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A Pluralist Account of Labour Participation in India

GPRG-WPS-042

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Global Poverty Research Group

Website: <http://www.gprg.org/>

The support of the Economic and Social Research Council (ESRC) is gratefully acknowledged. The work was part of the programme of the ESRC Global Poverty Research Group.

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May 2006

Abstract

Labour force participation in India is found to respond to a plurality of causal mechanisms. Employment and unpaid labour are both measured using the 1999/2000 Indian National Sample Survey. Men's labour-force participation stood at 85% and women's at 35%. The overall rate of labour force participation among women had fallen since 1989. Regression reveals a U curve of female employment by education levels. Many women at the bottom of the U are doing extra-domestic work, so a detailed measurement of both domestic work and other unpaid work is provided. Women in the Muslim cultural group do more extra-domestic work (and are more likely to be 'inactive') than women in other cultural groups. Economic poverty causes employment to be more likely. We use retrodution to interpret the regressions of labour force participation. We provide a number of reasons which could explain both the work patterns and the housewifisation pattern.

Keywords – labour-force participation, gender, pluralism, housewifisation, India, employment

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Introduction

Raising women's participation in employment would be a controversial target for Indian economic policy. If women's employment were advocated *per se*, then women's other roles as unpaid workers, in farming, and in the informal sector would perhaps be ignored. The more women's time is allocated to paid employment, the less of their time is available for unpaid work. Most feminists would argue that the unpaid work done by women tends to get too little attention, and that its social and economic valuation is unreasonably low. The purpose of this article is to give a balanced review of the situation whilst describing the causes that lead to the particular employment outcomes of Indian women ages 16 and over, including inactivity.

Inactivity does not count as unemployment. The International Labour Office (ILO) defines unemployment by requiring that the person be seeking work and also be available for work during a two week period. This definition is used here but is inadequate for treating the non-employment of women. The ILO's definition of labour-market inactivity has been evolving and now tends to include fewer of the family helpers as 'inactive' than in the past.¹ The 'unpaid family helper' nowadays tends to be classified as a 'contributing family worker' (though without pay) (<http://laborsta.ilo.org>, Sources and Methods section). In this way there is a drift toward higher *recorded* labour-force participation of women and children.

Among women there was a long-term downward trend in the labour-force participation rates 1901-1971 (Sharma, 1985: 64, citing Mies, 1980: 6). This long-term trend reflected the growth of the distinct role of the housewife over the period 1901-1971 and was unfortunately associated with a rising male sex ratio in the population as a whole (*ibid*: 63). Since 1971 there has been a stabilisation of women's employment rate, which was 31% in 1970, 31% in 1980, 27% in 1990, and 30% in 2000 in India (UNCDB, variable 4270).

The measures of work participation obtained by the National Council for Agro-Economic Research (NCAER) in their survey in 1997 showed labour force participation rates of 52% among men and 26% among women (Shariff, 1999: 66). A U-curve of employment probabilities exists over education levels. This U curve is stronger among Muslim women than among other women due to a range of factors.

In India it is widely believed that it is prestigious for a woman to cook and serve food to her family and any guests that may come (Dube, 1988). In rural areas for these women to do domestic work only and nothing else is relatively rare. Instead, doing a range of paid and unpaid work, including some tasks that we call 'extra-domestic work', is more common. The tendency of naming a woman *as being overall a housewife* is popular due to cultural values associated with Sanskritisation, Brahmanical gender norms, and/or the habit of observing *purdah* (Chakravarti, 1993; George, 2002; Poitevin and Rairkar, 1993).

We begin with a literature review, then introduce the large-scale data set (NSS 55th

round) used in the paper and present the results. The interpretation that takes up the last section follows a retroductive logic: what social and cultural mechanisms must or may be operating to create the overall patterns that were observed in the data?

Review of Literature on Women's Labour Force Participation in India

The relevant literature includes economic theory, institutionalist revisions, gender and development theory, and some additional themes from demography and geography. In the literature on labour-force participation, standard sources begin with the supply of labour (Ellis, 1993) and quickly move on to mention human-capital aspects of labour supply (Mathur, 1994). According to this view, 34% of adult Indians participated in the labour market in 1991, and this figure comprised 16% among women and 51% among men (*ibid*: 470). 30% of the women in rural areas were working, as recorded in the National Sample Survey of India using a combination of principal and subsidiary employment status, compared with 53% of men (Srivastava, 2003: 130-131). Only 14% of urban women were working, by this measure (*ibid.*, 131). Using NSS data the rural percentage in the labour force fell by 10% among women and by 4% among men between 1993/4 and 1999 (Jacob, 2001: 6). The urban percentage in the labour force fell 11% among women and there was no change among men. (*ibid*: 55).

The U curve can be seen using Mathur's data for women (Mathur, 1994: 495-497) since participation first falls between the illiterate group and the next group. Participation rises rapidly after that. Our study updates the definitive study by Mathur and puts it into a pluralist perspective.

