning the home, and collecting water and firewood, rather than with care work. In fact, women associate care work, which is relational in nature, with mostly positive emotions: 91 percent of the time women spent on care work was experienced as pleasant compared to 65 percent for other types of household work (see Figure 4). This is consistent with existing evidence on the high value that Bangladeshi women place on caring for their families when evaluating their personal well-being (Devine et al. 2008; Camfield et al. 2009).

Identity

We measure identity based on a person's average level of agreement across several statements that capture his or her attitude with respect to several different aspects of life, including the intrahousehold division of labor, children's education, women's roles outside the household, and domestic violence. Responses are given on a 7-point Likert scale, ranging from 1 ("strongly disagree") to 7 ("strongly agree") with a midpoint of 4 ("neither agree nor disagree"). Table 2 lists the statements and presents the average level of agreement for sampled men and women.

Men's and women's average responses are similar on several statements and generally converge around the midpoint of the response scale. For instance, both sexes tend to disagree with statements involving expectations regarding daughters' behavior: (3) "Daughters should be sent to school only if they are not needed to help at home," (4) "If a family can only afford for one



Source: Authors' calculations based on primary data collected in 2014.
Note: Kernel density estimates of the proportion of time experienced as pleasant by women for care work versus other types of household work. The dashed lines indicate mean values. *T*-test performed comparing the means values of care work and other household work indicates that the difference is statistically significant at the 99 percent confidence level.

Figure 4 Proportion of time experienced as pleasant by women: Care work vs. other types of household work

Statement	Men	Women
1. A husband's job is to earn money; a wife's job is to look after the home and family.	5.47	6.05**
2. It is more important for boys to get an education than it is for girls.	3.53	3.46
3. Daughters should be sent to school only if they are not needed to help at home.	2.32	2.12
4. If a family can only afford for one child to go to school, it should be the son.	3.31	3.28
5. A daughter should not expect to inherit her father's property.	2.18	2.23
6. Husbands who help their wives with chores around the house are considered weak by their friends.	2.33	3.59***
7. A woman who speaks her mind when around men other than her husband is considered rude by her friends.	4.27	5.84***
8. Businesses run by men are more successful than businesses run by women.	5.58	5.17
9. Men make better political leaders than women.	4.65	4.60
10. If a wife earns more money than her husband, it is almost certain to cause problems.	4.73	4.35
11. A good wife never questions her husband's opinions, even if she is not sure she agrees with them.	4.88	4.77
12. A woman should tolerate violence to keep the family together.	4.91	5.40
13. A husband who expresses his affection for his wife is weak.	2.85	3.31
Average, all statements	3.92	4.17*
N	66	81

Source: Authors' calculations based on primary data collected in 2014.
Notes: Responses were given on a 7-point Likert scale, where 1 corresponds to "strongly disagree," 4 to "neither agree nor disagree," and 7 to "strongly agree." *T*-tests performed comparing mean values of men and women. *, **, and *** indicate statistical significance at the 90 percent, 95 percent, and 99 percent confidence levels, respectively.

Table 2 Average agreement with patriarchal attitude statements by gender.

child to go to school it should be the son," and (5) "A daughter should not expect to inherit her father's property,"[12] and, likewise, both men and women disagree with the statement about how men should behave toward their wives: (13) "A husband who expresses his affection for his wife is weak." Both men and women agree with statements involving men's income-earning acumen: (1) "A husband's job is to earn money; a wife's job is to look after the home and family" and (8) "Businesses run by men are more successful than businesses run by women".

Gender differences are most pronounced on statements related to the intrahousehold division of labor and proper decorum in public: (1) "A husband's job is to earn money; a wife's job is to look after the home and family," (6) "Husbands who help their wives with chores around the house are considered weak by their friends," and (7) "A woman who speaks her mind when she is around men other than her husband is considered rude by her friends." On all these statements, women expressed, on average, statistically significantly stronger agreement compared to men. Moreover, these differences are substantial enough that when averaged across all statements, women register a slightly higher level of overall agreement compared to men (4.2 vs. 3.9, respectively).

Gendered patterns of time allocation in rural Bangladesh

Although the focus of our analysis is on household and care work, understanding the intrahousehold division of labor in Bangladesh requires a broader lens. Hence, Table 3 presents men's and women's average time use for all activities covered by the survey. Note that these calculations include tasks performed as either primary or secondary activities (i.e., occurring simultaneously with a primary activity), both of which receive equal weight.

Although men and women spend, on average, similar amounts of time working – defined broadly to include both paid and unpaid work – men tend to allocate more of their time to market work (7.1 hours per day or 72 percent of total work), whereas women tend to allocate the majority of their time to household work (8.5 hours per day or 89 percent of total work). Men and women, on average, spend similar amounts of time on leisure and personal care. These trends are echoed in data from the BIHS for rural households in the bottom two consumption quintiles, as well as for rural Bangladesh as a whole (see Table 4). Thus, our sample appears to be generally consistent with the larger population of rural Bangladesh.

