Formalising the informal economy: Women's autonomous self-employment in rural south India

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Abstract: Institutionalism argues that changes in institutional arrangements occur both through changes in informal norms and through legal and regulatory change. In the case of women who run small enterprises in South India, rapid change has created dual pressures. They are under pressure to make profits, repay any debts incurred, and to help the business survive, but they are also under pressure to conform to certain gender-specific norms of behaviour, many of which are further mediated by expectations related to caste, class and religion, and are also prone to change over the course of the life cycle. In this situation, women can become more autonomous over time but they may face set-backs, resistance, difficulties and social disapproval along the way. This study takes advantage of data from the year 2000 in the Indian National Sample Survey (NSS). I measure autonomy over the production processes and relations for rural women small enterprise ownermanager's. I study the distribution of high and low autonomy cross-sectionally using a selectivity adjusted probit model. I approach the theory of institutions from a structuralist perspective, and show the relevance of specific social structures of caste, class, age-group and life course for autonomy. The intention is not simply to suggest that autonomy of women is a 'good' in society, but rather to note that where there is an absence of autonomy there can still be other good outcomes for women.

1. Introduction

This paper considers the effects of contemporary restructuring of women and men's employment in rural south India alongside ongoing efforts to recast India's poor rural women as entrepreneurs. The intention is to contextualise issues around gender equality in labour markets and relations in general, and specifically the scope for autonomy over production processes and relations available

to rural women small enterprise owner-manager's within a framework that recognises labour market institutions as "gender-bearing" (Whitehead 1979). Following from the old institutionalist school, and influenced by Hodgson (2000, 2006, 2007) and Chang (2002) I adopt an approach to institutionalism that explicitly recognises institutions as contributing both to constraints on individual and collective behaviour and to the constitution of motivations and perceptions. In the next section I highlight the importance of viewing labour markets and relations as gendered institutions with reference to ongoing processes of adaptation and change in accepted social norms evident in south India's rural labour markets, roles and relations. In section three I review the literature on women small business owners in the Indian context with particular regard to the ascendancy of the self-employment and entrepreneurial ideal. There then follows a short discussion of the constraints that limit the capacity for autonomy over various aspects of small enterprises and the phenomena of disguised wage labour. This leads to section five, in which I introduce the data and the theoretical model. Section a discussion of the implications of the results of the statistical analysis.

2. Labour markets and relations as gendered institutions

Following from Veblen ([1914] 1964) and Schotter (1981), I define institutions as generally accepted (spatially and temporally positioned) regulatory social norms for behaviour in a specific social situation, which are subject to self-regulation and / or external authority. Approaching institutions in this way permits theorisation to extend beyond, without dismissing, a concern with the real constraints that institutions impose on individual behaviour to consider how they contribute to perceptions of interests and, correspondingly, the legitimacy of existing social relations as well as attempts to alter established patterns. In the context of this research it is important to recognise that institutions central to the labour relation are gendered in essential ways. As "gender bearing" institutions (Whitehead 1979) labour markets and relations are instantiations of the gender roles and patterns of the society in which they are embedded. Stereotypes associating authority in the workplace with masculinity, and suggesting there is 'man's work' and 'woman's work' are inscribed in social institutions and effect the types of work endorsed for, and acceptable to, men and women (Elson 1999). Cook et al have claimed that the gendered division of labour both within and outside the household has profound repercussions for women's market labour involvement: "women do enter the public sphere but are often constrained by their roles in the private sphere and frequently undertake activities in the labour market which are an extension of their activities in the private sphere" (2000:19). In the South Indian case, gender, mediated by caste and class, is a powerful constraint on rural women's mobility, public visibility, and autonomy. Women lack (enforceable) ownership rights over land and other productive assets (Agarwal 1997, 1998; Unni 1999), their work is valued far less than men's and is accordingly remunerated (Da Corta and Venkateshwarlu 1997; Unni 1999, 2001; Venkateshwarlu and Da Corta 2001), their mobility is limited, and so their power to bargain over contracts, prices, and wages is severely constrained. However, as noted by Morgan and Olsen (2009:3) institutions may alter somewhat over time through a series of interrelated cultural changes. Transformations in areas of the political economy and available technologies, as well as collective or cumulative processes of bargaining and negotiation can lead to adaptation and change in accepted social norms, processes which are evident and ongoing in South India's rural labour markets, roles and relations.

Throughout India the composition of rural labour has altered over the past three decades. Casual daily wage agricultural labour has increasingly become the domain of women accompanied by subjection to many of the labour relations that men have sought historically to exit, including tied labour disciplined by debt relations (Chaudhry 1994; Da Corta and Venkateshwarlu 1997). This increasing gender specialisation has emerged as landless and land-poor men benefitted from banjar land policy, access to government subsidised loans for productive assets, and collective protest, all of which contributed to a possibility for exit from all but the most highly valued and most remunerative forms of agricultural labour, those involving draught animals and / or mechanisation (from which women are excluded). Agricultural labour activities that, until quite recently were undertaken by both men and women are increasingly viewed as the preserve of women or of elderly men since, compared with exclusively male activities, the wages are low (Chaudhry 1994), implying that, as women specialise in areas of agricultural wage labour, the value accorded to those activities is further eroded.

The improved position of many landless and land poor men may have enabled their withdrawal from agricultural labour but the income from newly acquired assets has rarely been sufficient to secure household survival, which has in most cases then depended on the remunerated labour of their wives and daughters. As men have moved away from agricultural wage labour into the non-farm economy, women have thus taken on the lower paid activities (both agricultural and non-farm) left vacant (Fisher et al. 1997). Bennet (1992) concludes that this feminisation of daily wage agricultural labour can be accounted for by growth in demand for labour as men withdraw to pursue non-farm employment and self-employment in small businesses, so increasing the agricultural labour opportunities available to women. Da Corta and Venkateshwarlu (1997) convincingly argue in favour of a construal of this gender-divide as corresponding "to some extent, to a class division between a non-propertied / waged workforce composed of women...and self-employed (though largely tied to

commission agents) men" (Ibid: 104). A point emphasised by Chaudrey (1994), who equates feminisation of the agricultural labour force with women's proletarianisation.