The human capital theory primarily predicts that wages reflect the rewards earned by human capital in productive enterprises. The theory helps to show that there is an opportunity cost of avoiding labour-force participation. If the individual's returns to working are low, their opportunity cost of not working will be low too. They will then tend toward being labour-market inactive. If they have a degree, the opportunity cost is high since their workplace productivity is likely to be reckoned (by employers) to be high. From human capital theory, one would expect an upward tendency in the labour force participation rate as we move across education levels.

In some ways this is a neoclassical logic. It sounds individualistic; it assumes optimising behaviour; and it assumes that market valuations are the only relevant valuations. Neoclassical theorists also assume that the whole household is aware of these differentials, and that people with low levels of education are therefore less likely to be employed than those with more formal education or more work experience. Neoclassical theorists would argue that supply and demand cause the wage to reward workers according to marginal productivity (Skoufias, 1992). In the case of India, however, men's and women's labour is valued very differently even for a given level of education. Huge gender pay gaps exist (Deshpande and Deshpande, 1998). These ranged in 1994 from 43% among illiterate and lower primary workers (ie women earning just 57% as much as men, per day) to 23% among graduates, averaging at 20% overall (all figures are for urban India). A neoclassical economist would tend to argue that only market imperfections such as stereotypes, rigid segmentation by gender, and cultural taboos on one sex doing certain operations can be introduced as explanatory factors. To a neoclassical economist, these factors are givens; they act as

preferences of individuals; they are not part of the scope of economic science; and they cannot be treated in economic models.

The approach taken here is that the human capital claims can be augmented with a rich array of other claims arising in disciplines close to economics. Statistical analysis followed by retrodution – asking why these results came out – and has been iterated with further statistical and qualitative analysis.

It has been abundantly clear that an individualistic framework is inadequate (Folbre, 1986; Kabeer, 1994). Among economists, the “new home economics” evolved to handle the choices made among farmers who have to balance the opportunity cost of not working in the wage-labour market, the rewards to the household of working on the farm, and the desire for leisure of each person. For a review of NHE see Ellis (1993). It was applied to Indian labour markets by Skoufias (1993).

Interestingly, Skoufias’ detailed study of seasonal movements in wages and how they relate to men’s and women’s labour time (spent working on farms, either paid or unpaid) concluded that women’s labour time is seasonally spread quite differently from men’s in India. This generalisation is certainly supported by older data, but in recent years women have taken on much more of the agricultural work than in the past. A feminisation of agricultural labour has occurred whilst men have tended to take most of the new non-agricultural jobs in rural areas (DaCorta and Venkateswarlu, 1999; Harriss-White, 2003).

In European contexts the new household economics and bargaining ideas, and their competitors, have been presented in the volume on *Gender and Economics* edited by Dijkstra and Plantenga (1997). The general tenor of such recent economic writings about labour markets tends toward a political-economy institutionalism hinted at by Ott (1995) and spelt out in detail by Toye (2003), Hodgson (2004), and Harriss-White (2003). Institutionalism refers to an assumption that social norms are in a state of flux as they interact with rules and with personal interpretations that either reproduce those rules or change them. Institutions are never simply given. In the case of India’s labour markets, for instance, there are institutionalised norms about the terms of employment which help to define what people expect from “piecework” “group contracts” “daily casual labour” (also called *coolie* labour), “exchange labour” and salaried work. These norms are always potentially renegotiable and they are often cross-sectionally differentiated.

Institutionalists empirically studying the Indian labour market fall into three main types. First there are the women-in-development specialists (WID), who focus on gender differentiation (Bhowmik and Jhabvala, 1996; Gautum and Tripathi, 2001; and Gulati, 1995). For a survey and critique see Kabeer (1994). Second there are studies of discrimination against women and its causes (Chatterjee, 1993; Dunn, 1993; Swaminathan, 2002; Narasimhan, 1999). Deshpande and Deshpande argue that the gender pay gap observed in urban India occurs because

gender-based discrimination is universal and enduring. . . That women are overcrowded in low-paid, dead-end, insecure and in short, “bad” jobs is easily verified . . . (1993: 223).

Kingdon (1999) argues that we need detailed evidence for such claims, since the situation varies from place to place and from job to job.

Thirdly there are those who have examined the formation of labour gangs, neighbourhood work groups, trade unions, bonded labour relationships, migrant labour and different types of work contracts (Kapadia, 1996, 1997, 1999; DaCorta and Venkateswarlu, 1999; Ramachandran, 1990; Singh, 1995; Rogaly, 1997; Berman, 2003; Agarwal, 1997). These studies obviously overlap with the methodologies of ethnography, sociology and cultural studies in interesting ways. The pluralism argued for in this paper is accepted by such scientists; it is primarily economists who isolate their arguments away from the details of competing theories (Olsen, 2006).

Thus a rich arena of social relations linked with power-rich hierarchies has been explored by these pluralist, multi-disciplinary authors studying the work economy. Most of these institutionalists have paid due attention to unpaid work. Few of them have offered any large-scale statistical evidence. Many institutionalist studies rest upon a locally based case-study dataset because that is how the terms and conditions of specific labouring contracts are best examined.

