

**The Home as the Factory Floor:
Employment and Remuneration of
Home-based Workers**

Wendy Cunningham and Carlos Ramos Gomez

The World Bank

I Introduction

Home-based work is a mode of informal sector employment that has gained increasing importance in Latin America due to globalization. As firms compete to survive in the global economy, they seek out modes of production that maximize flexibility in terms of production schedules and factor inputs while generating quality outputs at internationally competitive prices. This has led to a reorganization of production processes such that the final assembly, packing, data entry, or other low skilled tasks occurs less in factories and more in private homes through contracted-out production (Carr 2000, WIEGO 2000).¹ The absence of a permanent labor force or fixed capital allows firms to easily change production methods, the goods produced or the location of production, thereby lowering costs (ILO 1995, Prugl 1997, Benería and Roldón 1987). Additionally, the presence of a large potential labor force that has limitations to working outside of the home – either due to limited mobility (disabled) or due to frequent duties that must be performed throughout the day in the home (primary

motivations for self-employment and clandestine wage employment in small firms is plentiful such that a picture of the sector is under construction (Maloney 2000, Gonzalez de Rocha 1994, Chant 1991), but little is known of home-based work, which is a distinct class in itself.

Most of the scarce research on home-based work is derived from case studies and interview data by sociologists and anthropologists, due to an absence of empirical data that would permit statistical analysis of a random sample (Chen 1999, Prugl 1997, Carr 2000). The interview data largely agree that home-based work is primarily undertaken by women and their children (Chen 1999) who perform simple, repetitive, labor-intensive tasks (Arriagada 1998) for low wages. Since the work is performed in the privacy of one's home, the workers are subject to poor work conditions, few legal protections,² and isolation (WIEGO 2000). However, these studies do not clearly show that home-based work offers a worse alternative than does other types of work that people with similar labor market and home constraints may face. A competing view suggests that home-based work provides income generation opportunities for those who have family

on the sociological findings, thereby reinterpreting the qualitative data. The next section defines home-based work and lays out the challenges to analyzing the sector. Section III discusses the findings from the small sample, qualitative sociological studies. Section IV discusses the data and the mean characteristics of the samples. Section V uses the large samples to empirically test the hypotheses – namely who are home-based workers and whether or not they are exploited in terms of wages and work shift duration. Section VI summarizes the discussion and outlines policy implications to increase the efficiency of the sector while protecting workers' rights.

II. Defining home-based work

Home-based work is difficult to identify as an empirical concept due to an absence of a single definition of the sector and a lack of data to aid in the development of one (Prugl 1997). The most general definition of a home-based worker is an individual who works in his or her home or at a workplace near the homes that does not belong to the employer (WIEGO 2000, Arriagada 1998). This category would include the self-employed,³ piece workers or salaried who work for a middle-man or a firm, or those who work in a family

- *Level of Risk*: a worker who receives a fixed salary from the “client” and is not subject to the risk associated with price or demand fluctuations (Prugl 1997);
- *Nature of Output*: workers in industrial home-work, craft production, making and selling of foods, and telecommunications-based services (Prugl 1997);
- *Nature of Work*: assembly where the inputs and production tools may be provided by the employer or by the employee (Pollack 1998, Arriagada 1998);
- *Type of Client*: those whose client is an intermediary (i.e. not the public) as opposed to those who sell directly to the public (ILO 1995); and
- *Skill level*: those who work out of their homes but are not professionals (the latter are classified as entrepreneurs).

The wide variation in definition leads to two problems in analysis. First, many of these definitions are difficult to quantitatively define. Some concepts, such as “subordination” do not have a statistical definition, but instead can only be proxied by a number of other characteristics about autonomy in decision-making. Additionally, the

data may in fact be a result of different methods of measurement rather than true differences in the realities studied. The absence of single set of characteristics to define the sector makes it difficult to design surveys in order to systematically collect data on the sector (Chen, Sebstad, and O'Connell 1999).

III. Lessons from the Qualitative Analysis: A Literature Review

The proportion of the labor force that engages in home-based work ranges from 1.6 percent to 20 percent of the working population across the world (Table 1). In those countries where an attempt is made to measure home-based work, an array of definitions and questions are used to construct a picture of home-based workers, thus making comparisons meaningless. However, it should be noted that home-based work exists in both developed and developing countries across the world.⁴ Table 1 also shows that this organization of work did not necessarily arise from the globalization process. A few of the countries in the table had sizeable home-based work sectors prior to lowering their trade barriers.