The rural non-farm labour force has remained disproportionately male, with women most prominent in the most casual or intermittent activities offering the lowest levels of remuneration (bidi and match production; outsourced, home-based handicrafts and food processing; construction; mining), where work sites are commonly located within, or near to, their homes (Mitra 1993; Unni 1996; Visaria and Basant 1994). The production relations of this type of work are typically characterised by "excessively long hours, especially [for] young women...low piece-rates (with delays in payment in many cases)... unhygienic working conditions...[and] lack of pension benefits" (Mehrotra and Biggeri 2005). Withdrawal from agricultural casual wage labour in favour of higher status employment in the rural non-farm sector is less likely for women than for men. Such work is dependent on a minimum level of skills and education (Chadha and Sharma 1997), with women at a disadvantage since their literacy rates and education levels are generally lower than those of men (Chadha and Sharma 1997; Fisher et al. 1997). However, due both to gender bias and limited mobility to seek employment, those women with higher levels of education also face strong sanctions on their ability to work, with unemployment for women with secondary or post-secondary education over three times that of comparable men (Radhakrishna 2002).

Women's withdrawal from wage labour conducted in the public domain is thus most often attained through either self-employment in small businesses or wage labour which can be operated from, or close to, women's own homes. The former strategy has long been proposed as a poverty alleviation and empowerment strategy, as an effective means to permit women flexibility to combine autonomous remunerative work with fulfilment of their daily and intergenerational reproductive household duties and maintenance of honour in line with seclusion norms (Bose 2007; Mehrotra and Biggeri 2005; Tipple and Coulson 2007).

3. Recasting poor rural women as entrepreneurs

Poverty reduction policy directed towards livelihood security and stable incomes via the creation of new, or expansion of existing, informal sector small businesses (micro-enterprises) has emphasized a perceived need to encourage poor women's entry into the economy as entrepreneurs and has identified a market failure in credit provision facilities to the rural poor in general and women in particular as the primary limiting constraint (Tipple, 2005). Chadha and Sharma (1997) conclude that household assets (particularly land ownership), and access to capital are more important than education for small business success. They emphasise that this creates barriers for the landless and land-poor, lacking assets and capital in a context of poor access to formal credit markets for

sufficient and timely start-up and working capital, a situation which disproportionately affects women (Eapen 1995; Samal 1997; Vyas and Bhargava 1995). Within this context, the provision of small loans has been recommended as a policy instrument designed to permit productive investment in new or established small businesses that support self-employment. Credit has long been a component of the Indian State's poverty alleviation efforts, significantly less confrontational of entrenched inequalities than land redistribution and overhaul of tenancy and property rights and so politically savvy. Early State interventions in rural credit facilities were characterised by widespread subsidies, frequent loan write-offs, and regular refinancing of loss-making institutions, with loan recipients in general not poor (Meyer and Nagarajan 2000). Since the early 1980's the State has mainstreamed microcredit via the Self Help Group – Bank Linkage Programme (SHG-BLP), a programme extending loans to individuals, almost exclusively women, within 10 to 15 member self help groups (SHGs) (Karmaker 2009), which has proliferated throughout South India. Such microcredit programmes, broadly aimed at providing small loans for productive investment to those marginalized from the formal credit market and dependent upon informal loans from relatives, friends, or moneylenders, have come to dominate development discourse and practice, replacing earlier approaches that emphasized social protection and basic needs with a concentration on micro-enterprise development, self-employment and income generation (Navajas 2000: 334). This approach perceives the poor "as an homogeneous group of self-employed microentrepreneurs who need to raise the profitability of their businesses" (Hulme 2003: 653).

NABARD reports (Puhazhendi 2000; Puhazhendi and Satyassi 2000)have found that India's self help group – bank linkage programme (SHG-BLP) has had a poverty impact, significantly improving client's incomes and asset bases (usually through purchase of livestock or land) and enabling exit from low-paid, low-status daily agricultural paid labour in favour of self-employment in small-scale business interests (Garikipati 2008). An EDA study (2005) found, however, that impact is not evenly distributed among clients, some are better placed than others to translate small business ownership into tangible outcomes. For those not so placed their position may not improve and debt can further increase their insecurity and vulnerability. Littlefield et al (2003) find that microcredit is used to meet a wide variety of needs beyond its primary objective of providing capital for small enterprises, including daily household, health, education, marriage and funeral expenses, and coping strategies in emergencies. Research by Rahman (1999) indicates that, although micro-credit loans may improve the socio-economic status of households, many borrowers face increasing vulnerability, becoming trapped by the system. When income derived from small businesses is insufficient to meet repayments, borrowers are able only to service their debts by taking out new loans, further indebting themselves and increasing anxiety and tension for loan recipients and their households.

Weber (2002) has found that pyramid loans (taking out new loans to keep up with repayment schedules) and cross-borrowing or overlapping (taking out new loans to pay off old loans) are widespread practices among small business owners.

This emphasis on self-employment and business creation differs in fundamental ways from other poverty reduction programmes, requiring entrepreneurial skill and favourable local market conditions. K.G. Karmaker, Director of the Indian National Bank for Agriculture and Rural Development (NABARD), involved in the microcredit SHG-BLP pilot and its later expansion, explains:

It is necessary that members of SHGs...scale up and diversify their income-generating activities. Many NGO's are trying to promote micro-enterprises among SHG members. But their marketing abilities, skills and experience remain rather limited. (Karmaker 2009: 23)

In the absence of these characteristics, returns to investment in small businesses are likely to be small, limiting the capacity for reductions in overall poverty (Khandker 2005: 264). Such policies attempt to sidestep women's uneven integration into labour markets, however the ability to operate an independent small business as opposed to engage in outsourced, often highly exploitative, production lines has been found to be highly contingent on many of the same factors that lead to this exclusion from, or uneven integration into, the broader labour force. Indian women small enterprise owner-manager's may exit or avoid the employee relation, but remain embedded in multiple power relations, most important of which are the "gender dimensions of power which frame the work relationships of these workers" (Prügl and Tinker 1997:1475).

The debate over the potential of small business ownership for poverty reduction and empowerment shares much of its content and background with the shift from welfare to workfare, prominent in OECD countries (Peck 1998, 2004), with its attendant focus on worker's responsibility to enhance their employability. This shift is indicative of a broader trend as neo-liberalism's ascendency has fundamentally altered the politics of poverty. "'Old' discourses of needs, decency, compassion, and entitlement have been discredited, while 'new' (or redefined) discourses of work, responsibility, self-sufficiency, and empowerment have been forcefully advanced" (Peck 1998). The latter discourse, the key-stone of mainstream development studies' subordination to questions of policy relevance and jargon of participation, empowerment and poverty alleviation, is central to the logic of microenterprise, with its focus on "helping the poor to help themselves" (Yunus 2003). Poverty is thus dehistoricised and desocialised, treated variously as a chance affliction or an outcome of insufficient individual responsibility or skill, rather than a causal outcome of specific and historical social relations of production. This ontological bias privileges the individual as the appropriate level

of intervention. Such an emphasis relies on a heavily localised and ahistorical conceptualisation, naturalising present social conditions, privileging individual human agency over social structures and institutions, and disguising the need for historical and causal explanation.