Table 3 also compares men's and women's time use with their agreement with the attitude statements (where agreement is defined as an average response greater than 4 across all statements). While dividing men and women in this manner drastically reduces statistical power, statistically significant differences exist for several categories of activity. Consistent with the predictions of our analytical framework, women who agree with the patriarchal attitude statements spend, on average, more time on household work compared to those who disagree. This difference is particularly stark when it comes to domestic

	Mean hours during previous 24 hours					
	Men			Women		
Activity	All	**Disagree**	**Agree**	All	**Disagree**	**Agree**
Total work[abcde]	9.99	10.12	9.86	9.58	8.49	10.30***
Labor market work[a]	7.11	6.57	7.66	1.10***	0.99	1.18
Household work[bcde]	2.93	3.58	2.28*	8.48***	7.50	9.12**
Water and firewood collection[b]	0.01	0.02	0.00	0.45***	0.41	0.48
Homestead production[c]	0.98	1.29	0.67	1.41*	1.30	1.48
Care work[d]	0.31	0.30	0.33	0.90***	0.84	0.93
Other household work[e]	1.63	1.98	1.28	5.72***	4.95	6.22**
Personal care[f]	11.57	11.31	11.83	11.69	11.76	11.64
Leisure[g]	3.02	2.85	3.19	3.60	3.96	3.36
N	66	33	33	81	32	49

Source: Authors' calculations based on primary data collected in 2014.
Notes: *T*-tests performed comparing mean values of each category of activity between men and women (columns 2 and 5) and between men (columns 3 and 4) and women (columns 6 and 7) separately, based on agreement with the patriarchal attitude statements, where agreement is defined as an average response greater than 4 across all statements. *, **, and *** indicate statistical significance at the 90 percent, 95 percent, and 99 percent confidence levels, respectively.
[a] Includes work as employed, own business work, farming, construction, fishing, and other work.
[b] Includes collecting water and collecting firewood.
[c] Includes vegetable gardening and animal husbandry.
[d] Includes caring for children and caring for the sick/elderly.
[e] Includes cooking, shopping/going to the market, cleaning the home, weaving, sewing, textile care, and other domestic work.
[f] Includes sleeping, eating and drinking, and personal care.
[g] Includes traveling (for leisure purposes), watching television, listening to radio, reading, sitting with family, social activities, religious activities, and other leisure.

Table 3 Average time allocation by gender, type of activity, and agreement/disagreement with the patriarchal attitude statements.

	Bottom two consumption quintiles in rural Bangladesh		Rural Bangladesh as a whole	
Activity	**Men**	**Women**	**Men**	**Women**
Total work[abc]	9.59	8.93	9.50	8.70
Labor market work[a]	6.58	0.56	6.57	0.48
Household work[bc]	3.00	8.38	2.93	8.22
Care work[b]	0.18	0.99	0.15	0.89
Other household work[c]	2.82	7.38	2.78	7.33
Personal care[d]	12.34	12.68	12.08	12.65
Leisure[e]	2.02	2.41	2.35	2.66
N	1,778	1,983	4,302	5,020

Source: Authors' calculations based on 2011–2012 BIHS data.
Notes: Includes married individuals from households in the bottom two consumption quintiles only. *T*-tests performed comparing mean values of each category of activity between men and women. All differences are statistically significant at the 99 percent confidence level.
[a] Includes work as employed, own business work, farming, construction, fishing.
[b] Includes caring for children, adults, and the elderly.
[c] Includes cooking, shopping/going to the market, cleaning the home, weaving, sewing, textile care, and other domestic work.
[d] Includes sleeping, eating and drinking, and personal care.
[e] Includes traveling (for leisure purposes), watching television, listening to radio, reading, sitting with family, exercising, social activities, practicing hobbies, and religious activities.

Table 4 Average time allocation by gender and type of activity in the 2011–2012 BIHS.

activities, such as cooking, going to the market, and cleaning. Similarly, men who disagree with the patriarchal attitude statements spend, on average, more time on household work compared to those who agree.

