

**Case Study:
Gender, Industrialization,
and the Labor Force in Ecuador**

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*** In collaboration with
Rafael Urriola, CEPLAES**

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**CASE STUDY: GENDER, INDUSTRIALIZATION,
AND THE LABOR FORCE IN ECUADOR**

The GENESYS Project

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GENESYS (Gender in Economic and Social Systems) is an A.I.D.-funded project supporting A.I.D.'s efforts to integrate women into the national economies of developing countries around the world. The project provides assistance to A.I.D. staff worldwide for reviewing, initiating, or expanding gender considerations in development activities for sustainable economic and social development. Project components include technical assistance, training, policy research and evaluation, and information dissemination and communications. The sectoral foci are private enterprise, democratization, agriculture and rural development, and environment/natural resource management.

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LIST OF ACRONYMS

A.I.D.	(U.S.) Agency for International Development
CEPLAES	Centro de Planificación y Estudios Sociales
EAP	Economically Active Population
EPH	Encuesta Permanente de Hogares
GENESYS	Gender in Economic and Social Systems
GNP	Gross National Product
IESS	Instituto Ecuatoriano de Seguridad Social
INEC	Instituto Nacional de Estadística y Censos
INEM	Instituto Nacional de Empleo
ISCO	International Standard Classification of Occupations
ISIC	International Standard Industrial Classification
LAC	Latin America and the Caribbean
MLF	Manufacturing Labor Force
UNP	Unemployment Rate

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EXECUTIVE SUMMARY

This case study was undertaken as part of a GENESYS research effort for A.I.D.'s LAC Bureau to identify gaps in knowledge about women in development in the region and to develop a research plan for the Bureau. Two short-term, low-cost case studies -- one in Ecuador and one in Honduras -- were designed and implemented to demonstrate research methodologies that can contribute to strategy and project development and that can be easily replicated in other Missions. The research in Ecuador was designed to overcome a severe lack of gender-disaggregated information on labor force participation and employment characteristics at the subsector level. The present report utilized EPH data in the absence of industrial employment data by gender. The study provides information on the extent to which Ecuador's industrial development will depend on women compared to men workers; who is likely to benefit from increased employment and in which subsectors; and some of the reasons why these distributions may be occurring.

The principal data source for this descriptive analysis is the Government of Ecuador's national urban household survey on employment, unemployment, and underemployment -- the *Encuesta Permanente de Hogares (EPH)*. The EPH has been conducted annually beginning in 1987. Additional data were provided by the 1982 and 1990 population censuses and by the national manufacturing and mining surveys during the 1982-1988 period.

The industrialization process in Ecuador during the last 20 years has opened the door to participation by women in industries that, until recently, were predominantly male territory. The entry of women into the industrial labor force, however, has not translated into equal opportunities for women and men. Rather, the structure and dynamics of the labor market are strongly influenced by societal attitudes about what are "appropriate" activities for, and the differing natural capacities of, women and men.

Some of the principal findings of the study are presented below. The reader is also referred to the conclusions presented in the last section of the report.

- Between 1982 and 1990, women's measured rate of participation in the economy increased from 24% to almost 31%. By 1990, women comprised 32% of the total urban labor force in Ecuador. In industry, women's participation rate increased at a faster pace than men's during this period. By 1990, women represented around one-fifth of the industrial labor force and around one-third of the manufacturing labor force.
- Within industry, women are overwhelmingly concentrated in manufacturing (93% in 1990), while men are more evenly divided between manufacturing (55%) and construction (40%). Female manufacturing workers are typically employed in relatively labor-intensive, light industries that produce consumer goods of varying levels of sophistication; these industries range from processed foods, textiles, and clothing, to chemicals. Of the total number of women employed in manufacturing in 1989, more than half were in textiles/clothing/leather (58%), followed by smaller percentages in foods/beverages/tobacco (18%) and chemicals (7%). The large concentration of women in just a few manufacturing subsectors contrasts sharply with the widespread distribution of men. Together, three subsectors -- chemicals, foods/beverages/tobacco, and textiles/clothing/leather -- employed 83% of the female manufacturing labor force (MLF) in 1989, compared to just 47% of men.