3.1 Characteristics of home-based workers

of the home-based workforce is women; estimates range from 64 percent to over 90 percent, compared to 40 percent of the non home-based workforce (ILO 1995, Chen, Sebstad, and O'Connell 1999). Female home-based workers report that the flexible work hours and the home as the work site allows them to more efficiently fulfill their home and market responsibilities than if they worked a shift in a remote factory location (Prugl 1999, Tomei 2000, Arriagada 1998). Benería and Roldón (1987) report that 60 percent of home-based workers in their sample would decline the offer of a better paying factory job in favor of the time and location flexibility of working from the home. The preference to work at home is highly correlated with the presence of children, as shown by interviews with female home-based workers with children who say that once their children leave home, they hope to find employment outside the home (Jelin 2001). Thus, the constraints faced by these women due to their roles as caregivers and the absence of or prohibitive cost of market or public alternatives to substitute for the women's home care – such as child care, running water, labor saving household appliances – make home-based work an optimal form of market participation; without these constraints, they

of the family (Akerlof 1998). However, market work from the home is more clandestine than if the wife leaves the house and community to go to the worksite. Also, market work in the home has been shown to be considered less serious than is work outside of the home, thereby maintaining the appearance that the husband is adequately performing his role. In fact, husbands and the women themselves who work at home often classify this type of work as income earning activities to supplement the husband's income, even when earnings from home-based work is the primary source of household income (Geldstein 2001).

The second class of individuals who have difficulty working outside of the home are those with physical or mental disabilities that limit their ability to travel to external work sites. This category includes those of any age who are handicapped (ILO 1995) and older individuals who have lost mobility with age (Carr 2000, Tomei 2000). Given the current constraints in terms of ease of transportation, home-based work perhaps offers their only opportunity for employment.

Home-based workers may also be those who have difficulty entering the regular

skill is less important), employer bias may be less prevalent in this work. On the other hand, these individuals may have less information about job opportunities or how to search for jobs, particularly the first three categories, so they accept piece work that is handed out in their marginal neighborhoods, thus never fully searching the labor market (ILO 1995). Both of these scenarios contributes to the existence of a home -based labor force and a potentially oligoposonistic -type labor market; i.e. a few potential employers who may collude to keep wages low and benefits at a minimum. ⁵

3.2 Nature of the work

The production processes and outputs by home -based workers vary, but most of the qualitative studies agree on two characteristics: home -based workers earn low wages and they work more than the legal number of hours each week. ⁶ Home-based workers are found to be low paid. Roldon and Beneria (1987) find that 90 percent of the women in their sample earn less than the minimum wage. Other studies support this assertion (WIEGO, Carr 2000, ILO 1995).

However, Jelin (2001) finds the opposite result for Argentina home-based workers, whose weekly work shifts are $2/3$ of those of shift workers.

IV. Data, Methodology and Sample Characteristics

4.1 Data

The remainder of the paper uses survey data from Brazil, Ecuador and Mexico to test the qualitative findings. These countries were selected solely on the basis of data availability – they were the only labor market surveys for Latin America that could be obtained and that permitted identification of market work in the home. The data sets used are: the Brazilian National Survey of Households (PNAD) for 1999; The Mexican National Urban Employment Survey (ENEU) for 1999 (second quarter); and the Ecuadorian Living Conditions Survey (ECV) for 1999.

For all countries, the sample is limited to urban men and women who are between the ages of 15 and 70 years old, i.e. of working age. Men and women are analyzed separately since the qualitative analysis suggests that they have very different patterns in

- **Informal self-employed.** Individuals who declare themselves self-employed, work at home, and have no more than secondary education completed.
- **Professional.** Individuals who declare themselves self-employed or employees, work at home and have more than secondary education completed.
- **Contract.** Individuals who declare themselves as employees, work at home for a wage, have no more than completed secondary education, and work in the manufacturing sector.⁸
- **Unpaid.** Home-based workers who are not remunerated.

Table 2 shows the proportion of home-based worker in each country by sex and the breakdown by category for 1999. The “other” category consists of firm owners, service workers (including domestic servants), and agricultural laborers.

Home based workers are a substantial fraction of the work force. By 1999, five percent of the Brazilian and Mexican labor force (and 10 percent of the informal sector) and more than 17 percent of the Ecuadorian labor force worked out of their homes.

Women are more than three times as likely as men to be home based workers in all three

one percent of the labor force with the exception of Ecuador, with approximately three percent of the labor force in unpaid home based work.⁹

Due to the small number of professionals and unpaid workers, and their unique situations – professionals have high human capital and unpaid workers may be considered as having misreported their earnings¹⁰ – the rest of the analysis will only consider informal entrepreneurs and contract workers who have no more than a completed secondary level of education.¹¹

4.2 Demographic Characteristics of Home Based Workers in the Sample

Women are over-represented in the home-based work sector in all three countries analyzed (Tables 3a-3c). In Mexico, while women comprise 35.5 percent of all workers, they are nearly 65 percent of informal entrepreneurs and 42 percent of contract workers. The proportions are higher in Brazil, with 75 percent and 82 percent, respectively, as compared to 39.5 percent in the rest of the economy, and Ecuador with 74 percent and 62 percent, respectively, compared to 35 percent of all workers.