4. Autonomy over production processes and relations

Women's inclusion in the market labour force has long been a goal of social and economic initiatives which have historically associated the transition from unpaid household and family work to paid work with numerous improvements in development indicators (Horton 1996). However, independent market labour does not necessarily mean that significant control over income is possible. Agarwal's (1986) research in three Indian states revealed that women's income was typically acquired and controlled by men. In addition, the ability to generate independent income may empower women to some degree, but may also curtail support by male kin, leaving them isolated and increasing their vulnerability to market forces over which they cannot exert control (*Ibid*). As Agarwal (1994:71) concludes, earning an income does not necessarily translate into autonomy, empowerment, or control:

we need to examine not just the fact of earning, but also a number of related factors which are likely to be important, such as the period over which such earnings are sustained, the level of earnings, community attitudes and norms about women's needs and rights (i.e. the social legitimacy of women's claims) and, most importantly, the process by which an improvement in women's earnings has been achieved.

Implicit in the widespread support for small business self-employment in preference to employment generation is the association of self-employment with greater control over production than that permitted the employee. Sethuraman's (1998) hierarchy of women's market labour is characteristic of this approach, favouring self-employment above wage employment as a tripartite strategy for development, poverty alleviation, and women's empowerment. The promotion of household businesses has become a development and poverty alleviation strategy (ILO 1998; Tipple and Coulson 2007). However, as Khandker (1992) has concluded, while the benefits of informal self-employment / micro-enterprise may supercede *unprotected* wage work, they may not be preferable to *protected* waged work.

In the case of south Indian women, norms of propriety and responsibilities for unremunerated home-sited labour activities (such as cleaning, meal preparation and childcare) and unremunerated home-sited production for income substitution / supplementation (such as tailoring, clothes / food / fuel production / gathering) place limits on spatial mobility. The impact of these entrenched institutions was recognised by the earliest official development programmes to promote rural

women's self-employed handicrafts production and "micro-enterprise" as distinct from wage labour. These programmes sought to nurture and extend women's already existing home-sited non-market labour arrangements by providing training, and creating co-operative arrangements for credit access and the supply of raw materials (Boris and Prugl 1996:41). Their objective being to provide an effective means of permitting women the flexibility to combine remunerative work with fulfilment of their household duties and maintenance of seclusion norms (Bose 2007; Mehrotra and Biggeri 2005; Tipple and Coulson 2007).

The fact that many women operating small businesses do so in or around their homes, or use their homes as a base for their business in some way has led to a concentration in the literature on women's self-employment and small business management as "home-based labour", a category that includes a very broad range of labour activities undertaken in, close to, or requiring as a base at some point in the production process, worker's own homes (Hennon and Loker 2000; Prügl 1999). Prior research has indicated this very broad category to be highly differentiated by the degree of independence over production processes and relations exercised by the worker. India-based fieldwork dating from the 1980's found that those classified as self employed were "rarely capable of sustenance or expansion" (Papola 1981:54), and were more likely to be engaged in disguised wage work than be genuine micro-entrepreneurs (Breman 1996; Mies 1982; Papola 1981). This focus on the broad dichotomy between employee and self-employed forms of home-sited market labour has recently been undermined by research which has questioned the notion that the production relations and outcomes of these labour forms are as distinct as is widely assumed (Hahn 1996; Hennon and Loker 2000; Prügl 1999). Most recent literature on women small business ownermanagers has explicitly recognised that "artificial distinctions between the ideal independent selfemployed entrepreneur and the exploited and dependent sub-contracting worker...obfuscate the debate" (Prügl and Tinker 1997:1479) and "fail to capture the complexity of women's insertion into the labour market" (Ibid:1476). Many petty commodity producers are neither wage-workers, nor self-employed, but lie instead somewhere in between (Kantor 2003). Research focused on women has claimed that traditional dichotomies obscure the fact that "women...are inserted differently into the economy than men because their socially constructed roles tie them to the home (Prügl and Tinker 1997:1472)".

More recent research has sought to integrate the complexity and differentiation of production relations, security and vulnerability, with reference to a continuum of labour relations:

The employment status of...workers can be...[viewed as]...a continuum of dependence, from being completely independent to being fully dependent on the contractor /

middleman for design, raw material, and equipment, and being able to negotiate the price of the product (Unni and Rani 2005:13)

A number of qualitative studies have provided evidence of such a continuum of dependency. Work by Bose (2007) has found that the most dependent petty commodity producers, paid by piece rate, undertaking work according to precise specifications, and reliant on contractors or middlemen for credit, materials and equipment, are far more likely to be undertaken by women. Indeed the type of production to which these conditions most readily apply are precisely those most associated with women: garment stitching, beedi rolling, agarabatti making, food processing, lace making, zari and embroidery (Hahn 1996). Often limitations on autonomy are exacerbated by ties to commission agents, and many ostensibly self-employed small business owners have been found instead to be operating as out-sourced or sub-contracted components of local, national or global production chains to produce specified goods and non-negotiable piece-rates (Mehrotra and Biggeri 2005). Genuine small business self-employment requires labourers to leave the home at times, to visit market places to procure materials and sell finished products, and to liaise with contractors and creditors (Kantor 2003). Qualitative research has found that, for women engaged in more dependent forms of petty commodity production, "trips to factories to acquire specifications and return finished goods are made by male relatives or older women in the family who face fewer sanctions" (Bose 2007:282). This latter point is supported by anthropological findings that married women gain in autonomy and authority as they become older, since "not only are family members less interested in protecting and controlling the sexuality of older women through restrictions on their movements and behaviour, but over time, motherhood and experience give married women status and strength in the household" (Malhotra and Mather 1997:609). Women's autonomy within their household and over their market labour thus appears from the literature to be highly integrated.