Methodology

We investigate the relationship between women's SWB, time spent on household work, and attitudes toward gender roles by estimating the following equation:

$$SWB_j = \beta_0 + \beta_1 w_j + \beta_2 I_j + \beta_3 (w_j \times I_j) + \beta_4 \mathbf{X}_j + \varepsilon. \quad (5)$$

We measure person j's SWB in terms of: (1) overall life satisfaction and (2) the proportion of time experienced as pleasant.[13] The key explanatory variables are person j's hours of household work, w_j; her average level of agreement across the patriarchal attitude statements, I_j; and the interaction between these two variables, $w_j \times I_j$, which serves to test the (null) hypothesis that attitudes toward gender roles do not influence the relationship between SWB and household work. Rejection of this hypothesis occurs if β_3 is statistically significant, i.e., if the slope of the relationship between women's SWB and household work differs with respect to how strongly their personal attitudes toward gender roles conform to patriarchal norms. The model also includes several individual- and household-level control variables, $\mathbf{X}_j$, which may impact a person's SWB, including life-cycle stage (proxied by age and age squared), education, marital status, occupation type, socioeconomic status, and household composition. See Table 5 for the definitions and summary statistics for all of these variables, including, when possible, a comparison with the data from the BIHS.

Data limitations

A few data limitations should be noted. First, the sample size for our analysis is very small. This limits the statistical power of our empirical tests. Second, our sample is disproportionately representative of the lower portion of the income distribution. Based on the "lower poverty line" threshold established by the Bangladesh Bureau of Statistics (BSS 2011), 57 percent of households in our sample qualify as poor. Yet, according to BIHS data, only 40 percent of the population in the study region are, in fact, poor, suggesting that our sample is not regionally representative.

We address these issues, first, by estimating our empirical models using GME regression in addition to traditional OLS regression. GME regression is more appropriate than OLS for

		Analytic sample		Bottom two consumption quintiles in rural Bangladesh		Rural Bangladesh as a whole	
Variable	**Definition**	**Women**	**Men**	**Women**	**Men**	**Women**	**Men**
Access to electricity†	1 = Household is connected to electrical grid.	0.25	0.29	0.34*	0.34	0.49***	0.47***
Annual per capita consumption expenditure (*taka*)†	Includes expenditures on food consumption (e.g., food purchased from the market, food produced at home, food received as a gift, and meals purchased outside the home), nonfood consumption (e.g., daily use items, clothing and housewares, education expenses, work-related expenses, and housing expenses), and durable goods.	16,684	15,784	11,079***	11,061***	19,574**	18,902***
Age	Age of primary female decisionmaker.	38.9	49.0	35.1***	44.0***	35.9**	45.0**
Farming	1 = Primary female decisionmaker reports agricultural work as her primary economic activity during the past seven days.	0.73	0.48	0.77	0.65	0.72	0.59*
Head of household	1 = Primary female decisionmaker reports being head of the household.	0.20	0.95	0.09**	0.99	0.12	0.99
Household work (hours)	Hours spent on collecting water and firewood, vegetable gardening, animal husbandry, caring for children, caring for the sick/elderly, cooking, shopping/going to the market, cleaning the home, weaving/sewing/textile care, and other domestic work.	8.48	2.93	–	–	–	–
In-laws live in household	1 = At least one member of the primary female decisionmaker's parents-in-law or grandparents-in-law lives in the household.	0.16	0.14	0.14***	0.14	0.14	0.13
Life satisfaction	Average level of life satisfaction based on the question: "Overall, how satisfied are you with life as a whole these days?"	5.89	6.53	–	–	–	–
Patriarchal attitudes	Average level of agreement across all the patriarchal attitude statements.	4.17	3.92	–	–	–	–
% children ages 0–4 in household	Share of girls and boys aged 4 or younger living in the household.	0.09	0.07	0.13***	0.12***	0.11	0.10*
% children ages 5–14 in household	Share of girls and boys aged 5–14 living in the household.	0.28	0.23	0.27	0.26	0.24*	0.22
Proportion of time experienced as pleasant	Duration-weighted average level of pleasantness reported across all activities a person engaged in during the previous day, based on a series of five questions asked about five different emotions (happiness, sadness, tiredness, pain, and stress) with respect to each episode of the activity ("How often did you feel ___?").	0.67	0.76	–	–	–	–
Primary education or higher	1 = Primary female decisionmaker has completed a primary level of education or higher.	0.49	0.41	0.33***	0.27**	0.43	0.38
Village attitudes	Average level of agreement across all the patriarchal attitude statements among other sampled men and women in the same village.	4.06	4.09	–	–	–	–
	N	81	66	1,983	1,178	5,020	4,303

Sources: Authors' calculations based on, in columns 3 and 4, primary data collected in 2014 (or, where indicated by †, 2011–2012 BIHS data) and, in columns 5 and 6, 2011–2012 BIHS data.
Notes: The average exchange rate of *taka* per $1 for 2011 was 74.2 (World Bank 2019). *T*-tests compare mean values of men and women respectively, between samples. *, **, and *** indicate statistical significance at the 90 percent, 95 percent, and 99 percent confidence levels, respectively.