- In manufacturing as a whole, 55% of the 1989 labor force was employed by small firms -- here defined as firms with fewer than 10 employees. Of these workers, slightly more than 40% were women. In comparison, in large establishments (defined as those employing more than 20 people), less than 25% of all employees were female. This pattern is found in both traditional industries (e.g., textiles, dressmaking) where production units are generally small, and in more modern industries such as chemicals and nonmetallic metals. One of the important implications of women's concentration in small firms is their reduced access to many of the benefits associated with employment in larger enterprises -- social security membership, overtime pay, bonuses, mandatory maternity benefits, and so forth.
- In 1989, women comprised nearly 30% of the informal sector industrial labor force, compared to 22% in the formal sector. Further, approximately 55% of female industrial workers were employed in the informal sector compared to 44% of males. In manufacturing, women form a larger part of the labor force in the informal sector (30%) than in the formal sector (20%). In both industry as a whole and in manufacturing, more than half of the female labor force works in the informal sector. This finding supports the hypothesis that women in Ecuador have a greater tendency to work in the informal sector than men.
- In 1989, women's share of unemployment in manufacturing roughly paralleled their share of the MLF; women accounted for 36% of the unemployed and 34% of the workforce. But on average during 1987-1990, women's share of the manufacturing unemployed (44%) was higher than their share of the workforce (34%).
- A review of the data for 1988-1990 reveals only slight differences between women and men in terms of migration status. As such it can be said that migrant or non-migrant status is not a relevant characteristic of factory workers, nor is it particularly relevant for gender analysis of the manufacturing sector.
- The extent and nature of women's participation in the labor market tend to be more dependent than men's on their family responsibilities. In manufacturing, family roles may be a particularly important consideration. For example, factory employment is often characterized by more demanding schedules, less flexibility, and stricter discipline than work in services. Around 15% of female manufacturing workers in 1989 were heads of households, 45% were married, and 27% lived with their parent(s). For female heads of households, who are the primary or even sole generators of income, heavy domestic responsibilities may make them more willing to accept unfavorable working conditions and low salaries in exchange for the more flexible employment terms found in traditional manufacturing subsectors such as textiles/clothing/leather. Notably, that subsector had a higher percentage of both females (18.5%) and males (80%) identified as heads of households than any other manufacturing subsector in 1989. Other subsectors, including machinery/equipment and nonmetallic minerals, have distinctly low proportions of women workers who are household heads -- around 4%. This figure may reflect the demands on workers' time and energy in those subsectors.

The highest percentages of women workers identified as living with their parent(s) are found in relatively modern manufacturing subsectors -- paper/printing/publishing, chemicals, basic metals, and machinery/equipment. In Ecuador, many separated or divorced young women return to their parents' home, where their children can be cared for by relatives while the women go to work.

On average in these subsectors, more than 40% of female workers lived with their parent(s), compared to less than 30% of men and an average of only 27% for the female MLF as a whole.

- Gender-based differences in household and reproductive responsibilities and their reflection in the labor market can be seen in the reasons that women and men give for working less than 40 hours per week. In global terms, 19% of manufacturing employees in 1989 worked less than 40 hours per week. Yet this encompassed 34% of women workers compared to only 11% of men. Most relevant are their reasons for working less than a normal workweek: 29% of women said they did so for personal reasons, compared to 15% of men. Among the nearly one in every three women workers in manufacturing who cannot or do not want to work a full workweek, domestic concerns and, presumably, responsibilities are likely to be high on the list of personal reasons. For men, the data indicate that a reduced workload was more likely the result of an involuntary reduction in their workweek (e.g., due to a slowdown in production) and their inability to find more work or another job.
- In 1989, around 72% of female and 68% of male workers in manufacturing were between the ages of 20 and 44. These figures are in line with the 1990 age curve for the total urban labor force in Ecuador (see Section 5.4). In manufacturing, as in the labor force as a whole, women join the labor force more slowly than men between the ages of 12 and 29, perhaps delaying entry in part to accommodate reproductive responsibilities. However, the 1990 census data show no large declines in women's rates of participation during the childbearing years. Men also maintain higher rates of participation than do women age 45 and over. Compared to their share of the workforce as a whole in manufacturing (68% in 1989), men are overrepresented among younger and older workers. They make up 73% of the manufacturing labor force age 19 and under, and 81% of those age 64 and above.

In some traditional industries -- such as textiles/clothing/leather and foods/beverages/tobacco -- more than half of the female workers were between 25 and 44 years old in 1989. Further, in these subsectors, 20% of the labor force was over age 45; and women age 65 and over were still employed. Here, the age distribution for men was similar to women's. The relative maturity of the workforce in these subsectors is influenced by the prevalence of employees who work at home (e.g., doing piecework). In contrast, in three of the more modern subsectors -- paper/printing/publishing, chemicals, and machinery/equipment -- 43% of female workers (compared to only 27% of male) were under age 25 in 1989, very few were over age 45, and none were over 64.

- Education is often used to explain gender differences in the demand for labor. Yet female manufacturing workers in Ecuador are fairly well educated. Indeed, most are better educated than their male co-workers. Approximately 45% of male manufacturing workers in 1990 listed gradeschool as the extent of their education, compared to 33% of women. Conversely, almost 53% of women manufacturing workers in 1990 had attended secondary school, compared to 44% of men. Even at the level of advanced studies, the female work force surpasses the male work force. Further, the data confirm the hypothesis that in more modern industries, women workers are not only younger, but also better educated than women workers in traditional subsectors.
- A review of women's and men's relative position in the MLF suggests that the type of jobs women hold are lower status and have fewer paid benefits than those held by men. The data indicate slower/and or less change in female employment patterns over time than would be

expected in light of, e.g., women's educational achievements in recent decades. Women in manufacturing are less likely than men to be employers or salaried/wage workers, and more likely to be self-employed and unpaid family workers. Among blue-collar workers (machine operators, artisans, and laborers), women are highly concentrated in textiles, garment manufacture, and foods and beverages industries. In contrast, men are fairly well distributed throughout a wide range of jobs. Further, in traditional subsectors, women constitute a substantial share of the workforce: in the garment industry, they make up the vast majority (80%) of blue collar workers; and among blue collar textile workers, women represent around half of the workforce.