Decision-making and control are explicit markers of autonomy within research on women's roles and relationships within marriage, family and household, and are also apparent in attempts to distinguish self-employed market labour (within a wider informal economy) from formal labour and to internally differentiate forms of ostensibly self-employed market labour. Research has focussed on the potential for autonomy and empowerment to result from self-employed market labour rather than accrue to it. In the Indian context this focus has extended traditional feminist analyses (Collins et al. 1993; Connell 1985) of income generating work (and resulting economic resources), long considered essential to increasing women's autonomy and empowerment, both within the home and society more widely. It is within this context that Jejeebhoy and Sather define autonomy as:

The control women have over their own lives – the extent to which they have an equal voice with their husbands in matters affecting themselves and their families, control over material

resources, access to knowledge and information, the authority to make independent decisions, freedom from constraints on physical mobility, and an ability to forge equitable power relationships within families (Jejeebhoy and Sathar 2001:688)

The National Sample Survey Organisation (NSSO), the Government of India department responsible for design and implementation of the survey on which this study draws, emphasises the notion of autonomy in its definitions of self-employment. "The essential feature of the self-employed is that they have autonomy (i.e. how, where, and when to produce) and economic independence" (NSSO 2000:6 [emphasis in original]). The NSSO therefore defines self-employment in relation to 'other-employment'. Research on the informal economy more widely has also emphasised the concept of autonomy, arguing that "each employment status...is associated with different degrees of autonomy and risk for those who work in them" (Chen 2008:22). Although prominent in the literature, what is meant by "autonomy" in relation to production processes and relations is not explicitly defined. The NSSO's claim that it amounts to "how, where, and when to produce" (NSSO 2000:6) seems insufficient, with no attention paid to power relations and disparities.

No research has to date explored gender differences in the space for such autonomy over small business management. Research on the Indian context has focused on the experiences of women, concentrating on its implications for women's status in the household and family, rather than as workers. This study uses information for 6,138 self-categorised small enterprise owner-manager's to consider what differentiates those with significant autonomy over their business from those who work, to various degrees, under disguised wage relations.

The measure for autonomy that I adopt is a composite of the responses to several questions in the survey that are separate but interdependent components of autonomous behaviour, and are deeply implicated in the literature on the various categorisations of self-employment (Hahn 1996; Prugl 1999; Hennon and Loker 2000; Unni and Rani 2005; Bose 2007). The result is a simple index that draws on both prior findings within the existing literature and the availability of appropriate measures within the dataset. A similar approach has been used by numerous studies to measure women's autonomy in the context of household decision-making (Holvoet 2005; Jejeebhoy and Sathar 2001; Kantor 2003, 2005; Malhotra and Mather 1997). The index incorporates five elements, summarised below in table 2.

The break-point (above four) for the binary measure means that only labour undertaken *entirely* free of specifications is sufficient (though not necessary) for an outcome of relative autonomy. All other elements must be combined with at least one other. The weighting applied to individuals is informed by the literature on dependency relations. Coincidentally, this break-point corresponds closely to the mean, so the outcome may also be thought of as above and below the mean level of autonomy.

Table 1: Derived relative autonomy measure

measure	weight	maximum score
Does not work under given specifications	8	
Works partly under given specifications	4	8
Works wholly or mainly under given specifications	0	
Self-proprietorship of small enterprise	4	
Partnership based small enterprise	2	4
Other-proprietorship of small enterprise	0	
Independent provision of credit, equipment and materials	4	
Independent provision of credit, equipment or materials	2	4
Recipient of final goods provides credit, equipment and materials	0	
Contract or wage rate income	2	2
Piece rate income	0	2
Relies on one outlet for finished products Multiple outlets for finished products	2	2

5. Data and Method

All India National Sample Survey

This study uses data from round 55 (1999/2000), schedule 10 of the All India National Sample Survey (NSS), a nationwide, continuous survey operation conducted by the National Sample Survey Organisation (NSSO), a Ministry of the Indian Government, in the form of successive annual rounds. Schedule 10 is a survey of employment activities and includes information on a wide range of demographic and socio-economic characteristics. The full dataset contains information for over half a million individuals, randomly selected by stratified, multistage sampling design (MSPI 2008). For the purposes of analysis the sub-population is defined as all individuals aged above 15 years resident in rural South India (Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, Lakshadweep, and Pondicherry). This results in a sample size of 51,493.

Although only a sub-set of the data is analysed, all cases are retained in the calculation of the standard errors. This permits increased confidence in the accuracy of standard errors and statistical validity of resultant inferences from sample to population (Rao 2003). The descriptive statistics for the variables of interest are presented in table 2, below:

Table 2: Descriptive statistics

Variable Name	mean	S.D.
Binary autonomy (outcome variable)	4.1	4.0
Binary small business operator (selection variable)	0.13	0.33
Sex (men / women)	0.5	0.5
Age	35	16
Age2	1501	1395
Marital status (married / unmarried)	0.6	0.5
Dependent children (present / absent)	0.6	0.5
Education (four categories)	0.8	0.8
Household class (six categories)	3.1	1.6
Household caste (four categories)	1	1.3
Household religion (Hindu / Muslim / Other)	0.2	0.5
Number of household loans	4.4	2.7
Household member responsible for domestic work (present / absent)	0.6	0.5
Household member unpaid assistant in enterprise (present / absent)	0.3	0.4
Working hours (part time / full-time)	1.7	1
Work location (outside home / home-based)	0.2	0.1
Regional % of male unemployment	2.7	1.2

n = 51,493 (individuals aged 15+ in rural south India 1999-2000) [weighted sample sans grossing]
Source: All India National Sample Survey 1999 / 2000: round 55, schedule 10: Employment & Unemployment

The Heckman selection probit model (Heckprob)

The Heckprob selection model allows for a probit model to be specified in circumstances where sample selection bias is suspected on theoretical or statistical grounds (Sartori 2003). Thus, in this case, the model allows the likelihood of self employment in a small business undertaking to be separated from the likelihood of significant levels of autonomy over that business. The selection model is appropriate because, although these two outcomes are related, significant autonomy is an outcome available only to those operating a small business to begin with. If the sample of individuals participating is systematically different from the sample of those who are not, coefficients for relative small business autonomy will be biased (Ibid). As is clear from the model specification (below), the Heckman probit selection model provides a means to incorporate this suspected selection bias into the modelling procedure. Not only does this method provide a more appropriate accommodation of the theorised social relations and context, it is considered the only consistent estimator given the truncated sample for the outcome stage (Briggs 2004). This is the first study to use the Heckprob model in this context. The theoretical model is provided below:

Three equations are required to represent the probit model with sample selection Van de Ven and Van Pragg 1981).