Table 5 Descriptions and mean values for all variables used in the analysis, compared to the 2011–2012 BIHS.

small sample analysis because it does not require restrictive assumptions about the distribution of the error terms (Golan et al. 1996; Golan 2006). Second, we make use of the fact that many of the variables used in our analysis were also collected by the BIHS, and we assess the extent to which our sample differs from the rest of rural Bangladesh. Specifically, we compare households in our sample to those in the bottom two consumption quintiles in rural Bangladesh and to rural Bangladesh as a whole. These differences, presented in Table 5, are generally small in magnitude and, importantly, do not persist across both BIHS samples. One notable exception is that women in our sample tend to be older than women in both BIHS samples, though this is likely due the fact that our survey was conducted almost two years after the BIHS. Overall, our sample does not appear to be atypical of rural Bangladesh. Furthermore, as noted above, men and women in both samples exhibit broadly similar time use and SWB patterns. Nonetheless, we caution readers against interpreting our results as valid outside of the specific socioeconomic contexts reflected in our sample.

Some additional caveats pertain to unobserved biases in the SWB and personal attitude variables. Reported SWB (both evaluative and experienced), as well as agreement or disagreement with the patriarchal attitude statements, may be driven by unobserved personality traits (Diener et al. 2003). For instance, an inherently pessimistic (optimistic) person may be more inclined to disagree (agree) with the attitude statements, report lower (higher) life satisfaction, or attribute greater weight to the experience of negative (positive) emotions. Further, a person's response to the attitude statements may be driven to some extent by social desirability bias – that is, a bias based on a person's perception of prevailing norms or what would be a socially acceptable response – as opposed to solely reflecting personal views (Schuler and Islam, 2008). Unfortunately, the small sample size and lack of longitudinal data prevent us from establishing the extent to which these biases affect our results.

Finally, since we analyze cross-sectional data, our results should be interpreted as evidence of correlation between SWB, identity, and household work hours, rather than as causal relationships. Thus, while our analytical framework may suggest that changes in identity can impact the payoffs (in terms of SWB) associated with the amount of time women spend on household work, we lack the data necessary to fully test this assertion.

	Model 1		**Model 2**	
	OLS	GME	OLS	GME
	Life satisfaction	Life satisfaction	Proportion of time experienced as pleasant	Proportion of time experienced as pleasant
Household work	-1.065**	-1.066***	-0.085*	-0.091*
	(0.457)	(0.403)	(0.047)	(0.055)
Agreement w/patriarchal attitude statements	-2.462***	-2.459***	-0.259**	-0.265**
	(0.810)	(0.831)	(0.100)	(0.113)
Household work × Agreement w/patriarchal attitude statements	0.259**	0.260***	0.024**	0.025*
	(0.101)	(0.096)	(0.011)	(0.013)
Head of household	-0.633	-0.634	0.257***	0.260***
	(0.652)	(0.647)	(0.073)	(0.088)
Age	0.095	0.103	-0.034	-0.035
	(0.213)	(0.165)	(0.021)	(0.022)
Age squared/100	-0.136	-0.147	0.032	0.033
	(0.251)	(0.189)	(0.024)	(0.026)
Primary level education or higher	0.061	0.067	-0.022	-0.025
	(0.567)	(0.539)	(0.083)	(0.073)
Works on farm	0.914	0.862*	0.147**	0.144**
	(0.556)	(0.484)	(0.066)	(0.066)
% children aged 0–4 in household	0.634	0.579	-0.239	-0.226
	(2.422)	(2.080)	(0.313)	(0.282)
% children aged 5–14 in household	-1.049	-1.137	-0.207	-0.194
	(1.457)	(1.342)	(0.197)	(0.182)
In-laws live in household	-0.432	-0.510	-0.043	-0.043
	(0.712)	(0.580)	(0.101)	(0.079)
Access to electricity	-0.304	-0.293	0.043	0.047
	(0.638)	(0.507)	(0.085)	(0.069)
(log) Annual per capita consumption	0.759	0.741	0.034	0.037
	(0.568)	(0.473)	(0.058)	(0.064)
Adjusted/pseudo *R*-squared	0.052	0.050	0.149	0.045
N	81	81	81	81

Sources: Authors' calculations based on primary data collected in 2014 and 2011–2012 BIHS data.
Notes: Standard errors in parentheses. *, **, and *** indicate statistical significance at the 90 percent, 95 percent, and 99 percent confidence levels, respectively. OLS = ordinary least squares; GME = generalized maximum entropy.

Table 6 OLS and GME regression results for Models 1 and 2.