- An examination of social security membership among industrial workers in Ecuador reveals a statistically significant difference between women and men at the sectoral level in 1989, although their membership rates for industry as a whole are similar (32% of women and 35% of men). While women in construction and mining have a greater chance than men of being affiliated with the *Instituto Ecuatoriano de Seguridad Social* (IESS), in manufacturing -- which employs the majority of women -- only 30% of women are members compared to 40% of men. In general, affiliation with IESS is directly related to firm size. Whereas less than 30% of female manufacturing employees worked in large firms in 1989 (of which 66% had social security), almost 45% of male workers were employed by large firms (and 70% had social security); this partially explains the 10% difference in membership rates for women and men at the aggregate level.

Among manufacturing subsectors, gender differences do arise in social security membership rates, although they are partially explained by the distribution of women and men across occupational categories. In textiles/clothing/leather -- where only 18% of the female compared to 38% of the male labor force were IESS members in 1989 -- half of female workers and one third of male workers in 1989 were self-employed, probably as seamstresses, tailors, or homeworkers.

- The wage gap between women and men workers in industry is clearly evident in the manufacturing sector. Over 37% of the female MLF earned less than the legal minimum wage in 1989 compared to just 16% of men. Conversely, the share of the male labor force in the top two income brackets was double that of women in 1989 -- 60% versus 31%. In virtually half of the manufacturing subsectors, the share of women in the lowest two income brackets is higher than the industry average for that subsector. The reverse is true for gender representation in the higher income brackets. Above-average shares of men were in the top two income brackets in more than half of the subsectors. Particularly in textiles/clothing/ leather and paper/printing/publishing, men are disproportionately represented among high income earners.

A similar pattern exists across occupational groups. Also, comparison of women's and men's earnings across selected occupational groups in three subsectors (foods/beverages/tobacco, textiles/clothing/leather, and chemicals) confirms the hypothesis that the gender-based wage gap, whereby women earn less than men for similar work, is more distinct in traditional industries such as textiles/clothing/leather than in modern industries such as chemicals.

- An examination of the way in which unemployed industrial workers seek employment found little difference between women and men. More than half of the unemployed, both men and women, resort to friends for help in finding jobs. While the newspaper and radio were important channels for finding a job prior to 1990, they became insignificant as a resource in 1990. It would seem

that almost no one in industry relies on these sources nowadays; instead, increasing numbers of both women and men make direct inquiries to employers.

The report concludes that the sexual division of labor cannot be explained or justified solely by economic factors and inherent masculine and feminine attributes. On the contrary, there is every indication that this is a social construction -- a product of a multifactorial process in which cultural aspects play an essential role. In the context of Ecuador's economic development process, the sexual division of labor will influence how women and men benefit from economic growth in industry and other areas. Along with the reopening of the Andean market, economic and industrial development based on exports of primary products and a few processed foods and beverages could favor indirect job growth. To diversify exports and exploit Ecuador's comparative advantages, new products are currently being developed, especially tropical fruit preserves and to a lesser degree, wood and metal-mechanic products. Although these activities are not directly labor intensive, they may exercise a positive influence on agricultural employment. They might also increase demand for female as well as male labor, since women already supply a sizeable portion of labor in processed foods.

The descriptive analysis presented in this report is useful in that the existence and degree of gender discrimination in employment are documented along with the need to consider this information in formulating development policy. Nonetheless, a qualitative study would be useful for exploring the complex mechanisms underlying gender-based segmentation of the labor market. Future research should also take a harder look at the effects of current models of development and industrialization on women's participation in, and benefits from, the industrial labor market.

1. Introduction: Profile of the Industrial Labor Force

1.1 Study Setting

The industrialization process in Ecuador during the last 20 years has opened the doors to participation by women in industries that, until recently, were underdeveloped and predominantly male territory. The entry of women into the industrial labor force, however, has not translated into equal opportunities for women and men. Rather, the structure and dynamics of the labor market are strongly influenced by societal attitudes about what is female and male, what are "appropriate" activities for, and the differing natural capacities of, women and men.

In a market economy, the supply and demand of female labor are affected not only by the structure and dynamics of economic sectors, but also by cultural and social factors related to the predominant gender characteristics perceived by the society (female and male attributes and social roles). These factors influence a woman's decision to enter the labor market, and an employer's decision to hire women.

Generally speaking, the behavior of Ecuadorian women in the labor market is different from that of men. In Ecuadorian society, it is imperative for a man to have a job; it is a central part of his identity. On the other hand, a woman's identity largely centers on motherhood and reproductive activities.¹ This social construct partially explains why men typically remain in the work force until they reach retirement age, barring intervening circumstances (accident, illness, war, or economic recession). For men, this pattern is relatively independent of many other factors, including civil status, number of children, level of education, place of residence, and economic structure of the country.