In general, home-based workers have less human capital than do workers in the rest of the economy. Informal entrepreneurs tend to have more work experience (since they are older) than workers in the rest of the economy while contract workers are mixed. Only 8.5 percent of Mexican informal entrepreneurs, 11.5 percent of Brazilian, and 7.1 percent of Ecuadorian entrepreneurs are in the age category 15-25 while approximately 30 percent of the rest of the economy is. However, in Mexico, nearly half of all contract workers are in the young age category while Brazilian contract workers are more likely to be in the age category 26-45, i.e. prime-aged workers and in Ecuador they tend to be in the oldest category: 46 years or more. Education levels also tend to be lower than those of the rest of the economy, especially among contract workers.

Dependent women are most likely to be home based workers. In Mexico, 35.5 percent of the informal entrepreneurs and 20.4 percent of the contract workers are wives while in Brazil, the proportions are 49.7 percent and 60 percent, respectively, and in Ecuador they are 31.2 percent and 23.1 percent, respectively. In comparison, only 13.8 percent of Mexican workers, 19.6 percent of Brazilian workers, and 13.3 percent of

being the household head. This reflects the high proportion of women and wives in this category.

Contract workers are more likely to have children age 0-12 in their homes in Mexico and Brazil than do workers in the economy as a whole or informal entrepreneurs. Approximately 29 percent of Mexican workers have children age 0-5 in their households while more than 40 percent have children age 6-12 or 13-18 living in their home. The proportions are similar among Mexican home-based informal entrepreneurs, but the proportions of children age 0-5 and 13-18 are 10 percent higher in Mexican contract worker homes and 20 percent higher for children age 6-12. Similar differences emerge in Brazil. In Ecuador, home-based workers are a few percentage points more likely to have children in the household than are workers outside of the home, but the differences are not as large as in Mexico and Brazil.

4.3 Employment Characteristics of Home-based Workers in the Sample

Home based workers are less likely to be in the formal sector than are non-home

to 80 percent of home based contract workers are employed in firms with five or fewer employees while the proportions are more than twenty percentage points less for non-home based workers. In contrast, the share in firms with more than 16 employees is lower for home based than non-home based workers in Mexico and Brazil, while the proportions are nearly equal in Ecuador. This high proportion in small firms may be due to the contract worker's identification of the "middle men" as their employers, who commonly receive orders from firms then farm out the work among producers (Arriagada 1998). Informal entrepreneurs, by definition, own small firms.

Both contract workers and informal entrepreneurs who work out of their homes have lower hourly earnings than do workers who do not work from their homes. Using the legal minimum wage in the first period for each country as a unit of measure (thereby not allowing comparisons across countries), a higher proportion of home based workers earn less than one minimum wage than do non-home based workers while a lower proportion earn more than three minimum wages.

Finally, home based workers report working fewer hours on the job than do

reporting errors due to the sporadic nature of home based work, difficulty in identifying activities as market or non-market based, the multiple jobs that home-based workers often hold (Benería and Roldan 1987), and the intermixing of market and home activities that makes it difficult to estimate time spent in market work in the reference week.

4.4 Methodology

Simple regression methodologies are used to better identify the characteristics that lead to home-based work and whether or not their wages and hours are lower than non-home based workers, conditioning on their propensity to be less educated and to have family duties.

The characteristics of home-based workers are identified by using a logit estimate of the probability of being a home-based worker, where *home* is a dummy variable that takes a value of 1 if the individual works in his or her own home and 0 if not.¹³ The dependent variable is regressed on the demographic variables given in Tables 3a -3c. *Sex* takes a value of 1 if the individual is a female. The variables *age15*, *age2645*, and *age46* are dummies that take a value of 1 if the observation's age is within the range. The last

adult are included. *Presch* takes a value of 1 if there are children aged 5 or less in the household, *elemsch* takes a value of 1 if there are children aged between 6 and 12 in the household, *teen* takes a value of 1 if there are children aged between 13 and 18 in the household, and *adult* takes a value of 1 if there are (non-spouse) adults age 19 or older in the household. For the Brazilian regressions, the dummy variable *non-white* is included to control for race; this variable was not available for Mexico and Ecuador. Finally, to understand the income status of those who work at home, a dummy for the household's position in the income distribution was used. The dummy variables *p10*, *p20*, and *p80* take a value of 1 if the worker's household income, net of earnings from home-based work, falls in the first, second, or the eighth through tenth deciles of the income distribution, respectively. The regression is estimated three times for each country; first with the whole sample (where the *Sex* variable is of most importance) and then by sex.

To test whether or not home-based workers earn less than other workers simply by being based out of their home or if it is due to human capital characteristics, the log hourly wage earned by home-based and non-home-based workers is regressed on

significance levels are similar to those in the wage equation that does not condition on labor supply.

Finally, to test whether or not home-based workers have longer or shorter work shifts than do those who work outside of the home, the log of weekly hours worked is regressed on sex, age, headship, household characteristics that may constrain labor market time (marital status, the presence of children of different ages, the presence of other adults), and the *home* dummy.