In response to the perceived weaknesses of the individualistic approaches to labour-force involvement, authors from the "gender and development" school (known as GAD) have argued that households have cultures (Hart, 1986b), households engage in social class relations (Kalpagam, 1994), and households experience both bargaining and cooperation among their members (Agarwal, 1997; Sen, 1990). The gender and development school differs from the women-in-development school in that class and gender are seen as interacting. Women are not simply seen as a homogenous group. Many upper-class women utilise the labour of low-caste women to do their domestic work. GAD and WID are sometimes posed as opposites, but GAD builds upon the insights of WID (Kabeer, 1994).

Kalpagam (1994) is a typical GAD author who prioritises class over gender and aims to see the whole system transformed to create richer lives for both men and women. A richer life might mean a better childcare/employment mix, reasonable working hours, decent pay, productive farming and the eradication of poverty, says Kalpagam. Their view, the emancipation of women so that they are not coerced into excessively limited roles is critical to move toward this overall goal. In this sense of questioning rigid gender divisions, WID and GAD overlap normatively. They also share a deep interest in the details of women's lives. GAD authors are also very interested in men's lives. See Olsen and Mehta (2005) for a GAD analysis of the right to work in India.

The class-aware and gender-aware revisions of economic theory have rarely been operationalised using statistics. Exceptional authors that used descriptive statistics include Swaminathan (2002), Agarwal (1994), and Srivastava (2003), all of whom review the terrible overall outcomes experienced by Indian women due to patriarchal and exploitative capitalist culture. No challenge has been issued to these claims that women are suffering discrimination and exploitation.

In concluding this pluralist review, we should note three further hypotheses that augment what has already been said about wages, education, work-experience, institutions, and gender stereotypes. (1) Demographers and economists alike have

shown concern about the male-dominated sex ratio in India. The Hindu tradition focuses attention on boy children and sees girl children as a burden and a cost (Dube, 1988), resulting in a tendency to higher female mortality during childhood (Dreze and Sen, 1995). The ideology of 'the special value accorded to male children' (Dube, 1988: WS-11) persists among India's masses. (2) Economic aspects of dowry, in which boys' families receive and girls' families give large amounts in cash and in kind (Heyer, 1992) have contributed to reinforcing the trend. (3) Girls are also less likely to be put into school because they will be lost to the natal family when they marry (Swaminathan, 2002). As a result of these trends, we find girls less well educated. Education therefore must enter the labour-force participation regression equation. A related question is what differentiation along caste or religious lines is there in the tendency to work for pay after controlling for education.

The demographic factors also include women's childcare responsibilities, so the number of children in the household must be taken into account. Childcare work is expected to reduce adult women's labour force participation among the 20-30 age group. Demographers routinely adjust for age-groups, allowing curvature, because the male and female samples also may have different age compositions. The age variables in the regressions are highly significant.

Finally geographers would add that state-wise differentiation in labour markets arises for a variety of agro-climatic and historical/institutional reasons. We allow for these variations across the huge regions of India in a crude way. Each state gets its own 'constant term' in the logistic regression. The states with higher women's labour force participation are all those in the far north and east of the country. The rest have lower employment rates than the base case, which is Andhra Pradesh in the south.

Whilst the Tables and Figures in this paper arise from gross averages – ie they are not corrected for state-wise variation in outcomes – the regression equations reinforce and complement these Figures. The state-wise coefficients are the subject of a separate discussion by the same authors (Olsen and Mehta, 2005). In effect, coefficients for each State offer an adjustment for institutional, irrigation, soil, cropping pattern and climatic factors all at the same time. They are therefore hard to interpret but are better 'in' than 'out'. These three sets of measurements – demographic factors; child-bearing; and state-level differences – increase the pluralism of the regression model.

Data and Methodology

In the analysis which follows, the main outcome studied is the mode of labour-force involvement of the person. These are classified as follows (see also Appendix): Employed; self-employed, which includes own-account workers and unpaid family labour; unemployed; and inactive. The last category covers 'attending to domestic duties' as well as student, retired, ill and other. Table 1 shows the percentages of the Indian working-age population falling into these categories in 1994.

Extra-Domestic Work

For those who do domestic work, two collapsed categories are shown here ('inactive' and 'doing extra-domestic work'). Details of the recording of extra-domestic work are in Appendix 1. Traditionally gender theorists have stressed that work in the informal

sector should probably appear as 'self-employed', which is possible if the household's respondent argues that that is the best way of categorising a person. For many women, 'attending to domestic duties' was the main employment status, but there was nevertheless performance of a wide range of up to 12 activities which would, by many people, be considered to be productive and 'in' the labour market (see Appendix). These are not remunerated activities, but they contribute to the household's livelihood.