In contrast, one of the most frequently noted characteristics of the female labor force is women's tendency to have multiple entries into and exits out of the labor market. Likewise, women may seek or hold a wider variety of jobs than men. These behaviors are generally associated with changes in women's civil status (e.g., marriage, separation, widowhood) and their family obligations, such as becoming the head of household or having to tend small children. It is true that the economic crisis in recent years and changing attitudes about women have favored their increased participation in the labor market, independent of civil status and maternal responsibilities. Nevertheless, while women's participation rates have increased, their domestic obligations² have remained unchanged, resulting in longer and more exhausting workdays.

In Ecuador, employers are much more selective in hiring women than men. Women's age, civil status, family responsibilities, and the presence of small children are all taken into account, in the belief that absenteeism among women workers is much higher than among men.³ In reality, however, very few studies have ever confirmed this pattern. Furthermore, there is still strong support for the idea that women should work in certain, "appropriate" jobs such as teaching, child and health care, and food preparation, which are extensions of their reproductive responsibilities.

Likewise, there has been little change over time in employers' attitudes about "female characteristics" -- such as manual dexterity, knowledge, and patience. While these characteristics may make women more productive than men in certain jobs, they are rarely rewarded monetarily; employers generally consider them an inherent part of a woman's being -- not a learned skill. In the same fashion, women typically are paid lower salaries than men; they are considered secondary workers, not interested in promotions (neither are employers interested in promoting women⁴), and satisfied with taking home a supplementary income. In fact, a large number of women are responsible for supporting their children.

Even in multiple-income households, Ecuadorian women's income is generally designated in its entirety to family expenses, unlike men's income.⁵ Yet this does not seem to affect the dominant conception of work based on gender: men are providers and principal workers, women are secondary workers.

1.2 Study Purpose and Methods

The goal of the study on which the present report is based was to assess gender-specific barriers to industrial employment in Ecuador. It was designed as an example of how existing statistics in a country can be tapped to provide a baseline or background information for A.I.D. programs at a low cost to the Mission. It does not purport to be an exhaustive analysis, nor to draw out detailed implications of employment-related activities in the LAC region (see Annex A, Scope of Work). Because more than 90% of the female (and over 60% of the total) industrial labor force in 1990 in Ecuador was employed in manufacturing, that sector was given special attention in the research. The research results provide information on the extent to which development of Ecuador's industry will depend on women compared to men workers; who is likely to benefit from increased employment and in which subsectors; and some of the reasons why these distributions may be occurring.

The objectives of this report are to describe:

- gender-based discrimination in Ecuadorian industry⁶ with special emphasis on manufacturing;⁷
- the magnitude and characteristics of the division of labor by gender in industry; and
- the actual distribution of male and female workers within manufacturing.

The principal data source for this descriptive analysis is the national urban household survey on employment, unemployment, and underemployment -- the *Encuesta Permanente de Hogares* (EPH) -- from 1987, 1988, 1989, and 1990. This survey is conducted annually by the Ecuadorian National Institute of Employment (*Instituto Nacional de Empleo*, INEM). Additional data were provided by the 1982 and 1990 population censuses (INEC 1985 and 1991) and by the national manufacturing and mining surveys from the 1982-1988 period, both conducted by the National Institute of Statistics and Censuses (*Instituto Nacional de Estadística y Censos*, INEC).

The 1987 EPH was restricted to sample populations from the three principal cities: Quito, Guayaquil, and Cuenca. In contrast, the 1988, 1989 and 1990 surveys drew on urban samples nationwide. The survey results have been statistically extrapolated by INEM to apply to the entire Ecuadorean urban population (see Annex B). Because of the unique nature of the 1987 sample, it cannot be as readily compared to the other three years, since the inclusion of small and medium-sized cities affects the characteristics of labor in industry and manufacturing. For example:

- The number of small businesses increases.
- A greater proportion of the labor force is employed in textiles/clothing/leather and foods/beverages/tobacco.
- There is an increase in the overall number of industrial workers. This is particularly true in textiles/clothing/leather, because textile handicrafts provide a common source of income in small cities.

- The proportion of workers affiliated with social security decreases.
- Wages tend to drop significantly, to the lowest levels.

Hence, only one year's EPH was selected (1989) for an indepth exploration of certain characteristics, using more precise statistical techniques (see Annex B).

2. Characteristics and Development of Ecuador's Industry

Ecuador can be characterized as an exporter of primary products that has experienced an intensification of the industrialization process since the early 1970s. Increased investment in industry, in particular in manufacturing, was funded primarily by income generated from oil exports. Manufacturing subsequently expanded and functioned well until the early 1980s, when Ecuador was hit by both international and domestic economic recessions and by the debt crisis.