V. Regression Results

5.1 Characteristics home-based workers

The regression results for all three countries strongly support the findings in the qualitative literature that women dominate in the home-based work sector (column 1 in Tables 5a-5c). Women are 4.4 percent, 8.6 percent and 22.9 percent more likely to be home-based workers in Mexico, Brazil, and Ecuador, respectively. This emerges even when controlling for women's households constraints – the presence of children and a

due to the small sample size.¹⁵ Similarly, in Mexico and Brazil, women with children age 0-5 (*presch*) or 6-12 (*elemsch*) were 1.5 percent more likely to be home based workers than were women without young children in their households. In Ecuador, the coefficient estimate on children age 0-5 is significant at the 10 percent level, thereby suggesting that these women are six percent more likely to be home based worker. Men, on the other hand, show weak tendencies for home-based work as a result of household characteristics: their participation in home-based work is uncorrelated or negatively correlated with marriage and the presence of young children, unlike the women whose correlations were strong and positively significant in all the estimations.

Even when controlling for the presence of children, less educated women have a higher propensity for home-based work in all three countries while less educated men are neither more or less likely to be a home-based worker. The strong effects for women and absent effects for men suggest that education alone does not lead to home-based work. Instead, perhaps the combination of being female and uneducated leads to a higher value for her domestic work since uneducated families tend to be poor (Wodon 2000) and poor

tend to work at home. The probability of being a home-based worker is monotonically increasing with age for men and women in all three countries, with young women being particularly unlikely to accept this type of work in Brazil and Ecuador. This reflects the propensity for the informal self-employed, who are a sizeable portion of the home-based worker in the sample, to be in the oldest age category (Cunningham and Maloney 2001).

There is less evidence that those with limited access to the labor market, whether due to demand or supply constraints, leads people to home-based work. The regression using the Brazilian data shows that non-white individuals are neither more nor less likely to be home-based workers compared to the (favored) white workers .

5.2 Hourly remuneration

Both men and women who are home based workers earn less than do non-home based workers in all three countries. Home based workers earn 22.8 percent, 28.9 percent, and 39.6 percent less than non-home based workers in Mexico, Brazil, and Ecuador, respectively. The difference is larger among women than men, where women

for the foregone goods and services (for auto-consumption) that they would have produced had they not had to spend time traveling to work or could take breaks from market work to perform domestic work throughout the day. Women working in the home “pay” for the benefits of flexibility in work schedules and locations via a lower wage.¹⁶

5.3 Work shift duration

Contrary to the qualitative findings, the data show that home based workers have shorter work weeks than do non-home based workers. In Mexico and Ecuador, their hourly work weeks are approximately one-third less than the time that non-home based workers spend on the job while in Brazil, they spend about one-fourth less time at work. This is highly due to women’s shifts, with women in all three countries working 30 – 40 percent fewer hours than women who work outside the home. Male home based workers, on the other hand, work 9-17 percent shorter work weeks than their non-home based counterparts.¹⁷

spent working. However, qualitative studies have also shown that many tasks associated with the job, such as travel to the supplier to pick up inputs, time spent packing final products, time spent recording outputs, and the like, are not counted as “work time” although they are activities for the job.

VI. Conclusions and Policy Recommendations

This paper has shown that many of the findings on home-based work from qualitative studies can be supported by randomly sampled quantitative surveys. Women are more likely to be home-based workers. This is due to their roles as mothers, wives, and women. Mothers and wives select themselves into this type of work in order to better balance home and market work, but sacrifice higher wages in exchange. Women with low levels of education, who are likely to subscribe to more traditional gender roles and have fewer exit options, also tend to enter this type of work, perhaps in order to preserve her own and her husband’s gender identities. Women in home-based work also are more likely to be part-time workers, allowing them to hold multiple jobs, a common

the skills and mobility (older workers) to work outside the home. Instead, home-based work offers perhaps the only form of market work in which they may engage (Beneria and Roldon 1987).

Finally, it should be noted that the analysis in this paper is limited since due to an absence of a quantifiable definition and good country data regarding the motivations for being in this sector and the patterns. Only once a definition is agreed upon and country statistical agencies use this definition to standardize questionnaires with questions to examine these issues, will the incidence of, reason for employment in, and quality of the jobs in home-based work be understood.

Given the lessons learned in this paper, to lower the incidence of home-based work, it would be necessary to decrease the barriers to work outside the household. Among poor women with high domestic responsibilities, time saving devices – such as running water, electricity, and childcare services with flexible hours – may lower the cost of these women working outside the home. Additionally, more frequent, adequate, and safe transportation that would lower the time to travel to a job site, provide means for the

hypothesize that it is due to participation in an oligopsonistic labor market. In the short run, collectivization of home-based workers would lead to an exchange of information on salaries (and work conditions) throughout the market, thereby increasing the competitiveness of the market. In the longer run, as constraints to working outside the household are decreased, home-based workers may fully enter the competitive market, only working at home if the wage and non-wage benefits in home-based work is preferable than working outside of the home.