The extra-domestic activities include various food preparation tasks, fuel gathering work and other informal sector unpaid work. Using these data, Jacob (2001: 7) showed that 26% of the urban female domestic workers did 'sewing, tailoring, etc.' (vs. 22% of rural female domestic workers). 13% of urban female domestic workers did 'tutoring of own children' (vs. 5% for rural female domestic workers), and 9% of the urban and 36% of the rural female domestic workers worked in a kitchen garden, did poultry work, or similar. Overall, urban women were more likely to be working purely as housewives than were rural women. This pattern may support Mies's claim that modernisation would imply a growing housewifisation (Mies, 1998, original 1989).

General Introduction

The National Sample Survey is an integrated survey on household consumer expenditure, employment, unemployment and informal non-agricultural work. It covers both individuals' work (including both paid and unpaid work) and household principal occupation. The survey is not very detailed in the area of rural livelihoods since it does not include details of plotwise crops, value of crop production, or any indication of farm input costs. However a gross measure of landholding is available, and this is then adjusted for leasing-in and leasing-out; furthermore, an indication of the acreage actually cultivated is provided. Beyond this, farming is represented mainly through the work activities of the farm residents.

Sampling

The NSS has used a sampling scheme that rotates on the calendar months for its Central samples. Thus all quarters of one calendar year are represented in all regions. The survey period of the 55th Round is 1st July, 1999 to 30th June, 2000. A sample of 10,400 first-stage units (*fsu*'s) (rural and urban combined) were surveyed at all-India level. In addition to these main units, which are known as the Central sample, there are state samples with additional *fsu*'s. In this paper, the central sample and state samples have been combined to maximise the sample size.

The number of persons in the survey households was 360,000 in the age range 16-65, and 592,000 for the whole age range from 0 to 99 years. The average household size was 5.8 and there were on average 2 children under the age of 16. Table 2 shows the overall proportions of men and women who were employed and who were in the labour force.

Results: Indian Women's Labour Force Participation

In Tables 1 and 2 the overall level of labour-force participation is seen to be 85% among men and 35% among women using the one-week recall method. In the

National Human Development Report 2001 (Planning Commission, 2002), the same NSS data are used to report the labour-force participation rates as they were recorded at three time-points: 1989, 1994, and 1999/2000. The rates shown there for 1999/2000 are very similar to our estimates: 84% among men and 39% among women (Planning Commission, 2002: 155).

Going back in time, this *Report* shows a decline in both participation rates (*ibid.*). Men's rates fell from 87% in 1983 to 84% in 1999/2000 (a small decline). Women's rates fell from 44% in 1983 to 39% in 1999/2000 – a larger decline on a smaller base. This decline could be seen as worrying because it implies lower production by women. However, its meanings are multiple and some of the important meanings of withdrawing women from employment are positively valued by many Indian residents quite apart from the commercial effects.

As shown in Table 3, women's employment rates fall as caste status rises. It is also notable that rural and urban employment rates are very different. In both places however women do plenty of self-employment. In rural areas this is mostly agricultural whereas in urban areas it is mainly informal-sector and small-scale manufacturing.

The U curve of employment *per se* is shown in Figure 1. A logistic regression of employment *per se* shows that the tendency to have a job (including casual work) first falls with education moving from illiteracy toward middle levels, and then rises. The rapid decline in rates of inactivity among both Hindu and Muslim women as they reach graduate status can be seen in Figure 1. Both Hindu and Muslim women tend to have a typical inverted U of labour-force participation over age-groups (Figure 2).

The education effects shown in the first regression in Table 4 indicate weak support for the human capital theory of labour supply. The rise in labour supply only applies when we compare highly educated women to those in the middle levels of education. Below that there is an apparent perversity. Women of low education levels are more likely to work than those of middle levels. The causal mechanism behind this is a nexus of household-level poverty.

Institutional factors are present and statistically significant. The different states' cultural, regulatory and historical backgrounds are allowed for by using state dummies, many of which are highly significant.²

The self-employment regression shows a similar range of factors having effects. Being female makes one much less likely to be self-employed (as found with employment *per se*). Being highly educated also reduces the likelihood of being self-employed. Being a tenant is positively associated with self-employment. Muslim people are, on balance, less likely than all others to be self-employed.

Turning to Table 5, where two more regressions appear, the factors associated with inactivity are a mirror image of those associated with employment. A hump shape of education levels shows both forms of inactivity being associated with middle levels of education. Females of course have far higher probabilities of being inactive than men. Muslims are more likely to be inactive in either sense. Scheduled tribes and castes, as well as people in poor households, are less likely to be inactive. The results have a high level of statistical significance.

Poverty and Labour Market Outcomes

Household level economic poverty was measured by the NSS in a simple way. Monthly expenditure on a recall basis was adjusted for the household size, giving a per capita indicator. There is evidence for several warranted arguments here. One: households that are poor have a reduced tendency to have a woman working purely within the home (as a domestic worker or housewife), because the women in these households tend to go out for employment. There is therefore pressure on poor women to gain monetary income and yet it is unclear how these households manage their domestic work. Two: people whose households are tenants are less likely to be employed and are more likely to be self-employed instead. It is likely that many poor women have a double or triple burden of work: a double burden of domestic and paid work; or a triple burden of domestic, farming and paid work.