Consequently, while the average annual increase in the adjusted gross national product (GNP) was 5.4% from 1974 to 1982, it declined to 1.9% annually between 1982 and 1990. In the growth years between 1974 and 1982, industry and manufacturing grew at an average annual rate of 4.8% and 8.9% respectively, outpacing agriculture's rate of 2.4%. Between 1982 and 1990, however, growth rates in industry and manufacturing declined severely, down to 1.6% and 0.04% respectively. Manufacturing, responsible for 19.1% of GNP in 1982, accounted for only 16.3% by the end of the decade.

Ecuador's industry has been characterized by high costs and prices; weak job generation; intense geographic concentration; production primarily for internal markets; an emphasis on consumer goods; underutilization of total productive capacity; dependence on government economic incentives, subsidies, and trade protection; and the coexistence of modern and complex businesses with small enterprises barely distinguishable from those defined as operating in the informal sector.

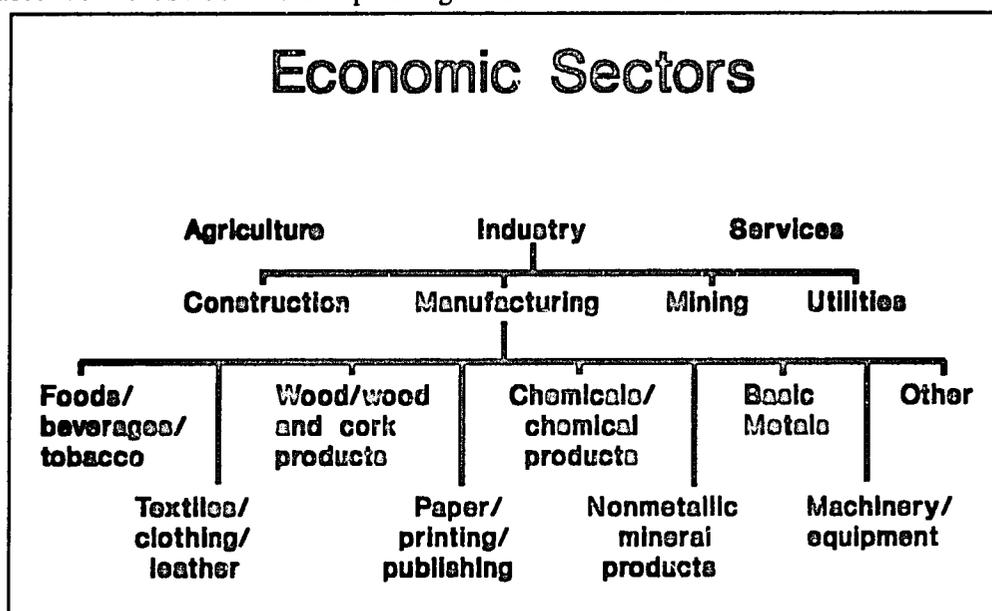


Figure 1

2.1 Employment

Between 1982 and 1990, the average annual growth rate of the economically active population (EAP)⁸ was 4.6%. Among the economic sectors (Figure 1), growth was highest in services (5.8%) followed by agriculture (3.5%). Industry lagged behind, with a rate of increase in the labor force during that period of 3.3% annually. Within industry, for example, the labor force in construction increased by only 2.8%; in utilities, it actually declined, with an average annual rate of -0.5%.

By comparing average GNP and EAP growth rates during 1982 and 1990 in manufacturing -- 0.04% versus 3.3% -- we can perhaps infer that any job creation took place mainly at the artisan level rather than in factories. This would explain the apparent inconsistency between the two rates, in that

manufacturing EAP, measuring employment generation, during the period is weak but visible, while manufacturing GNP, measuring the dollar value of output, is relatively stagnant.

According to the INEC Manufacturing⁹ and Mining Surveys, in 1982, 103,516 people were employed in manufacturing. However, this statistic decreased yearly between 1980 and 1987 (Table 1). In 1988, at the time of the last manufacturing survey, the total number of employees had increased to only 109,577. Even though they exclude the substantial share of employees of small businesses, these low figures indicate that few jobs were created in manufacturing during the 1980s.

The rate of job creation has varied across manufacturing subsectors, however (Box 1). Foods, beverages, clothing, chemicals, and the production of nonmetallic minerals have been prominent in creating new jobs. During 1986, 1987, and 1988, foods, beverages, and nonmetallic minerals expanded their workforces by a total of 11,995 jobs, compared to the net increase of 12,412 manufacturing jobs during the same period (this includes positions lost in, e.g., textiles) (Table 1).

The most important subsectors in terms of direct job creation -- i.e., those that increase employment the most in response to increased investment -- are: wood, with 8.5 employees per million sucres of additional output (in constant 1975 sucres); and textiles/clothing/leather, with almost 7 employees per million sucres (Abril and Urriola 1990:46). Processed meats and fish, breads and cereals, and various foods are among the poorest job creators (at the 3-digit level), generating at most two direct employees per million sucres of additional output. Nevertheless, when total job creation (direct and indirect employment) per million sucres of output is considered, these three industries surpass all others in manufacturing. Meats and fish create a total of almost 41 jobs per million sucres of additional output; breads and cereals around 40; various foods, 33. In comparison, wood generates a total of 31 jobs, while sugar generates 20.