Tables

Table 1: Proportion of the labor force engaged in Home-based work

	Estimated proportion	Year of estimate	Year of trade liberalization
Algeria ¹	3.3	1989	1991
Australia ¹	2.9	1989	1964
Brazil ²	5.5	1999	1991
Ecuador ²	17.3	1999	1991
India ¹	2.5	1981	1994
Japan ¹	1.6	1988	1964
México ²	4.4	1999	1986
Philippines ¹	23.0	1980s	1988
Peru ¹	10.5	1987	1991
United Kingdom ¹	2.3	1981	Always open
United States ¹	7.53	1985	Always open

¹ILO (1995); ²author's calculations

Table 2: Prevalence of Home-based Work, by Gender (1999)

Home-based workers as a proportion of the whole (or male or female) labor force

Brazil			
	Male	Female	Total
Informal s-e	1.6	6.27	3.61
Professional	0.24	0.51	0.35
Contract	0.01	0.08	0.04
Unpaid	0.16	0.65	0.37
Others*	0.26	2.35	1.16
All together	2.28	9.86	5.54

Table 3a: Characteristics of Home-based Workers in Mexico (1999)
 Percent of the type of worker (informal entrepreneur, contract, or other) who has the demographic listed

	Home-based Workers		Rest of the Economy*
	<i>Informal Entrepreneurs</i>	<i>Contract</i>	
<i>Sample size</i>	4322	93	102384
Female	64.81	41.94	35.54
Age 15-25	8.51	48.39	31.73
Age 26-45	51.60	40.86	48.63
Age 46+	39.89	10.75	19.64
No school	13.05	10.96	5.05
Primary	71.71	75.34	73.51
Secondary	15.24	13.70	21.44
Household head	46.32	20.43	47.48
Husband	23.69	13.98	37.26
Wife	35.47	20.43	13.78
Single Mother	3.63	2.15	3.01
Single Female	5.04	12.90	10.99
Single Male	5.88	34.41	18.97
Pre-school child	27.81	37.63	29.38
Elementary child	41.42	62.37	40.03
Teen child	42.23	59.14	43.02
Nonwhite	N/A	N/A	N/A
0-10 per	18.33	11.22	10.77
10-20 per	14.01	12.24	11.11
80-100 per	10.59	8.16	15.78

Table 3b: Characteristics of Home-based Workers in Brazil (1999)

	Home-based Workers		Rest of the Economy*
	<i>Informal Entrepreneurs</i>	<i>Contract</i>	
<i>Sample size</i>	4851	60	110205
Female	74.69	81.67	39.56
Age 15-25	11.56	20.00	31.06
Age 26-45	52.36	63.33	49.45
Age 46+	36.08	16.67	19.49
No school	14.60	11.43	11.52
Primary	57.31	82.86	58.20
Secondary	28.09	5.71	30.28
Household head	41.31	16.67	49.43
Husband	17.75	3.33	37.52
Wife	49.68	60.00	19.56
Single Mother	16.57	10.00	10.72
Single Female	5.09	5.00	2.83
Single Male	3.46	3.33	5.33
Pre-school child	22.20	28.33	25.76
Elementary child	34.63	38.33	33.32
Teen child	39.13	41.67	39.23
Nonwhite	50.15	43.33	50.01
0-10 per	11.67	8.33	6.79
10-20 per	9.79	10.00	8.14
80-100 per	16.27	15.00	22.64
% Household income	52	42	63

Table 3c: Characteristics of Home-based Workers in Ecuador (1999)

	Home-based Workers		Rest of the Economy*
	<i>Informal Entrepreneurs</i>	<i>Contract</i>	
<i>Sample size</i>	464	13	3630
Female	74.14	61.54	34.85
Age 15-25	7.11	38.46	29.48
Age 26-45	50.22	15.38	47.60
Age 46+	42.67	46.15	22.92
No school	3.93	0.00	3.32
Primary	44.32	53.85	38.85
Secondary	51.75	46.15	57.83
Household head	42.46	23.08	46.97
Husband	15.30	15.38	25.92
Wife	31.68	23.08	13.22
Single Mother	22.63	15.38	12.73
Single Female	0.43	0.00	0.19
Single Male	4.74	23.08	21.65
Pre-school child	25.43	30.77	30.14
Elementary child	35.78	15.38	39.01
Teen child	40.09	76.92	38.90
Nonwhite	N/A	N/A	N/A
0-10 per	10.56	23.08	7.30
10-20 per	8.84	23.08	9.17
80-100 per	17.24	7.69	18.02
% Household income from this job?	51	35	56

Table 4a: Firm Characteristics in Mexico (1999)