	Model 1		Model 2	
	OLS	GME	OLS	GME
Agreement w/patriarchal attitude statements	Life satisfaction	Life satisfaction	Proportion of time experienced as pleasant	Proportion of time experienced as pleasant
1	-0.806**	-0.806**	-0.062*	-0.066
	(0.359)	(0.310)	(0.036)	(0.042)
2	-0.547**	-0.546**	-0.038	-0.042
	(0.263)	(0.219)	(0.027)	(0.030)
3	-0.288*	-0.286*	-0.014	-0.017
	(0.172)	(0.135)	(0.018)	(0.018)
4	-0.029	-0.026	0.010	0.008
	(0.105)	(0.084)	(0.014)	(0.011)
5	0.023**	0.234*	0.033*	0.032*
	(0.113)	(0.118)	(0.017)	(0.016)
6	0.489**	0.495**	0.057**	0.057*
	(0.188)	(0.198)	(0.025)	(0.027)
7	0.748***	0.755**	0.081**	0.081*
	(0.279)	(0.287)	(0.035)	(0.039)

Sources: Authors' calculations based on primary data collected in 2014 and 2011–2012 BIHS data.
Notes: Values in column 1 correspond to the response scale used for the patriarchal attitude questions (1 corresponds to "strongly disagree," 4 to "neither agree nor disagree," and 7 to "strongly agree"). Standard errors in parentheses. *, **, and *** indicate statistical significance at the 90 percent, 95 percent, and 99 percent confidence levels, respectively. OLS = ordinary least squares; GME = generalized maximum entropy.

Table 7 Average marginal effects of household work on life satisfaction and the proportion of time experienced as pleasant at representative values of agreement with the patriarchal attitude statements.

Results

We test the predictions of our analytical framework, namely that attitudes toward gender roles mediate the relationship between SWB and household work hours, by estimating two specifications of Equation 5. In Model 1, we measure SWB in terms of women's life satisfaction, and, in Model 2, in terms of the proportion of time she experienced as pleasant during the previous 24 hours. As noted above, we estimate both models using OLS and GME regressions. Our discussion, however, concentrates on the GME results, given that GME regression is more appropriate for small sample sizes such as ours.

Table 6 presents the estimation results. In both models, the coefficient estimates for household work, agreement with patriarchal attitudes, and their interaction are all statistically significant. A more nuanced interpretation of these results requires to estimate the average marginal effect (AME) of household work on SWB (i.e., the predicted change in SWB associated with an additional hour spent on household work) at each value of agreement with the patriarchal attitude statements, holding all the other variables constant. The AMEs are presented in Table 7.

A close examination of the AME results reveals a distinct pattern in the relationship between women's SWB and household work hours. As women's average response to the patriarchal attitude statements changes from strongly disagree to strongly agree, the sign of the relationship between SWB and household work changes from negative to positive. That is, the AMEs of household work on SWB are positive for high values of agreement (5–7) and negative for low values of agreement (1–3). For the latter, however, note that in Model 2 the magnitude of the AMEs is not statistically different from zero.

In sum, these results indicate that additional household work is associated with: (1) an *increase* in SWB for women who have fully internalized and strive to follow traditional gender norms (i.e., who *agree* with the patriarchal attitude statements) and (2) a *decrease* in SWB for women who question the status quo and do not believe in prevailing patriarchal structures (i.e., who *disagree* with the patriarchal attitude statements).

This pattern is entirely consistent with the predictions of our analytical framework. To better understand why, recall that the observed relationship between SWB and household work hours reflects the net impact of three hypothesized effects (health, attitude, and response), of which only the latter two relate to identity. Whether SWB and household work relate positively (additional household work implies a net gain in SWB) or negatively (additional household work implies a net loss in SWB) depends on the relative strength of each of these effects. The fact that we observe a positive relationship between SWB and household work for women with patriarchal attitudes is consistent with increases in SWB experienced as a result of working longer hours in the home. This presumably stems from women's acceptance of their socially ascribed roles (attitude effect) and the responses of family and community (response effect), outweighing any potential (unobserved) decrease in SWB due to adverse health effects. Conversely, the negative relationship between SWB and household work for women with egalitarian attitudes is consistent with the combined decrease in SWB resulting from women's internal feelings of discord brought about by behaving counter to their