The latent equation expresses the assumed underlying relationship:

$$Y_{j}^{*} = x_{j} \beta + u_{1j}$$
 (latent equation)

Which means that the binary outcome is observed:

$$Y_i^{probit} = (Y_i^* > 0)$$
 (probit equation)

The dependent variable for observation $_{\rm j}$ is only observed if:

$$Y_i^{\text{select}} = (Z_i^* Y + u_{2i} > 0)$$
 (selection equation)

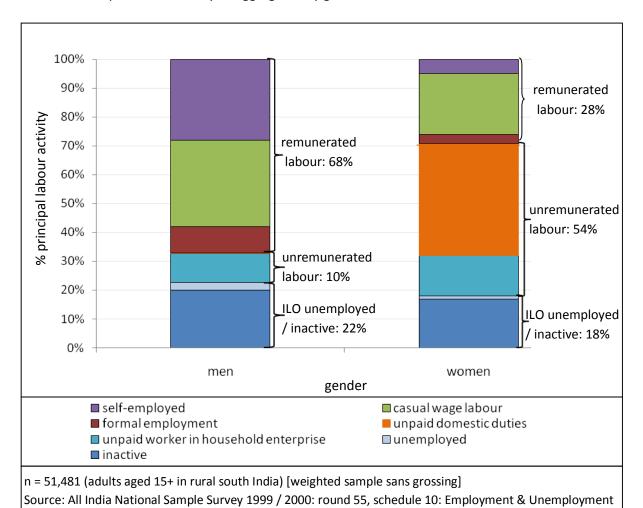
Where: $u_1 \sim N(0,1)$ $u_2 \sim N(0,1)$ $corr(u_1,u_2) = \rho$

As should be clear, this process results in two models; an outcome stage and a selection stage (in this case respectively modelling i) whether or not an individual is operating a small business ii) whether an individual has relative autonomy over production decisions and labour). The decision to operate a small business is thus endogenised and the estimated probability of an outcome *other than* small business ownership is used as a regressor in the outcome stage. As with a standard probit model, a binary outcome is modelled at each stage, making it an appropriate choice for this study.

6. Results and implicatitons

Analysis of the secondary data supports many of the findings reported by the qualitative, small 'n' and anthropological research cited above. Chart one illustrates the differences in the labour activities that predominate men and women's respective time-use. In line with the broader literature, the data show that women's time use is primarily taken up with unremunerated domestic labour, with 40% of women reporting household chores as their principal labour activity. This labour includes the cleaning, meal preparation and childcare necessary for reproduction of the household on a daily and inter-generational basis, as well as production for income substitution / supplementation (tailoring; food and fuel production and/or gathering). A further 14% of women work primarily as unpaid labour in small enterprises belonging to family members. Whereas more than half of all women respondents report unpaid work in and around their households to be their primary labour activity, for men, the figure is just 10%. 0.3% of male respondents report household chores as their principal labour activity, with around 10% working unpaid in family enterprises. This gendered division of labour within the home or family is inverted in the labour market, where more than twice as many men as women are undertaking income-earning labour of some form. For a minority (13% of all those working for payment), this implies a formal contract and regular source of income. For the remainder, almost equal proportions (43% and 44% respectively) earn their income primarily from self-employment and casual wage labour.

Chart 2: Principal labour activity disaggregated by gender



In their study of agricultural labour relations in rural Andhra Pradesh, Da Corta and Venkateshwarlu (1997) find casual wage labour is widely considered socially inferior, with social status deeply entrenched in the capacity to withdraw from such labour, and at higher levels, to withdraw from manual work altogether, including on own means of production (Ibid). Self-employment in small

business can often supplant such labour, eventually providing for exit altogether. Although as a

proportion of all respondents, fewer women than men report casual wage labour (21% compared to 30%), 72% of all women who report primarily undertaking remunerative labour are involved in casual wage labour (compared to 44% for men). Only 18% are self-employed (compared to 43% of men), indicating that, for women self-employment does not provide the same alternative to casual labour that it appears to do for men. Of the income-recipient women, 10% have formal employment, compared with 13% for men. Both men and women rely heavily upon the informal /

unorganised economy as a source of income, however, as a proportion of all respondents (including those not receiving direct income), the rates of formal employment for men are three times those

for women, with 9% of all men employed in a formal labour relation compared with 3% of all

women. The gendered disparities in labour market activities are highly apparent, but considering gender in isolation risks disguising the mediating affects of important structures of social stratification and the institutions they rest upon and help to perpetuate.

Indian rural labour markets and relations exhibit deep inequalities in resources, status and power. Though they are experienced differently and unequally by men and women, they are experienced by both all the same. Land ownership, particularly of high quality, irrigated land, is highly concentrated among the few. More individuals (both men and women) living in small-scale farming households (those owning less than one acre of land) report casual labour than any other household class (including landless casual labour). 45% of men's and 48% of women's casual labour is undertaken by this household class. Operation of small businesses is similarly skewed by class, with 42% of small businesses operated by men and 40% of those operated by women from capitalist farming class households (households with landholdings exceeding eight acres). Capitalist and mid-size (those owning more than one and less than eight acres) farming households exert a monopoly on formal employment, no men or women from small-scale farming or landless casual labour households report formal labour as their principal labour activity. A larger proportion of men and women employed in the formal economy come from landed household classes than from landless households where the head of household is formally employed (61% compared to 23% for men and 58% compared to 28% for women). It is within moderate to large landed households and landless formal labour households that women's seclusion is most notable. 68% of women from capitalist farming households work primarily as unpaid household labour, compared to 30% of women from small-scale farming households and 48% of women from landless casual labour households.

Caste too, appears important in internally differentiating gendered labour institutions. Although caste is not a definitive indicator of prosperity or occupation it once was, it remains seminal to ideologies of work and status. The lived reality of caste in rural South India forms part of a highly complicated social reality. Caste interacts with other forms of social stratification and hierarchy to designate or deny status and prestige. Caste is recorded broadly by the State bureaucracy and administration, primarily in order to facilitate enumeration and evaluation of caste discrimination while attempting to diminish the importance of *Jati* and sub-*Jati* group. Four very broad groups are designated; Scheduled Castes (Harijans / Dalits); Scheduled Tribes (Adivasis); Other Backwards (a large and contentious category) and Forward / Other (all those not otherwise classified). These are the only classifications of caste recorded in NSS survey data. Although no longer directly indicative of social class, wealth, and asset holdings, caste has strong repercussions for the kind of labour that people will seek, be offered, and will freely accept. The great proportion of casual wage labour is

undertaken by men and women from 'scheduled castes' and 'other backwards'. A larger proportion of men from 'forwards / other' castes than any other operate small businesses (35%), although the proportions for 'scheduled tribes' (30%) and 'other backwards' (32%) are not dissimilar, for 'scheduled castes', the proportion is much lower, at just 13%. The proportion of small business operator's shows little variation by caste for women.