	Home-based Workers		Rest of the Economy*
	<i>Informal Entrepreneurs</i>	<i>Contract</i>	
Manufacturing	43.01	100.00	22.89
Commerce	21.68	0.00	21.67
Services	23.42	0.00	32.01
Agriculture	0.00	0.00	1.65
Other	11.89	0.00	21.78
Formal sector employer ^a	0.00	19.67	54.91
Firm size 0-5	99.81	80.65	44.35
Firm size 6-15	0.19	12.90	9.67
Firm size 16+	0.00	6.45	45.97
0-1 minimum wages	71.70	78.49	68.95
1-3 minimum wages	24.60	21.51	27.98
3-5 minimum wages	2.34	0.00	2.17
5-10 minimum wages	1.11	0.00	0.74
10+ minimum wages	0.25	0.00	0.17
Weekly hours	34.80	36.18	45.93

*Rest of the economy are those who are working but not at home

^a Formal sector employer is defined by the variable statusp and firm size

Table 4b: Firm Characteristics in Brazil (1999)

	Home-based Workers		Rest of the Economy*
	<i>Informal Entrepreneurs</i>	<i>Contract</i>	
Manufacturing	16.29	100.00	13.90
Commerce	14.64	0.00	18.34
Services	63.61	0.00	28.23
Agriculture	0.00	0.00	8.62
Other	5.46	0.00	30.91
Formal sector employer ^a	0.00	6.67	58.36
Firm size 0-5	100.00	45.00	29.42
Firm size 6-10	0.00	11.67	14.18
Firm size 11+	0.00	43.33	56.39
0-1 minimum wages	40.30	51.72	29.38
1-3 minimum wages	43.84	44.83	50.57
3-5 minimum wages	9.06	1.72	11.32
5-10 minimum wages	5.04	1.72	6.47
10+ minimum wages	1.75	0.00	2.25
Weekly hours	35.36	36.3	37.03

* Rest of the economy are those who are working but not at home

^a Formal sector employer is defined by carteira assinada

Table 4c: Firm Characteristics in Ecuador (1999)

	Home-based Workers		Rest of the Economy*
	<i>Informal Entrepreneurs</i>	<i>Contract</i>	
Manufacturing	37.72	100.00	14.41
Commerce	36.21	0.00	28.74
Services	25.22	0.00	38.47
Agriculture	0.86	0.00	7.61
Other	0.00	0.00	10.77
Formal sector employer ^a	0	7.69	31.72
Firm size 0-5	100.00	69.23	60.35
Firm size 6-10	0	0.00	8.02
Firm size 11+	0	30.77	31.62
0-1 minimum wages	67.11	84.62	62.19
1-3 minimum wages	25.56	15.38	31.99
3-5 minimum wages	3.78	0.00	3.42
5-10 minimum wages	2.89	0.00	1.44
10+ minimum wages	0.67	0.00	0.96
Weekly hours	32.31	31.38	43.32

*Rest of the economy are those who are working but not at home

^a Formal sector employer is defined by contrato escrito/nombramiento

Table 5a: Brazil - Probability of Home-based work (relative to non home based)

	All	Men	Women
Sex	0.086 *** (30.05)		
Age1525	-0.053 *** (-20.25)	-0.020*** (-7.12)	-0.123*** (-17.59)
Age2645	-0.033*** (-11.49)	-0.013*** (4.52)	-0.073*** (-9.65)
Head	-0.011*** (-4.33)	0.007*** (2.76)	0.003*** (0.36)
Married	0.006*** (2.96)	-0.007*** (-2.95)	0.048*** (6.98)
presch	-0.002*** (-1.08)	-0.007*** (-3.44)	0.010* (1.73)
elemsch	-0.002*** (-0.82)	-0.004** (-2.27)	0.004*** (0.75)
teen	0.001*** (0.72)	-0.001*** (-0.79)	0.000*** (-0.2)
adult	-0.008*** (-3.87)	-0.001*** (-0.44)	-0.011** (-2.11)
non-white	-0.000*** (-0.17)	-0.001*** (-0.49)	-0.000*** (-0.02)
nosch	0.025*** (5.75)	-0.002*** (-0.79)	0.088*** (7.95)
pri	0.018*** (8.86)	-0.003*** (-1.55)	0.059*** (11.9)
p10	0.066*** (18.88)	0.021*** (4.15)	0.164*** (18.88)

Table 5b: Ecuador - Probability of Home-based work (relative to non home based)

	All	Men	Women
Sex	0.229*** (12.75)	-	-
Age1525	-0.178*** (-9.23)	-0.086*** (-4.48)	-0.348*** (-8.24)
Age2645	-0.095*** (-5.29)	-0.061*** (-3.8)	-0.155*** (-3.93)
Head	-0.001 (-0.26)	0.012*** (0.72)	-0.003*** (-0.37)
Married	0.026* (1.83)	0.018*** (1.15)	0.033*** (0.77)
presch	0.013 (0.97)	-0.006*** (-0.42)	0.053*** (1.71)*
elemsch	-0.040*** (-2.71)	-0.034** (-2.49)	-0.048*** (-1.49)
Teen	0.039*** (2.62)	0.01*** (0.66)	0.084*** (2.66)
Adult	0.054** (2.05)	0.034*** (1.85)*	0.11* (1.71)
nosch	-0.068** (-2.11)	-0.056*** (-1.55)	-0.11*** (-1.59)
pri	0.005*** (0.35)	0.007*** (0.5)	-0.006*** (-0.2)
p10	0.064** (2.35)	0.017*** (0.71)	0.16*** (2.74)
p20	0.001***	0.017***	0.046***