	Model 3		Model 4		Model 5		Model 6	
	OLS	GME	OLS	GME	OLS	GME	OLS	GME
	Life satisfaction	Life satisfaction	Proportion of time experienced as pleasant	Proportion of time experienced as pleasant	Life satisfaction	Life satisfaction	Proportion of time experienced as pleasant	Proportion of time experienced as pleasant
Household work	-1.125**	-1.127***	-0.083*	-0.088	-4.000*	-3.869**	-0.356	-0.320
	(0.458)	(0.407)	(0.048)	(0.055)	(2.074)	(1.576)	(0.290)	(0.218)
Agreement	-2.540***	-2.546***	-0.256**	-0.261**	-2.137***	-2.117**	-0.218**	-0.229*
w/patriarchal attitude statements	(0.809)	(0.832)	(0.100)	(0.113)	(0.754)	(0.845)	(0.103)	(0.117)
Household work × Agreement	0.269***	0.271***	0.023**	0.024*	0.230**	0.229**	0.019*	0.021
w/patriarchal attitude statements	(0.100)	(0.096)	(0.011)	(0.013)	(0.095)	(0.097)	(0.012)	(0.013)
Village attitudes	0.891	0.904	-0.039	-0.044	-5.438	-5.167	-0.642	-0.562
	(1.236)	(1.058)	(0.183)	(0.144)	(4.405)	(3.514)	(0.600)	(0.486)
Household work ×	–	–	–	–	0.745	0.716*	0.071	0.060
Village attitudes					(0.497)	(0.395)	(0.075)	(0.055)
Head of household	-0.592	-0.593	0.256***	0.259***	-0.394	-0.410	0.274***	0.271***
	(0.665)	(0.646)	(0.075)	(0.088)	(0.661)	(0.644)	(0.082)	(0.089)
Age	0.089	0.097	-0.034	-0.034	0.112	0.120	-0.032	-0.033
	(0.216)	(0.164)	(0.021)	(0.022)	(0.206)	(0.161)	(0.021)	(0.022)
Age squared/100	-0.133	-0.143	0.032	0.033	-0.156	-0.166	0.030	0.031
	(0.254)	(0.188)	(0.024)	(0.026)	(0.243)	(0.185)	(0.024)	(0.026)
Primary level education or higher	0.053	0.051	-0.021	-0.024	0.053	0.066	-0.021	-0.021
	(0.573)	(0.537)	(0.084)	(0.073)	(0.579)	(0.527)	(0.081)	(0.073)
Works on farm	0.896	0.844*	0.148**	0.145**	0.793	0.744	0.138**	0.136**
	(0.560)	(0.482)	(0.067)	(0.066)	(0.560)	(0.477)	(0.066)	(0.066)
% children aged 0–4	0.615	0.577	-0.238	-0.226	0.658	0.591	-0.234	-0.213
in household	(2.501)	(2.071)	(0.318)	(0.282)	(2.363)	(2.034)	(0.306)	(0.281)
% children aged 5–14	-1.261	-1.367	-0.198	-0.186	-1.127	-1.112	-0.185	-0.161
in household	(1.463)	(1.359)	(0.211)	(0.185)	(1.457)	(1.337)	(0.210)	(0.185)
In-laws live in household	-0.461	-0.554	-0.042	-0.043	-0.241	-0.317	-0.021	-0.021
	(0.723)	(0.579)	(0.104)	(0.079)	(0.680)	(0.580)	(0.093)	(0.080)
Access to electricity	-0.214	-0.215	0.039	0.042	-0.184	-0.152	0.041	0.045
	(0.678)	(0.516)	(0.086)	(0.070)	(0.674)	(0.507)	(0.088)	(0.070)
(log) Annual per capita consumption	0.680	0.656	0.038	0.040	0.750	0.747	0.044	0.045
	(0.565)	(0.480)	(0.063)	(0.065)	(0.577)	(0.473)	(0.066)	(0.065)
Adjusted/pseudo *R*-squared	0.046	0.049	0.137	0.044	0.070	0.046	0.141	0.043
N	81	81	81	81	81	81	81	81

Sources: Authors' calculations based on primary data collected in 2014 and 2011–2012 BIHS data.
Notes: Standard errors in parentheses. *, **, and *** indicate statistical significance at the 90 percent, 95 percent, and 99 percent confidence levels, respectively. OLS = ordinary least squares; GME = generalized maximum entropy.

Table 8 OLS and GME regression results for Models 3–6.

stated values (attitude effect) and from the adverse health effects of working long hours in the home. The combination of these two effects outweighs any potential (unobserved) increase in SWB owing to the responses of women's family and community.

In sum, the results of Models 1 and 2 lead us to reject our (null) hypothesis and argue that identity does, in fact, mediate the relationship between SWB and household work for most women in the sample. It is important to note that this result only holds for women who strongly identify with patriarchal or egalitarian notions of gender roles, i.e., women who express strong agreement or disagreement with the patriarchal attitude statements.

Robustness tests

One limitation of Models 1 and 2 is that they do not control for how a woman's SWB might be affected by the unobserved responses of others in her community to the amount of time she spends on household work. Depending on the magnitude of this effect, the coefficient estimates in Models 1 and 2 might be biased. To address this issue, we calculate the average level of agreement across all the patriarchal attitude statements for all the women sampled in each village (excluding a woman's own response) and estimate four extended model specifications. Models 3–6 include this additional control variable, referred to as "village attitudes." The intuition behind this variable is that communities with strong patriarchal structures, i.e., in which people tend to agree with patriarchal attitude statements, may be more prone to impose social sanctions on women who work fewer household work hours. Models 5 and 6 include not only the village attitudes variable but also a variable that captures the interaction between village attitudes and household work, allowing to investigate whether community-level attitudes affect the relationship between SWB and household work. Table 8 presents the estimation results.