A third warranted argument is much more controversial. Those households which pull out of poverty via dowry or via their earnings from employment are more likely to withdraw the woman (or to have her choose to withdraw herself) from the labour market. Women's withdrawal from employment can be an elegant yet silent testimony to the couple's economic success. However even this statement needs more nuancing since, among Muslim people for instance, women are more likely to do this 'housewifery' role and to be considered inactive even at a lower level of household income. So economic factors are not necessarily the dominant concern – there are social and cultural considerations here.

Having a woman kept in private is a prestigious and high-status behaviour in India. Many housewives are discouraged from riding bikes, are not allowed to do laundry at public water outlets, do not go out for any distance without someone accompanying them, and in various other ways observe forms of purdah. These patterns cut across castes and religious groupings. Because of this differentiation it is dangerous to generalise. The next section takes up some of the general reasons which *can be* invoked to explain the overall patterns found in the Tables.

Interpretation of Cultural Factors

Qualitative research helps in exploring the meanings people attach to women doing domestic work. Across India there is a broad cultural tendency to 'Hinduisation', such that even among India's Muslims and other minorities some cultural patterns mimic those of the dominant Hindu groups (Bujra, 1992). These include dowry, patrilocality, and arranged marriages for instance. In *A Field Of One's Own*, Agarwal (1994) argued that even within India the approach of Muslims to women's labour force involvement is differentiated, so in making comments on culture and economy one wants to avoid using over-generalised contrasts of Muslim vs. Hindu modes of working. Discussions of Muslim-Hindu differences in patriarchy include Jejeebhoy and Sathar (2001), Sonalkar (1999).

The delicate interplay of culture and local social norms leads to several aspects of housewifery roles being perceived normatively to be positively valued. These are listed below in order to open them up to scrutiny and to contribute to understanding why women choose, or are pushed into choosing, to avoid doing paid work.

1. Sanskritisation as a process invokes highly honourable roles for women as supporter of the man's successful career, as the provider of refreshments at functions, who manages the household in a calm and quiet manner, providing dignity, and who thus supports the household and family's upward social mobility (Chakravarty, 1993; Dube, 1988).
2. Women joining into the professions can successfully continue their housewifery roles by employing other women to do much of the nitty gritty daily work whilst continuing in the double burden (e.g. Raghuram, 2001). Thus poor women being employed and richer women being employed go together, whilst middle income women not being employed is consistent with this scene as well.
3. Women today are, more than ever, encouraged to take care of these matters without involving their employed menfolk. The exclusion of men from the role of housewife, and from all records of extra-domestic work in NSS 55th round, demonstrates a growing patriarchal role demarcation in India. It is widely seen as very dignified for men to be uninvolved with domestic matters.
4. Women who do farming work are not seen as predominantly 'the farmer', but instead as the helpmeet and unpaid worker of the male household head. This sexist and androcentric approach to farming households is a patriarchal value implicitly held very widely in society.
5. People prefer women to act submissive and deferential toward elders, men, and those with higher levels of education or income. Acting deferential is considered to be appropriate and dignified and to keep the women in safe relationship networks which protect the women in a patronising way that allows them a large 'private' life.

We are not arguing that these are objective advantages of housewifisation, but that to the extent that people hold these values they will intersubjectively create spaces in which middle-income women act as housewives. The economic rewards to higher education furthermore create a U curve in which the upper educated women have jobs but still are responsible for huge amounts of household work and child management.

The opponents of patriarchy are many and diverse (Kabeer, 1994). They list a range of disadvantages of having women play these deferential and excessively private roles. By listing them, we enable readers to consider the pros and cons of the U curve situation rather systematically.

The disadvantages of women doing all the household work and being classified as 'housewives' include:

1. Dependency of most wives on a male breadwinner and his family's property. This dependency is set up structurally when women leave the natal home to move to a new home at the time of marriage. It is then exaggerated if the woman leaves off paid work to watch over children.
2. Low bargaining power of women so that they cannot easily exit, or threaten to exit, a marital home even if there is alcoholism, an affair, or domestic violence (Agarwal, 1997, 1998).
3. the woman who has no job nor self-employment can, at times, be isolated and lose confidence. This is both a psychological and a social problem. The gender disparities are so great that numerous feminists have complained about the

systematic oppression of women, within which women play passive roles yet are actively disabled from being capable of making self-improvements (Srivastava, 2003; Jejeebhoy and Sathar, 2001). Both Srivastava and Swaminathan link poor educational outcomes of girls with low incomes of women: one link that we might want to explore is whether non-employed mothers feel hesitant about encouraging their girl children to get a higher education (see Swaminathan, 2002).