All the industries mentioned above are directly related to the primary sector (agriculture, forestry, hunting, and fishing). As Abril and Urriola point out, the linkages between the primary and secondary (e.g., manufacturing) sectors play an important role in determining the rate of indirect job creation. Industrial activities in general, and those related to agriculture in particular (processing of primary national products), greatly influence the indirect generation of employment. Industry is often considered inefficient in terms of global employment creation. But the number of indirect jobs created by industry is significant -- particularly in those industries with strong linkages to the primary sector.

Nevertheless, the proportion of manual labor used per unit of production increase in the economy as a whole is decreasing (Abril and Urriola 1990:55). Only in construction, chemicals, rubber, and transportation materials has this not been true; since 1982, the use of manual labor in these industries has increased slightly. In construction, this reflects a greater emphasis on housing programs, which are labor intensive. In the other industries, increased import costs and difficulties in obtaining foreign credit have limited their transition to high technology, forcing a more rational use of installed capacity.

Table 1: Manufacturing EAP by Subsector, 1981-1988

Subsector	1981	1982	1983	1984	1985	1986	1987	1988
311-312 Foods	24585	26272	22720	22167	23257	24109	27789	27398
% increase		6.86	-13.5	-2.43	4.91	3.66	15.26	-1.40
313 Beverages	4890	4569	4692	4797	5239	5594	6415	6859
% increase		-6.56	2.7	2.23	9.21	6.77	14.67	6.92
314 Tobacco	1165	1060	1239	1107	1103	1119	1123	887
% increase		-9.01	16.86	-10.65	-0.36	1.45	0.35	-21.01
321 Textiles	15703	15109	14810	14647	14305	14723	14094	14410
% increase		-3.78	-1.97	-1.10	-2.33	2.92	-4.26	2.24
322-324 Clothing	4331	4081	4033	4052	4234	4531	4781	5001
% increase		-5.77	-1.17	0.47	4.49	7.01	5.51	4.6
331 Wood products	3574	3107	2619	2871	3077	3184	3281	3409
% increase		-13.06	-15.70	9.62	7.17	3.47	3.04	3.9
332 Wood furniture	3385	3362	2884	2862	2540	3047	3415	3304
% increase		-0.67	-14.21	-0.76	-11.25	-19.96	12.07	-3.25
341 Paper	3502	3179	3043	3049	2933	3153	3440	3590
% increase		-9.22	-4.27	0.19	-3.80	7.5	9.1	4.36
342 Printing	3741	3260	2947	3075	3536	3719	3760	3843
% increase		-12.85	-9.60	4.34	14.99	5.17	1.1	2.2
323 Leather goods	912	930	965	972	1002	937	1022	1033
% increase		-1.97	3.76	0.72	3.08	-6.48	9.07	1.07
355 Rubber products	1253	1286	1309	1353	1536	1637	1553	1484
% increase		-2.63	1.78	3.36	13.52	4.73	-5.13	-4.12
351-352 Chemicals	6693	6458	6494	6588	6834	7449	7574	7715
% increase		-3.51	5.57	1.44	3.73	8.99	1.67	1.86
353-354 Oil & coal	1373	1409	1418	1521	1452	1488	1671	1716
% increase		2.62	6.38	7.26	-3.87	1.77	12.29	2.69
356-361 Non-metallic minerals	6172	5756	5690	6419	6010	11169	12107	12244
% increase		-6.74	-1.14	-12.81	-6.37	8.58	8.39	1.13
371-372 Basic metals	1186	1240	1333	1449	1595	1698	1896	1960
% increase		4.55	7.5	8.7	10.07	6.45	11.66	3.37
381 Metal products	7318	6712	6096	6127	6208	6584	6586	6268
% increase		-8.28	-9.17	0.5	1.32	6.05	0.03	-4.82
382 Non-electrical machinery	860	790	776	773	764	726	746	648
% increase		-8.13	-1.77	-0.30	-1.16	4.97	2.75	-13.13
383 Electrical machinery	4993	4391	4091	3875	4217	4396	4079	4444
% increase		-12.05	-6.83	-5.41	8.82	4.24	-7.21	8.94
384 Transport materials	2247	2108	1816	1634	1496	1604	1966	2088
% increase		-6.18	-13.85	-10.02	-8.44	7.21	22.56	6.2
385-390 Others	5633	5537	5600	5848	5790	1169	1235	1276
% increase		-1.70	1.13	4.42	-0.99	-7.9	5.64	3.31
TOTAL	103516	100616	94575	95186	97165	102036	108534	109577
		-2.8	-6.0	0.6	2.1	7.4	4.0	1.0

Source: INEC Manufacturing and Mining Survey, 1981-1988

**Box 1: International Standard Industrial Classification (ISIC) Codes
Manufacturing Divisions (2 & 3 digit level)**

- 31. **Foods, beverages, and tobacco**
 - 311-312 Manufacture of food products, with the exception of beverages
 - 313 Beverage industries
 - 314 Tobacco industries

- 32. **Textiles, clothing, and leather goods**
 - 321 Manufacture of textiles
 - 322 Manufacture of garments with the exception of footwear
 - 323 Manufacture of leather and related hide and fur products with the exception of footwear and other garments
 - 324 Manufacture of footwear, with the exception of those made with vulcanized rubber or plastic molds.