Landholdings have been heavily implicated in the literature (Chadha and Sharma 1997) as well as the initial interrogation of data as important for permitting operation of small businesses and access to formal labour. There are, however, vast numbers of people with no productive assets. For women, the situation is complicated further since they lack (enforceable) individual ownership rights over land and other productive assets (Agarwal 1997, 1998; Unni 1999) and their scope to independently utilise household landholdings is limited. Many other men and women possess no *independent* productive assets (due to tied small-holder and harvest relations in agricultural settings and disguised wage relations in apparently self-employed non-agricultural petty commodity production). The space for autonomy over the operation of self-employing small businesses appears to be highly gendered; class and caste appear to inform the kinds of work that is undertaken in the first place, but are less notable for their impact on autonomy over production decisions.

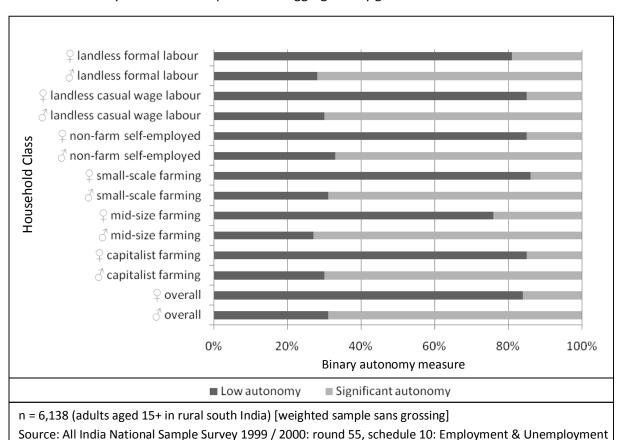


Chart 2: autonomy over business operation disaggregated by gender and class

Overall, 31% of men report low autonomy over the operation and production relations of their small business, with 69% reporting significant decision making autonomy. There is little deviation around this figure for men, although those from mid-size farming households report slightly higher levels of significant autonomy. The same is the case for women, although the returns to belonging to a mid-size farming household are higher.

Table three presents the results from the formal modelling procedure, permitting statistical analysis of the significance of the relationships discussed above.

Table 2: Heckman selection probit model

	outcome equation			selection equation		
	(autonomy)			(small business operator		
	Coeffi	Coefficient S.E.		Coefficient		S.E.
Constant	1.55	***	0.16	-1.56	*	0.20
Gender (women)	-1.3	***	0.07	-0.90	***	0.04
Age	0.2	**	0.05	0.60	*	0.05
Age ²	-0.08	**	0.05	-0.06	*	0.02
Marital status (yes)	0.36	*	0.04	-0.50	***	0.02
Dependent children (yes)	-0.2		0.03	-0.14	***	0.02
Education (reference - illiterate)						
Education (literate / primary/middle)	0.2	*	0.03	0.23	***	0.02
Education (secondary / higher secondary)	0.6	*	0.05	0.08	***	0.03
Education (graduate / postgraduate)	0.2	*	0.10	-0.04		0.05
Household class (reference - formal employment)						
Household class (casual wage labour)	-0.1	*	0.08	0.09	***	0.04
Household class (small-scale farming)	-0.13	*	0.08	-0.06	***	0.04
Household class (midsize farming)	0.09	*	0.10	-0.03	*	0.05
Household class (capitalist farming)	0.09	**	0.08	0.05		0.04
Household class (non-farm self employed)	-0.2	***	0.08	0.04	*	0.04
Household caste (reference - other backwards)						
Household caste (scheduled tribe)	-0.8		0.04	-0.40	***	0.03
Household caste (scheduled caste)	-0.3		0.08	-0.80		0.03
Household caste (forward)	0.5		0.04	0.40		0.02
Household religion (reference - Hindu)						
Household religion (Muslim)	-0.14	***	0.05	0.13	***	0.03
Household religion (other)	0.1	**	0.06	-0.14	***	0.02
Number of household loans	0.1	**	0.06	-0.05	***	0.03
HH member responsible for domestic work (present)	0.8	***	0.04	0.60	***	0.02
HH member unpaid assistant in enterprise (present)	0.4	***	0.05	0.10	*	0.02
Working hours (full-time)	-0.4	*	0.07	0.15	***	0.04
Work location (home-based)	-0.7		0.13	-0.60		0.13
State level male unemployment	-			0.20	***	0.01
ρ				-0.74	***	0.05

^{***1%} Significance level; **5% significance and *10% significance level

Likelihood-ratio test of $\rho = 0$: $\chi^{2}(1) = 27.34$, $p > \chi^{2} = 0.000$

Source: All India National Sample Survey 1999 / 2000: round 55, schedule 10: Employment & Unemployment

n = 51,493 (individuals aged 15+ in rural south India 1999-2000) [weighted sample sans grossing] censored observations = 45,355; uncensored observations = 6138 (outcome stage)

Statistical analysis of the data results in gender as by far the strongest indicator both of whether an individual undertakes home-sited labour and whether they are able to exert significant autonomy over their small business' production relations and operation, with a large (and highly statistically significant) negative impact on the likelihood of each outcome by women. This is not unexpected, seclusion norms impact on women's ability to visit market places to buy materials and sell finished goods; to liaise with contractors and customers; to access credit, all of which are directly implicated in the measure of autonomy it is possible to exact (Kantor 2003).

In line with the literature and the results from the earlier descriptive analysis, the model provides evidence of mediating effects; indicators of life cycle stage conform with expectations, with age exerting a small, but statistically significant, positive effect on the autonomy measure that evens out over time (as indicated by the negative sign on Age²), perhaps as age impairs physical mobility. Marriage too improves the scope for more autonomy, although it negatively impacts on the likelihood of small business operation in the first place, with dependent children reducing both the likelihood of small business operation and autonomy. Education exerts a marginal effect, with autonomy lowest for the illiterate, although there is evidence of diminishing returns, as graduates do not report higher levels of autonomy than do those who have completed (higher) secondary education. The impact of household class is not high, but the direction is as would be expected, with membership of a landed household exerting a positive impact on autonomy. There is the suggestion of a caste relationship, though this is not statistically significant, which suggests 'forward / other' caste exert more autonomy than their counterparts, with 'scheduled tribe' status the most limiting of autonomy. Muslim religious status has a negative effect on small business autonomy in relation to Hinduism, perhaps representing evidence of the differing impact of religious norms as well as an expression of faith-based social inequalities. Two variables help to assess the impact of household composition and the intra-household division of remunerative and non-remunerative labour. Small business autonomy is higher for individuals from households with at least one member primarily responsible for unpaid domestic work, with a similar, though lesser, impact for those with at least one member primarily engaged as an unpaid helper in the household enterprise. Longer working hours appear to exert a negative impact on autonomy, which are often indicative of piece-rate, outsourced production arrangements, so too is a home-based work location, and this too exerts a negative impact on the autonomy measure. The effect of debt is small, but positive and significant. Interestingly, a higher number of household loans has a negative impact on the likelihood of small business operation, but a positive impact on the scope for autonomy for existing small business operators. In the latter case it may be that loans are repeatedly acquired in order to meet the

ongoing capital costs of the business, particularly where payment deferrals occur, reduce dependency on contractors or middle men.