4. Women also fall behind in their knowledge of their own profession or occupation, since technology gradually changes and they are not being exposed to the on-the-job learning that other workers have. Even changes in seed and fertiliser combinations, among farmers, falls into this category. It can be called the 'loss of human capital relative to other workers' during the interruption of the work career (see Tomlinson 2003 for detailed UK illustrations and measurements).
5. Ultimately in this context women are often seen in a diminutive, degraded, and denigrated light. Their work is seen as 'helping' work even if it would be classified as 'employment' or 'self-employment' if done by a man. Women who are not in relationships are seen as exceptional, threatening, odd and often mentally unstable (documented by Gibbons-Thrika, 2003). Sexual harassment of working women goes hand in hand with the patronisation of non-working women. The earnings of girls and women may be seen as 'pin money', as temporary, as nonessential.

Conclusion

The paper has described a complex situation in which a U curve of women's employment by education levels is caused by a mixture of economic and cultural factors. The whole paper is suffused with interdisciplinary pluralism so that these factors can be taken into account in a balanced way. So-called 'inactive' people can be divided into the inactive *per se* versus those who were recorded as doing some extradomestic work. The ILO definition of unemployment is not sufficiently detailed to help us clarify the nature of the borderline between employment and non-employment. This borderline seems to be permeable and socially constructed.

The U curve was explored in some detail using both descriptive and regression statistics. Rural/urban, religious and state differences in patterns of labour force participation were considered. The paper ended with a list of the felt advantages and disadvantages of women working as housewives – the typical scenario at the bottom of the U among middle-educated women. It was noted that the standard norms for housewives are adapted for poor women, who often have a double or triple burden of work, and for rich women who can employ others to assist them whilst still being the manager of a household. Great heterogeneity among women is therefore noted. One hopes that a diversification of values (especially about men and women doing domestic work) and a serious ethical discussion of the morality of patriarchy can be based on this kind of overview study. We cited many authors who have engaged in this serious discussion but we also note that the situation appears to be getting worse instead of better in India since its economic liberalisation around 1991.

Table 1: Means of Important Variables by Gender, India 1999 (as %), Ages 16-65

Mean	Men	Women	All
Employed or Casual	39	15	27
Self-Employed*	43	19	31
Inactive (Narrow sense)	15	26	20
Inactive (ILO sense)	15	65	39
Extra-Domestic Work	0	39	19
Unemployed (in the ILO sense)	3.4	1.1	2.3
Percent in Labour Force	85	35	60
Married	70	77	74
Age	34 years	34 years	34 years
Female	0	100	49
Education Base Case:	"Illiterate"		
Education: Below Primary	11.4	9	10
Primary	12	10	11
Middle	17	11	14
Secondary	14	8	11
Higher Sec'y Degree	7	4	6
Muslim	5.5	5.5	5.5
Hindu	91.5	91.5	91.5
Scheduled Tribe	8.6	8.8	8.6
Scheduled Caste	19.3	18.9	19.1
Household Poor	16.9	18.3	17.6
Tenant	9.6	9.1	9.4
Land Owned	.79 hectares	.79 hectares	.79 hectares
Number of Babies	.22	.23	.22
Number of Children	2.1	2.1	2.0
Household Size	5.9	5.9	5.9

Source: NSS 55th Round, Employment and Unemployment Data, Ages 16-59. All of the all-India estimates are obtained using grossing weights. All other estimates in this paper are obtained using sampling weights at the person level. Note: *Self-employed' includes contributing family worker and own-account worker.

Table 2: India's Labour Force Participation Rates (Based on NSS), 1999

	Women	Men
% who were employed	15%	39%
% who were self-employed*	19%	43%
% of women who were reported as ILO unemployed	1.1%	3.4%
Total Labour Force Participation Rate	35%	85%

Source: NSS 55th Round, Employment and Unemployment Data, Ages 16-65.

Note: *Self-employed' includes contributing family worker and own-account worker.

Table 3: Women's Labour Force Participation by Caste Group, India 1999

<i>Mode of Renumeration</i>	Scheduled Tribes	Scheduled Castes	Other "Backward" Castes	Other Castes and Groups Not Named Already
Inactive (Narrow sense)	17%	20%	24%	32%
Employed	25%	24%	14%	8%
Self-Employed*	31%	16%	22%	16%
Extra-Domestic Work	26%	39%	39%	43%
Unemployed	0.9%	1.1%	1.1%	1.2%
All Women	100%	100%	100%	100%

Source: NSS 55th Round, Employment and Unemployment Data, Ages 16-65.

Note: *Self-employed' includes contributing family worker and own-account worker.