In all four models, the coefficient estimates associated with village attitudes (including the interaction term) are statistically insignificant. Furthermore, the coefficient estimates for household work, individual agreement with patriarchal attitudes, and the interaction term in Models 3 and 4 do not differ noticeably from the estimates obtained in Models 1 and 2, respectively. The slight variation in the magnitudes of the coefficient estimates for these variables between Models 1 and 5 and between Models 2 and 6 is likely due to misspecification, and, specifically, due to the inclusion of the statistically insignificant interaction between village attitudes and household work.

	Model 1		Model 2	
	OLS	GME	OLS	GME
	Life satisfaction	Life satisfaction	Proportion of time experienced as pleasant	Proportion of time experienced as pleasant
Paid work	-0.121	-0.047	-0.016	-0.017*
	(0.222)	(0.060)	(0.031)	(0.009)
Agreement	-1.157***	-0.968***	-0.078	-0.086**
w/patriarchal attitude statements	(0.412)	(0.261)	(0.060)	(0.040)
Paid work × Agreement w/patriarchal	0.029	-0.031	-0.001	0.002
attitude statements	(0.057)	(0.025)	(0.008)	(0.004)
Head of household	-0.825	-0.935	-0.225*	-0.231
	(1.314)	(1.234)	(0.128)	(0.188)
Age	0.053	0.089	0.061***	0.058***
	(0.137)	(0.132)	(0.017)	(0.020)
Age squared/100	-0.057	-0.093	-0.063***	-0.060***
	(0.138)	(0.127)	(0.016)	(0.019)
Primary level education or higher	-1.171**	-1.184**	-0.097	-0.093
	(0.545)	(0.509)	(0.086)	(0.078)
Works on farm	0.036	-0.016	-0.112	-0.102
	(0.616)	(0.482)	(0.082)	(0.074)
% children aged 0–4 in household	4.768*	5.589**	0.495	0.455
	(2.663)	(2.468)	(0.362)	(0.377)
% children aged 5–14 in household	-0.103	-0.364	0.101	0.119
	(1.723)	(1.416)	(0.242)	(0.216)
In-laws live in household	-0.561	-0.459	-0.089	-0.089
	(0.891)	(0.691)	(0.142)	(0.106)
Access to electricity	0.075	0.076	0.151	0.144*
	(0.594)	(0.532)	(0.098)	(0.081)
(log) Annual per capita consumption	0.281	0.190	0.153**	0.158*
	(0.493)	(0.551)	(0.074)	(0.084)
Adjusted/pseudo *R*-squared	0.049	0.044	0.147	0.041
N	66	66	66	66

Sources: Authors' calculations based on primary data collected in 2014 and 2011–2012 BIHS data.
Notes: Standard errors in parentheses. *, **, and *** indicate statistical significance at the 90 percent, 95 percent, and 99 percent confidence levels, respectively. OLS = ordinary least squares; GME = generalized maximum entropy.

Table 9 Male-oriented OLS and GME regression results for Models 1 and 2.

In sum, indirectly controlling for the response effect does not appear to change our main results, suggesting that the predictions of our analytical framework hold, irrespective of how conservative women's communities are.

While we have so far restricted our analysis to women, it is possible to apply our framework to men.[14] In theory, men's SWB is likely to relate to hours worked and identity in the same way as it does for women, except that hours worked now indicate paid (or market) work rather than unpaid household work. This correction reflects men's socially ascribed role of "breadwinner" in patriarchal societies. To determine whether the predictions of our analytical framework hold for the men in our sample, we estimate an additional set of models. The specification of these models parallels the analysis presented above but utilize data on men's (rather than women's) SWB, men's responses to patriarchal attitude statements as a proxy for their identity, and time spent by men on paid work (rather than household work), given that men's identities in Bangladesh are likely to be tied to paid work.

The results of this analysis, presented in Table 9, differ noticeably from our earlier results, in that we observe little evidence of a correlation between men's SWB and paid work. Although there appears to be some correlation between men's SWB and agreement with the patriarchal attitude statements, we find no evidence that men's attitude toward gender roles significantly affects the relationship between SWB and paid work. Thus, the predictions of our analytical framework do not appear to hold for the men in our sample. This may indicate that the relationship between identity and how a person spends his or her time is not as strong for men in Bangladesh as it is for women or that this relationship is nuanced in a way not captured by our model. Alternatively, it may stem from model misspecification, namely that a man's agreement with the patriarchal attitude statements is not an accurate proxy for his identity. Thus, these findings should be treated cautiously.

Conclusion

The tension between traditional gender roles and women's ability to take advantage of emerging economic opportunities is an important element in the evolution of gender norms and gender relations. While such processes of change are necessary to achieve gender equality, they are not without risks for women,

including backlashes from families and communities in the form of domestic violence, isolation, and resentment.