The penultimate row of table two presents the selection bias statistics. The test statistic (the LR test of independent equations) is expressed as:

$$2 (\log L_U - \log L_R)$$

where log L_U and log L_R are the log-likelihoods for the unrestricted and restricted versions, is distributed as a χ^2 statistic with 1 degree of freedom under the null hypothesis that $\rho = 0$ is valid. Since the value of the likelihood ratio test (27.34) exceeds the critical value of chi-squared with one degree of freedom at the 0.1 percent level (10.83) the null hypothesis is rejected, indicating the presence of a selection effect, and confirming the suitability of the modelling procedure.

The analysis illustrates the repercussions of the gendered division of labour within and outside the home for women and men's labour market involvement. The established norms for women's participation in the labour market place limits not only on the kinds of work they may be offered and be willing to accept, but also the location in, and the conditions under, which they may accept it. Kantor, (2003, 2005) and Kabeer (2000) have found the prevalence of seclusion norms among both Muslim and Hindu Indian households dramatically limit the range of choices available to women over "what work to do and where to do it" (Kantor 2005:429). As Spain (Spain 1992) has pointed out, this "confinement to the domestic arena is linked to [women's] lower status in society". Indian women's association with the domestic arena can be understood as a corollary of this restricted spatial mobility. However, numerous studies (Agarwal 1994; Bose 2007; Ghosh and Kanbur 2008; Harriss-White 2003; Holvoet 2005; Kantor 2003) have reported that the gendered division of labour that characterises, and is characterised by, traditional forms of household organisation is mediated by individual characteristics, and wider socio-economic and cultural institutions. The ability to negotiate such norms and the rigidity with which they are applied is unevenly experienced (class, caste, assets, education, and life cycle stage are all important considerations), but this does not undermine the importance of recognising labour institutions as gender-bearing in fundamental ways. It is important to do so in order to move beyond the preference-based explanations of sexdiscrimination favoured by neo-classical economics and premised on a concept of labour markets as neutral arenas in which individual employers may nonetheless discriminate.

The formal economy cannot accommodate the vast numbers of the under-employed. While landless and land-poor men's desire for exit from casual wage labour has been assisted by small business operation, far fewer women appear to have been able to make this transition, with the majority of

those working for direct income, doing so as casual wage labour. Efforts to formalise the informal by assisting the creation of new, or expansion of existing small businesses geared towards petty commodity production has emphasised the superiority of self-employment in comparison to other-employment, but the evidence suggests that for those lacking assets and status, in a context of poor access to formal credit markets for sufficient and timely start-up and working capital, a situation which disproportionately affects women, the distinction can be illusory.

References

Agarwal, B. 1994. A field of one's own: Gender and land rights in South Asia. Cambridge: Cambridge University Press

Agarwal, B. 1997. "Disinherited peasants, disadvantaged workers - A gender perspective on land and livelihood." In 7th Daniel Thorner Memorial Lecture. New Delhi, India: Economic Political Weekly.

Agarwal, B. 1998. "Widows versus daughters or widows as daughters? Property, land, and economic security in rural India." Modern Asian Studies 32:1-48.

Bennett, L. 1992. "Women, Poverty and Productivity in India." World Bank EDI seminar paper 43.

Boris, Eileen and Elisabeth Prugl eds. 1996. Homeworkers in Global Perspective: Invisible No More. London: Routledge.

Bose, M. 2007. "Women's home-centred work in India - The Gendered Politics of Space." International Development Planning Review 29(3):271-298.

Breman, J. 1996. Footloose Labour: Working in India's Informal Economy. Cambridge: Cambridge University Press.

Briggs, D. 2004. "Causal Inference and the Heckman Model." Journal of Educational and Behavioral Statistics 29(4):397–420.

Chadha, G. K. and A. N. Sharma. 1997. Growth, Employment, and Poverty: change and continuity in rural India. Delhi: Vikas Publishing House.

Chang, H. J. 2002. "Breaking the mould: an institutionalist political economy alternative to the neo-liberal theory of the market and the state." Cambridge Journal of Economics 26(5):21.

Chaudhry, P. 1994. The Veiled Womanshifting gender relations in rural Haryana, 1880-1990. Delhi: Oxford University Press.

Chen, M. 2008. "Informality and Social Protection: Theories and Realities." IDS Bulletin 39(2).

Collins, R., J. Saltzman, R.L. Blumberg, S. Coltrane and J.H. Turner. 1993. "Toward an Integrated Theory of Gender Stratification." Sociological Perspectives 36:187-205.

Connell, R.W. 1985. "Theorizing Gender." Sociology 19:260-272.

Cook, J., J. Roberts and G. Waylen. 2000. Towards a Gendered Political Economy. Basingstoke: Macmillan Press.

Da Corta, L. and D. Venkateshwarlu. 1997. "Unfree relations and the feminisation of agricultural labour in Andhra Pradesh, 1970-95." In Workshop on Rural Labour Relations in India Today. London, England: Frank Cass Co Ltd.

Eapen, M. 1995. "Rural Non-agricultural Employment in Kerela - Inter-District Variations." Economic and Political Weekly 29(21).

EDA. 2005. The Maturing of Indian Microfinance: Findings and policy implications from a national study. Gurgaon: EDA Rural Systems.

Elson, D. 1999. "Labor Markets as Gendered Institutions: Equality, Efficiency and Empowerment Issues." World Development 27(3).

Fisher, T., V. Mahajan and A. Singha. 1997. The Forgotten Sector. London: ITDG.

Garikipati, S. 2008. "The Impact of Lending to Women on Household Vulnerability and Women's Empowerment: Evidence from India." World Development 36(12):2620-2642.

Ghosh, S. and R. Kanbur. 2008. "Male Wages and Female Welfare: Private Markets, Public Goods, and Intrahousehold Inequality." Oxford Economic Papers-New Series 60(1):42-56.

Hahn, J. 1996. "Feminisation Through Flexible Labour." In Homeworkers in Global Perspective: Invisible No More, eds. Eileen Boris and Elisabeth Prugl. London: Routledge.