Table 4: Factors Associated with Paid Work, India 1999 (Logistic Regression)

	Engaged in Paid Work - Either Regular or Casual				Self-Employed*	
	Coefficient	Significance	Coefficient	Significance		
Married	-0.002		0.039	***		
Age	0.0254	***	0.0199	***		
Age ²	-0.0003	***	-0.0002	***		
Female	-0.256	***	-0.245	***		
Education: Below Primary	-0.044	***	0.0003			
Primary	-0.070	***	0.001			
Middle	-0.102	***	-0.014	***		
Secondary	-0.107	***	-0.074	***		
Higher Sec'y	-0.120	***	-0.115	***		
Degree	0.017	**	-0.152	***		
Muslim	-0.048	***	-0.108	***		
Hindu	0.008		-0.026	***		
Scheduled Tribe	0.068	***	0.021	***		
Scheduled Caste	0.116	***	-0.097	***		
Poverty	0.067	***	-0.035	***		
Tenant	-0.013	***	0.020	***		
Landowned	-0.0406	***	0.0527	***		
Land ²	0.0006	***	-0.0008	***		
Number of Babies 0-2 years	-0.008	***	0.007	*		
Number of Children 0-16 years	-0.011	***	0.007	***		
Constant	0.104	***	0.052	***		
Significance of F	***		***			
Number of Cases	360136		360136			

Source: NSS 55th Round, Employment and Unemployment Data, Ages 16-65.

Note: 'household poor' refers to per-capita expenditure below half of the median

Babies refers to children under the age of 2 during the survey.

Base case is 'illiterate', of other religion, and living in Andhra Pradesh.

Controls for each state have been inserted and details are available from the authors.

Note: *Self-employed' includes contributing family worker and own-account worker.

Table 5: Factors Associated with Unpaid Work, India 1999 (Logistic Regression)

	Being Inactive (in the narrow sense, ie also not doing extra-domestic Work)		Doing ExtraDomestic Work	
	Coefficient	Significance	Coefficient	Significance
Married	-0.122	***	0.114	***
Age	-0.0405	***	-0.0043	***
Age ²	0.0005	***	0.0000	***
Female	0.137	***	0.384	***
Education:	0.025	***	0.024	***
Below Primary				
Primary	0.038	***	0.036	***
Middle	0.087	***	0.031	***
Secondary	0.161	***	0.013	***
Higher Sec'y	0.223	***	-0.003	
Degree	0.099	***	-0.010	**
Muslim	0.058	***	0.102	***
Hindu	-0.009		0.027	***
Scheduled Tribe	-0.036	***	-0.049	***
Scheduled Caste	-0.015	***	-0.008	***
Household Poor	-0.020	***	-0.022	***
Tenant	0.001		-0.002	
Land Owned	-0.0126	***	0.002	***
Land ²	0.0002	***	0.000	***
Number of Babies 0-2 years	-0.014	***	0.014	***
Number of Children 0-16 years	0.005	***	-0.0005	
Constant	0.863	***	-0.095	***
Significance of F	***		***	
Number of Cases	360136		360136	

Source: NSS 55th Round, Employment and Unemployment Data, Ages 16-65.

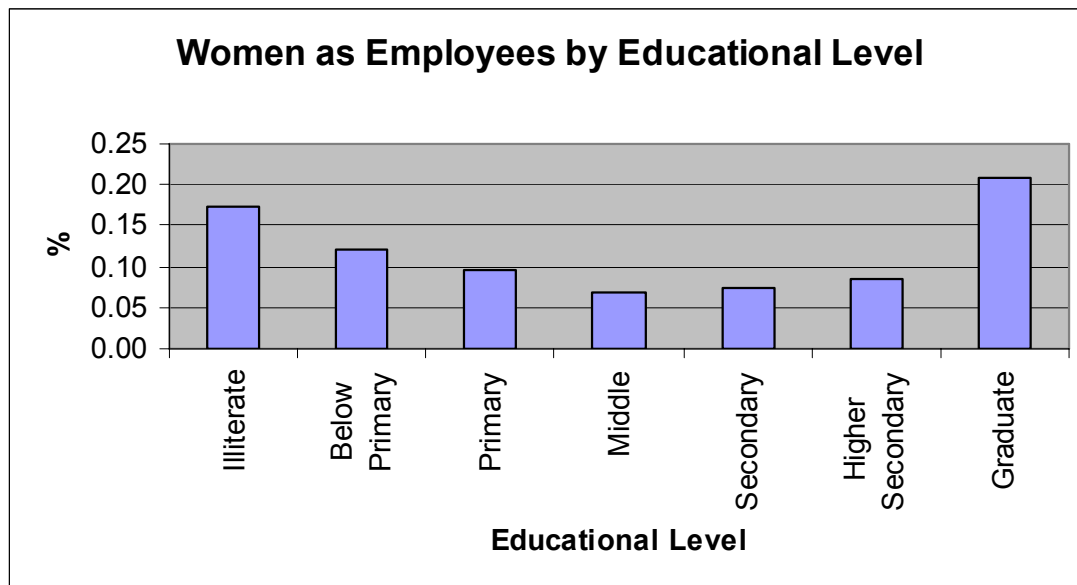
Note: 'household poor' refers to per-capita expenditure below half of the median

Babies refers to children under the age of 2 during the survey.

Base case is 'illiterate', of other religion, and living in Andhra Pradesh.