- 33. **Manufacture of wood and wood products including furniture**
 - 331 Manufacture of wood and wood products, with the exception of furniture.
 - 332 Manufacture of furniture wood accessories, with the exception of those made mainly of metal.

- 34. **Manufacture of paper and paper products, printing and publishing**
 - 341 Manufacture of paper and paper products
 - 342 Printing, publishing and related industries

- 35. **Manufacture of chemicals and petrochemicals**
 - 351 Manufacture of chemicals
 - 352 Manufacture of other chemical products
 - 353 Oil refineries
 - 354 Manufacture of oil and coal derivatives
 - 355 Manufacture of rubber products
 - 356 Manufacture of plastics, N.E.P.

- 36. **Nonmetallic minerals, with the exception of oil and coal derivatives**
 - 361 Manufacture of clay, enameled and porcelain objects
 - 362 Manufacture of glass and glass products
 - 369 Manufacture of other nonmetallic products

- 37. **Basic metals**
 - 371 Iron and steel industries
 - 372 Basic metals industries

- 38. **Metal products, equipment, and machinery**
 - 381 Manufacture of metallic products, with the exception of machinery and equipment
 - 382 Manufacture of machinery, with the exception of electrical equipment
 - 383 Manufacture of electrical equipment
 - 384 Manufacture of transportation materials
 - 385 Manufacture of professional and scientific equipment, instruments for measurement and control. N.I.P. photographic equipment and optical instruments

- 39. **Other manufacturing**
 - 390 Other manufacturing

3. Trends in Ecuador's Industrial Development

This section discusses the impact medium term industrial development will have on employment in general and on women in particular, not only in quantitative terms but also qualitatively.

The economic strategy that the current and recent governments in Ecuador have adopted for the short and medium term is based on exports: oil, primary sector products (e.g., shrimp and bananas), and to a lesser degree certain processed primary sector products, including derivatives of other seafoods, coffee, and cacao. Despite this dependence on mainly primary sector exports, movements to revive the Andean Pact have heightened hopes for increasing manufacturing exports. Since the early 1980s, rising protectionism in the wake of general economic recession in the region has stifled earnings from manufacturing exports.

The Andean market, and the international market in general, has taken on more importance for Ecuador in light of its domestic situation. Among those industries producing for the domestic market, growth rates -- and therefore employment -- are not expected to increase significantly in the short or medium term. The possibilities for expansion and diversification in domestically-oriented manufacturing are limited in part by the current economic malaise, which is depressing local demand. According to provisional data from the Central Bank of Ecuador (1992), the rate of GNP increase for manufacturing was 3.7% in 1991 (using 1975 sucres). At the subsector level, these growth rates varied substantially: 6.3% for machinery/equipment; 6.2% for paper/printing/publishing; 5.7% in foods/beverages/tobacco; 4.5% for chemicals; 2.9% for minerals; 1.0% in textiles/clothing/leather; and -0.3% for wood and furniture.

While manufacturing's relative importance as a generator of export earnings has been fairly insignificant during the 1980s, foodstuffs have proven the top subsector in terms of generating foreign currency. Between 1972 and 1986, the most important subsectors in this respect were processed meats and fish, and miscellaneous food products (Abril and Urriola 1990). Notably, more than 25% of all workers in foods/beverages/tobacco are women. If this subsector not only continues to outperform other manufacturing industries in export earnings, but also experiences growth as a result of a revived Andean Pact, women may profit from increased employment opportunities.

Ecuador has a comparative advantage in primary sector production as a result of low domestic labor costs and favorable public tariffs. This provides a nurturing environment for agroindustrial development, and growth in that area is foreseeable. Again, women's share of the labor force in related industries will mean that such growth may increase the number of wage and salaried jobs available to women, as well as men. As discussed throughout this paper, however, women and men may not benefit equally from employment; they may be concentrated in certain types of jobs and be paid more or less according to their gender.

One component of the government's export strategy has been the promotion of *maquilas*, i.e., factories producing for export and exempted from certain taxes and regulations. The introduction of *maquilas* in Ecuador is still very recent; according to the Ministry of Industry, only 35 such factories are in operation, mostly in Quito, Guayaquil, Manta, and in the province of Tungurahua. The majority manufacture clothing, while others process tuna and shrimp. The *maquilas* are estimated to generate around 3000 jobs, a majority of which are typically filled by women. This assumption, however, requires further investigation. Data on the number and type of jobs created by *maquilas* are scanty and unclear, and almost nothing is known about working conditions, job tenure, or turnover rates.