Harriss-White, Barbara. 2003. India Working: Essays on Society and Economy. Cambridge: Cambridge University Press.

Hennon, C. B. and S. Loker. 2000. "Gender and Home-Based Employment in a Global Economy." In Gender and Home-Based Employment, eds. C. B. Hennon, S. Loker and R Walker. Westport: Auburn House.

Hodgson, G. 2000. "What is the essense of institutional economics?" Journal of Economic Issues 34(2).

Hodgson, G. 2006. "What are institutions?" Journal of Economic Issues 40(1).

Hodgson, G. 2007. "Institutions and individuals: Interaction and evolution." Organization Studies 28(1).

Holvoet, N. 2005. "The Impact of Microfinance on Decision-Making Agency: Evidence from South India." Development and Change 36(1):75-102.

Hulme, D. 2003. "Programmes for the Poorest: Learning from the IGVGD Programme in Bangladesh." World Development 31(3).

ILO. 1998. "World Employment Report 1998-99." Geneva: International Labour Organization.

Jejeebhoy, S.J. and A. Sathar. 2001. "Womens Autonomy in India and Pakistan: The Influence of Religion and Region." Population and Development Review 27(4):687-712.

Kabeer, N. 2000. The Power to Choose. London: Verso.

Kantor, P. 2003. "Women's Empowerment Through Home-Based Work: Evidence from India." Development and Change 34(3):425 - 445.

Kantor, P. 2005. "Determinants of Women's Microenterprise Success in Ahmedabad, India: Empowerment and Economics." Feminist Economics 11(3):63-83.

Karmaker, K. G. 2009. "Emerging Trends in Microfinance." Economic and Political Weekly 44(13).

Khandker, S. 1992. "Earnings, Occupational Choice, and Mobility in Segmented Labor Markets of India." World Bank Discussion Paper 154.

Khandker, S. 2005. "Microfinance and Poverty: Evidence Using Panel Data from Bangladesh." World Bank Economic Review 19(2).

Malhotra, A. and M. Mather. 1997. "Do Schooling and Work Empower Women in Developing Countries? Gender and Domestic Decisions in Sri Lanka." Sociological Forum 12(4).

Mehrotra, S. and M. Biggeri. 2005. "Can Industrial Outwork Enhance Homeworkers' Capabilities? Evidence from Clusters in South Asia." World Development 33(10):1735-1757.

Meyer, R. L. and G. Nagarajan. 2000. Rural Financial Markets in Asia: Paradigms, policies and performance. Oxford: Oxford University Press.

Mies, Maria 1982. The Lace Makers of Narsapur: Indian Housewives Produce for the World Market. London: Zed Press.

Mitra, S. K. 1993. "Rural Non-farm Employment, Poverty and Women." The Indian Journal of Labour Economics 36(3).

Morgan, J. and W. Olsen. 2009. "Explanations of Unfree Labour in the India Case." Paper for the ESRC Unfree Labour Seminar Series May 2009.

MSPI. 2008. "How to Use Unit Level Data." New Delhi: Ministry of Statistics and Programme Implementation.

Navajas, S. 2000. "Microcredit and the Poorest of the Poor: Theory and Evidence from Bolivia." World Development 28(2).

NSSO. 2000. "Schedule 10, Concepts and Definitions." ed. Ministry of Statistics and Programme Implementation. New Delhi: Government of India: National Sample Survey Organisation.

Papola, T.S. 1981. Urban Informal Sector in a Developing Economy. New Delhi: Vikas.

Peck, J. 1998. "Workfare: a geopolitical etymology." Environment and Planning D-Society & Space 16(2):133-161.

Peck, J. 2004. "Geography and public policy: constructions of neoliberalism." Progress in Human Geography 28(3).

Prügl, E. 1999. The Global Construction of Gender: Home Based Work in the Political Economy of the 20th Century. New York: Columbia University Press.

Prügl, E. and I. Tinker. 1997. "Microentrepreneurs and Homeworkers: Convergent Categories." World Development 25(9):1471-1482.

Puhazhendi, V. (2000). 2000. Evaluation study of self help groups in Tamil Nadu. Mumbai: NABARD.

Puhazhendi, V. and K. Satyassi. 2000. Microcredit for Rural People: An impact study. Mumbai: NABARD.

Radhakrishna, R. 2002. "Agricultural Growth, Employment and Poverty: a policy perspective." Economic and Political Weekly 19th January.

Rao, J.N.K. . 2003. Small Area Estimation. New York: Wiley.

Samal, K.C. 1997. "Features and Determinants of Rural Non-Farm Sector in India and Orissa." Journal of Indian School of Political Economy 9(1).

Sartori, A. 2003. "An Estimator for Some Binary-Outcome Selection Models Without Exclusion Restrictions." Political Analysis 11:111-138.

Schotter, A. 1981. The Economic Theory of Social Institutions. Cambridge: Cambridge University Press.

Sethuraman, S.V. 1998. Gender, Informality and Poverty: A Global Review. Washington D.C: The World Bank.

Spain, D. 1992. Gendered Spaces. Chapel Hill: University of North Carolina Press.

Tipple, G. and J. Coulson. 2007. "Funding the Home-Based Enterprise - Finance and Credit in Developing Country Livelihoods." International Development Planning Review 29(2):125-159.

Unni, J and U Rani. 2005. "Impact of Recent Policies on Home-Based Work in India." Human Development Research Centre Discussion Paper 10.

Unni, J. 1996. "Non-Agricultural Employment and Rural Livelihoods: macro vis-à-vis micro view." The Indian Journal of Labour Economics 39(4).

Unni, J. 1999. "Property Rights for Women." Economic and Political Weekly 34(21).

Unni, J. 2001. "Gender and Informality in Labour Market in South Asia." Economic and Political Weekly 36(26).

Veblen. [1914] 1964. The Instinct of Workmanship and the State of the Industrial Arts. New York: Augustus M. Kelly.

Venkateshwarlu, D. and L. Da Corta. 2001. "Transformations in the age and gender of unfree workers on hybrid cotton seed farms in Andhra Pradesh." Journal of Peasant Studies 28(3):1-36.

Visaria, P. and R. Basant. 1994. Non-Agricultural Employment in India: Trends and Prospects. Delhi: Sage.

Vyas, V.S. and P. Bhargava. 1995. "Public Intervention for Poverty Alleviation: an overview." Economic and Political Weekly 30(41).

Yunus, M. 2003. Banker to the Poor: Micro-Lending and the Battle against World Poverty: Public Affairs.