Table 5c: Mexico - Probability of Home-based work (relative to non home based)

	All	Men	Women
Sex	0.044*** (27.72)		
Age1525	-0.042*** (-25.77)	-0.024*** (-12.49)	-0.071*** (-19.46)
Age2645	-0.023*** (-15.92)	-0.012*** (-7.4)	-0.040*** (-12.15)
Head	-0.007*** (-4.9)	0.007*** (3.57)	0.007* (1.82)
Married	0.005*** (3.97)	-0.008*** (-5.49)	0.036*** (10.02)
presch	0.004*** (3.00)	-0.002 (-1.58)	0.017*** (4.41)
elemsch	0.002 (1.21)	-0.001 (-1.00)	0.006** (2.24)
Teen	-0.000 (-0.08)	0.001 (1.29)	-0.005* (-1.78)
Adult	-0.003** (-2.22)	0.003** (2.00)	-0.002*** (-0.69)
nosch	0.04*** (12.28)	0.004 (1.35)	0.095*** (13.28)
pri	0.014*** (10.99)	0.003** (2.09)	0.033*** (10.41)
p10	0.025*** (12.66)	0.014*** (6.01)	0.059*** (12.55)
p20	0.010*** (5.50)	0.004** (2.16)	0.031*** (6.81)

Table 6a: Brazil - Log hourly wages for the labor force as a whole and with Heckman correction

	Hourly wage estimation			Heckman corrected		
	All	Men	Women	All	Men	Women
Sex	0.255*** (-36.39)	-	-	0.623*** (-86.65)	-	-
Age1525	0.754*** (-63.68)	0.794*** (-51.54)	- 0.686*** (37.3)	- 0.826*** (-96.99)	- 0.909*** (-81.22)	- 0.716*** (-54.68)
Age2645	0.224*** (-19.78)	0.198*** (-13.44)	0.261*** (-14.84)	0.018** (2.11)	0.002*** (0.18)	0.416*** (2.97)
Nonwhite	0.226*** (-33.46)	0.240*** (-27.18)	0.202*** (-19.34)	0.249*** (-47.55)	0.260*** (-36.51)	0.238*** (-30.63)
Nosch	0.895*** (-64.88)	0.919*** (-56.6)	0.806*** (-29.52)	1.638*** (-133.54)	1.556*** (-103.3)	1.739*** (-83.67)
Pri	0.384*** (-53.05)	0.374*** (-40.58)	0.401*** (-34.19)	0.912*** (-101.77)	0.815*** (-69.33)	-1.04*** (-74.44)
Home	0.211*** (-2.98)	0.116*** (0.94)	0.371*** (-4.43)	0.341*** (-30.08)	0.150*** (-6.53)	0.391*** (-29.53)
R ²	0.2615	0.2832	0.2103	-	-	-
Sample size	37795	23225	14570	84097	48519	35578

Table 6b: Ecuador - Log hourly wages for the labor force as a whole and with Heckman correction

	Hourly wage estimation	Heckman corrected
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Table 6c: Mexico - Log hourly wages for the labor force as a whole and with Heckman correction

	Hourly wage estimation			Heckman corrected		
	All	Men	Women	All	Men	Women
Sex	0.102*** (-22.15)	-	-	0.176*** (-43.02)	-	-
Age1525	0.407*** (-55.44)	0.372*** (-41.14)	0.463*** (-37.14)	0.454*** (-81.05)	0.467*** (-69.03)	0.487*** (-43.33)
Age2645	0.095*** (-13.23)	0.058*** (-6.55)	0.157*** (-12.95)	0.064*** (-16.19)	0.057*** (-13.53)	0.127*** (-8.52)
Nosch	0.820*** (-64.39)	0.702*** (-43.22)	0.965*** (-46.65)	1.019*** (-103.09)	0.963*** (-76.14)	1.136*** (-68.1)
Pri	0.366*** (-69.08)	0.293*** (-40.32)	0.441*** (-56.83)	0.595*** (-152.5)	0.566*** (-114.97)	0.645*** (-99.26)
Home	0.435*** (-11.09)	0.283*** (-4.18)	0.496*** (-10.24)	0.251*** (-24.29)	0.102*** (-5.77)	0.278*** (-24.98)
R ²	0.1708	0.132	0.2288	-	-	-
Sample size	62413	38457	23956	124714	76948	47766