In this paper, we empirically test the hypothesis that a woman's identity, defined as the degree to which she internalizes the traditional roles ascribed to women in a patriarchal society, influences the relationship between her SWB and the time she spends on household work, developing an analytical framework based on Akerlof and Kranton's (2000) model. We find support for this hypothesis by applying our framework to a sample of 81 women from 10 villages in rural Bangladesh. Specifically, we find that longer hours of household work are associated with: (1) an *increase* in SWB for women with patriarchal attitudes toward gender roles and (2) a *decrease* in SWB for women with egalitarian attitudes toward gender roles. These findings provide insights into how social expectations govern gender roles and, specifically, how gender inequalities persist, at least in part, due to men's and women's internalization of traditional gender norms.

Our results are in line with studies on women's labor participation in Bangladesh and elsewhere, which show that the expression of traditional gender norms is negatively correlated with the likelihood that a woman works outside the home (Ahmed and Sen 2018; Bridges et al. 2011; Heintz et al. 2018; Roy et al. 2015; Walker et al. 2014). Insofar as lower labor participation outside the home constrains women's empowerment, our results have implications for a range of agricultural and nutritional outcomes. Based on previous work analyzing the Women's Empowerment in Agriculture Index in Bangladesh (Alkire et al. 2013), women who work less outside of their homes and thus experience lower levels of empowerment may also be likely to register lower levels of agricultural productivity and crop diversification and, in turn, at experience higher risk of being food insecure or lacking dietary diversity (Anik and Rahman 2021; De Pinto et al. 2020; Seymour 2017; Sraboni et al. 2014; Sraboni and Quisumbing 2018).

From a policy standpoint, our study clarifies the potential role of women's self-perceived identities in reinforcing or breaking with prevailing gender norms, and it demonstrates the importance of taking into account identity when designing programs aimed at addressing gender inequalities and promoting women's empowerment. To be effective, such programs should challenge the unequal household division of labor and the low valuation given to women's unpaid work, questioning not only the material constraints on women's livelihoods but also the social and institutional constraints, including, as demonstrated in our study, how women (and men) personally define themselves and their roles in the household and society. Inspiration may be found in programs aimed at promoting gradual changes in men's and women's perceptions of gender roles through, for example, community-based education, mass media, or other means of information sharing (Bernard et al. 2015; Haylock et al.2016; La Ferrara, 2016; Read-Hamilton and Marsh, 2016).

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Notes

1. The terms "household work" and "household and care work" are used interchangeably throughout the paper to refer to the entirety of women's unpaid work activities.
2. For a discussion of the issues of role satisfaction and role stress in terms of women's sense of well-being, see Messias et al. (1997).
3. For the psychological underpinnings of social identity theory, see Tajfel and Turner's (1979, 1986) work on social identity theory.
4. Since $\mathbf{a}_j$ and $\mathbf{a}_{-j}$ determine j's consumption of goods and services, Equation 1 conforms to standard economic expectations for a utility function.
5. This is similar to the person-culture match hypothesis proposed by Fulmer et al. (2010), in which the positive effects of personality on SWB are enhanced when a person's personality matches the prevalent personalities of others in society.
6. The time a woman spends on household work affects her utility not only through the production and consumption of household goods and services (e.g., higher quality of care for family members) but also through the process of doing the activities themselves (Floro, 1995).
7. Note that this fieldwork was approved by the American University Institutional Review Board (Protocol 13070) and was conducted according to the principles expressed in the Declaration of Helsinki. Written consent was obtained from all respondents.
8. Although our analysis primarily uses data from the author's fieldwork, in a few instances we complement these data with BIHS data, making special notes each time.
9. Note, however, that the inclusion of non-married individuals in the sample does not produce dramatically different results from those presented below (these results are available upon request).
10. For excellent reviews of the SWB literature, see Di Tella and MacCulloch (2006), Diener (1984), Diener et al. (1999), Dolan et al. (2008), Frey and Stutzer (2002), and Kahneman and Krueger (2006).
11. This assumes, of course, that individuals behave so as to maximize their utility, which may not be the case in all instances.
12. Although laws exist in Bangladesh that support the equal right of all citizens (women included) to own property (via inheritance or purchase), social norms often hinder women from exercising this right (Sarwar et al. 2007; Kieran et al. 2015).
13. Note that in estimating Equation 5, we treat life satisfaction as a cardinal indicator (Ferrer-i-Carbonell and Frijters 2004). The results obtained by treating life satisfaction as an ordinal indicator and estimating Equation 5 using ordered probit regression do not differ dramatically from those shown below (results available upon request).
14. We thank participants of the 2016 International Association for Feminist Economics Annual Conference in Galway, Ireland and an anonymous reviewer for recommending this extension to our analysis.