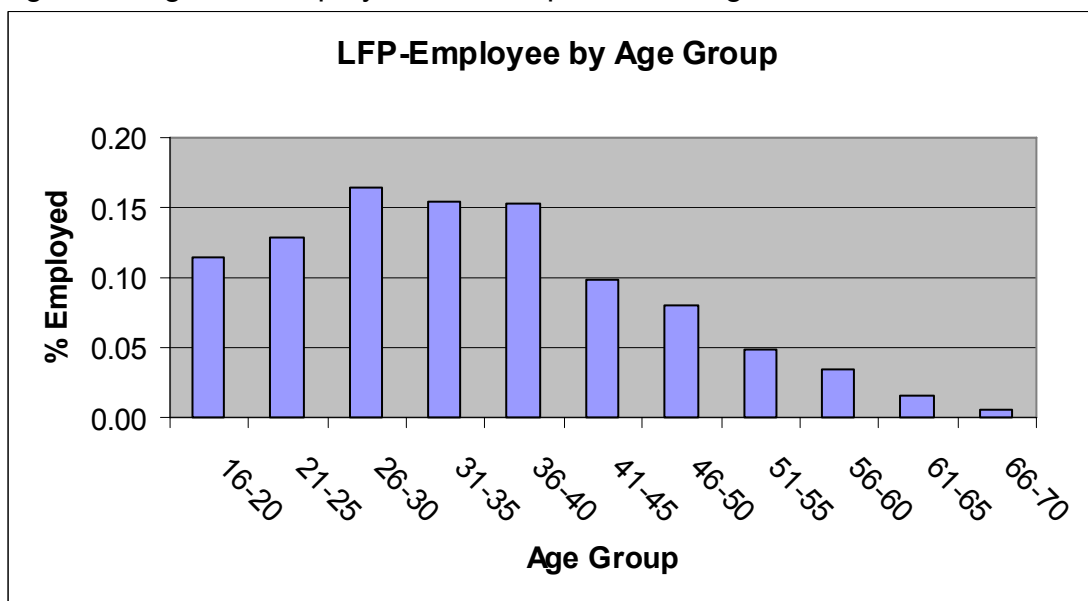
Controls for each state have been inserted and details are available from the authors.

Figure 1: The U curve of Women's Employment, India 1999



Source: NSS 55th Round, Employment and Unemployment Data, Ages 16-65. This figure omits women's self-employment.

Figure 2: Age and Employment Participation Among Women, India 1999



Source: NSS 55th Round, Employment and Unemployment Data. This figure omits women's self-employment.

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Appendix 1: Description of selected variables on labour force involvement

Every household member's employment status was examined using a one-week recall period of 14 half-days. Every half-day was examined, and firstly if there were any half-days (or more) with a regular salaried/waged employment then this job was recorded as a characteristic of that person. Then using the same one week recall data, doing casual labour was examined the same way. The one-week recall dataset included up to four different activities for each half-day period. These 'activities' did not include any of the extra-domestic work listed later in this appendix. Instead, standard employment statuses were recorded here which include 'domestic duties' as codes 91, 92 and 93.

For those women who had as their recorded main employment status "attended domestic duties", those who had no other work in the recall week are here labelled as inactive (in the narrow sense). But these women were asked about several other activities in the following way (NSS Round 55 questionnaire, page 15): 'Along with your domestic duties did you more or less regularly carry out during the last 365 days:

1. maintenance of kitchen gardens, orchards, etc? yes/no
2. work in household poultry, dairy, etc? yes/no
3. free collection of fish, small game, wild fruits, vegetables, etc. for household consumption? yes/no
4. free collection of firewood, cow-dung, cattle feed, etc, for household consumption? yes/no
5. husking of paddy for household consumption? yes/no
6. grinding of foodgrains for household consumption? yes/no
7. preparation of gur for household consumption? yes/no
8. preservation of meat and fish for household consumption? yes/no
9. making baskets and mats for household use? yes/no
10. preparation of cow-dung cake for use as fuel in the household? yes/no
11. sewing, tailoring, weaving, etc., for household use? yes/no
12. tutoring of own children or others' children free of charge? yes/no'

In addition, at the end, bringing in water from outside the household, and from outside the village, was recorded as well. The water-carrying has not been considered here as an extra-domestic activity, although this is a point which will merit further enquiry.

The women who did any of these works (excepting carrying water) were labelled here as 'extra-domestic workers'. They are included in a wider (ILO) sense of being labour-market inactive since they are non-employed and they are not self-employed either.

The Education Levels

The level of education of the person is recorded here as follows:

1. not literate
2. literate through attending either NFEC, AEC, TLC, or others, or literate but below primary
3. primary school
4. middle school
5. secondary school
6. higher secondary school
7. graduate and above

Notes

¹ The ILO presents for each five-year period its 'Projections and Estimates of female economic activity rate', also found in the UN Common Data Base as variable code 4270, dated on 5-year period centres. See <http://laborsta.ilo.org/> and see also www.esds.ac.uk >> United Nations Common Database.

² Due to space limitations, the state-wise differentials have not yet been explored here. See Olsen and Mehta (2005).