Table 7a: Brazil - Log hours worked (1999)

	All	Men	Women
Sex	-0.158*** (-42.91)	-	-
Age1525	0.028*** (5.38)	-0.010** *(-1.64)	0.076*** (7.28)
Age2645	0.048*** (10.67)	0.023*** (4.81)	0.081*** (8.72)
Head	0.092*** (22.34)	0.076*** (4.81)	0.057*** (5.5)
Married	0.019*** (4.88)	0.020*** (4.38)	-0.011*** (-1.11)
Presch	-0.001*** (-0.33)	0.012*** (2.88)	-0.023*** (-2.66)
Ellemsch	-0.002*** (-0.5)	0.011*** (2.94)	-0.021*** (-2.78)
Teen	-0.011*** (-3.33)	-0.018*** (-4.95)	0.001*** (0.16)
Adult	0.026*** (6.82)	0.014*** (3.42)	0.032*** (4.19)
Nonwhite	-0.021*** (-7.09)	-0.007*** (-2.33)**	-0.045*** (-7.13)
Home	-0.267*** (-42.45)	-0.092*** (-9.16)	-0.322*** (-34.84)
R2	0.1005	0.0226	0.0626
Sample size	69372	45267	24105

Table 7b: Ecuador - Log hours worked

	All	Men	Women
Sex	-0.332*** (-10.1)	-	-
Age1525	0.213*** (4.67)	0.334*** (3.52)	0.140*** (2.95)
Age2645	0.104*** (2.87)	0.109*** (1.47)	0.111*** (2.95)
Head	0.213*** (6.19)	0.205*** (2.66)	0.128*** (3.12)
Married	0.061** (2.09)	0.087*** (1.31)	0.066** (2.05)
presch	-0.064** (-1.97)	-0.290*** (-4.3)	0.078** (2.32)
elemsch	-0.014*** (-0.48)	-0.037*** (-0.59)	0.006*** (0.19)
Teen	-0.036*** (-1.24)	-0.107* (-1.76)	0.021*** (0.7)
Adult	0.038*** (0.71)	0.064*** (0.5)	-0.040*** (-0.75)
Home	-0.364*** (-9.3)	-0.461*** (-7.38)	-0.135*** (-2.57)
R2	0.1453	0.091	0.0306
Sample size	2950	1050	1900

Table 7c: Mexico - Log hours worked

	All	Men	Women
Sex	-0.178*** (-61.03)	-	-
Age1525	0.102*** (24.55)	0.030*** (7.11)	0.149*** (17.33)
Age2645	0.083*** (24.38)	0.054*** (16.11)	0.101*** (13.71)
Head	0.113*** (32.9)	0.060*** (14.06)	0.017** (2.26)
Married	-0.013*** (-4.61)	0.023*** (7.71)	-0.097*** (-14.33)
presch	-0.003*** (-1.22)	0.018*** (6.37)	-0.039*** (-6.08)
elemsch	-0.006** (-2.40)	0.005*** (1.76)	-0.028*** (-5.04)
Teen	-0.006** (-2.74)	-0.007*** (-3.54)	-0.000*** (-0.1)
Adult	0.054*** (19.43)	0.024*** (8.4)	0.052*** (8.8)
Home	-0.324*** (-55.65)	-0.178*** (-22.67)	-0.382*** (-40.6)
R2	0.1202	0.0263	0.0862
Sample size	108415	70091	38324

References

Akerloff, George and Rachel Kranton (1999) "Economics and Identity," *manuscript*.
Geldstein 2001.

Arriagada, Irma (1998) *The Urban Female Labour Market in Latin America: The Myth and the Reality*, Serie Mujer y Desarrollo #21 (ECLAC: Chile).

Beneria, Lourdes and Teresa Roldon (1987) *Las Encrucijadas de Clase y Género* .
de Ferranti 2001

Carr, Marilyn, Martha Chen, and Jane Tate (2000) "Globalization and Home-Based Workers" *Feminist Economics* 6(3), 123-142.

Chant, Sylvia (1991) *Women and Survival in Mexican Cities* (Manchester University Press: Manchester).

Chen, Martha, Jenifer Sebstad, and Leslie O'Connell (1999) "Counting the Invisible Workforce: The Case of Homebased Workers" *World Development* 27(3), 603-610.

Cunningham, Wendy and William Maloney (*forthcoming*) "Heterogeneity among Mexico's Micro-Enterprises: An Application of Cluster and Factor Analysis" *Economic Development and Cultural Change*.

Geldstein, Rosa (2000) "Non-Labor Market Coping Strategies in Argentina",
LCSPG/World Bank, *draft*.

Gonzalez de Rocha, Mercedes (1994) *The Resources of Poverty: Women and Survival in a Mexican City* (Blackwell Publishers: Massachusetts).

Wodon, Quentin (2000) *Poverty and Policy in Latin America and the Caribbean* World Bank Technical Paper No. 467 (World Bank: Washington, DC).