As more and more Latin American countries open their borders to intraregional and international trade, they are confronted with a need to specialize production in order to increase export earnings and avoid collapse of domestic industry. The Ecuadorean government and business community has been responsive to this changing environment to some extent. For example, they permitted a significant increase in capital goods imports in 1991. Efforts to produce and export based on comparative advantage are also in evidence, with new products currently being developed, e.g., tropical fruit preserves. Additionally, changes are anticipated in the wood industry, which has exported to Venezuela in past years, as well as in metal mechanics, which is seeing an increase in vehicle production for the domestic market. While some of these subsectors are not directly labor intensive, they may have positive indirect effects on agricultural employment. Further, among food processing industries, women may find new or increased employment opportunities.

The type of growth in manufacturing -- i.e., whether it is labor-intensive or capital-intensive, primarily among small or large firms -- will also affect the gender distribution of any employment generated. The relationship between the degree of labor intensity in the production process and the gender composition of the work force is explained by two factors (after Joeke's 1989). In labor-intensive production, the total wage bill takes on greater importance than capital inputs; priority is placed on reducing labor costs per unit of output, as labor is often the largest and perhaps the only flexible component of cost. This emphasis on labor cost containment is especially acute in small businesses (those with less than 10 people). Whereas in larger companies, the proportion of labor costs as a share of the total cost of production averages around 10-20%, smaller companies have fewer other costs. So they must either reduce labor costs or increase productivity in order to compete with larger firms. For several reasons -- including limitations on how the production process in small-scale operations can be organized -- it is easier for small firms to lower real wages. Frequently, hiring women -- more compliant and willing to work for lower wages than men -- is the most profitable option for businesses looking to cut costs.

Finally, there is some question about the impact on women workers of recent trends in industrial employment. In some manufacturing subsectors, a growing number of women are self-employed; or they work in small, less organized firms; or they do piecework or other poorly regulated forms of employment. This trend suggests the expansion of a type of productive organization that does not bode well for workers. These jobs are often precarious sources of income, and they leave workers vulnerable to exploitation and unsafe and unhealthy work conditions. Outwork (e.g., piece work conducted in the home) generally is among the lowest quality employment in the manufacturing sector: jobs are insecure; wages are low and no benefits are provided (including social security, overtime pay, and bonuses); and workers are sometimes exposed to job-related health and safety hazards. Data on working conditions in Ecuadorian factories are only recently beginning to be available, and comparisons have not yet been made between conditions for female and male workers. Yet, in non-systematic observations of textiles and clothing factories, researchers have found cramped quarters and lax (or no) observance of occupational health and safety regulations. This does not necessarily mean that working conditions are better in predominately male than female industries, but the former do enjoy stronger labor unions.

4. Women's and Men's Participation in Industry

The division of labor by gender operates as one of the organizing principles of productive activity in Ecuadorian industry. The inequality of women and men is manifest from the moment that both apply for a job in a factory. Not only are women offered fewer employment choices in this sector, but their status within those few areas also differs from men. As described below, young men may find employment, at least theoretically, in any industry but many are completely closed to most women seeking employment.

4.1 Overview of Economically Active Population (EAP) Rates

One way of analyzing the division of labor by gender is to measure the participation of women relative to men in the labor force, i.e., their levels of wage employment. Between 1982 and 1990, women's overall EAP rates increased, along with their share of the urban work force. In 1982, 23.9% and in 1990, 30.8% of all urban women aged 12 and over were registered as economically active (i.e., participating in the labor force). Similarly, as shown in **Table 2**, women represented 28.4% of the total urban labor force in 1982; by 1990, that share had risen to 32%.

Women also joined the labor force between 1982 and 1990 at a faster rate than men. While the total urban EAP grew at an average annual rate of 6%, the female EAP grew at a rate of 7.6%. More specifically, in urban industry, the female labor force increased at an average of 6.5% annually during this period. Although this was lower than the overall average growth rate for the female labor force (7.6%), it outpaced the average for the male industrial labor force. By 1990, women represented around one-fifth of the industrial labor force, and around one-third of the manufacturing labor force (**Tables 2 and 3**).

4.2 Gender-based Sectoral Segregation

Within industry, women are overwhelmingly concentrated in manufacturing -- 93% in 1990 -- with a little over 4% in construction and a minimum percentage in mining or utilities (**Table 2**). While women also work in, e.g., the informal construction sector, standard data collection methods used in censuses or home surveys do not record these activities.¹⁰ Consequently, the present analysis concentrates on manufacturing, as the sector where the data show women are most active. Industry as a whole is considered only when comparing certain general characteristics by gender.

According to INEM's household employment surveys (EPH), women represented an average of 33.7% of the manufacturing labor force (MLF) between 1987 and 1990 (**Table 3**). Within this sector, however, the distribution of female and male workers shows distinct patterns of gender-based segregation.

Women are typically concentrated in relatively labor-intensive, light industries that produce consumer goods of varying level of sophistication; these industries range from processed foods, textiles, and clothing, to chemicals. Of the total number of women employed in manufacturing, more than half are in textiles/clothing/leather, followed by smaller percentages in foods/beverages/tobacco and chemicals. In 1989, 58% of the female MLF was employed in textiles/clothing/leather, followed by 17.7% in foods/beverages/tobacco (**Figure 2**).

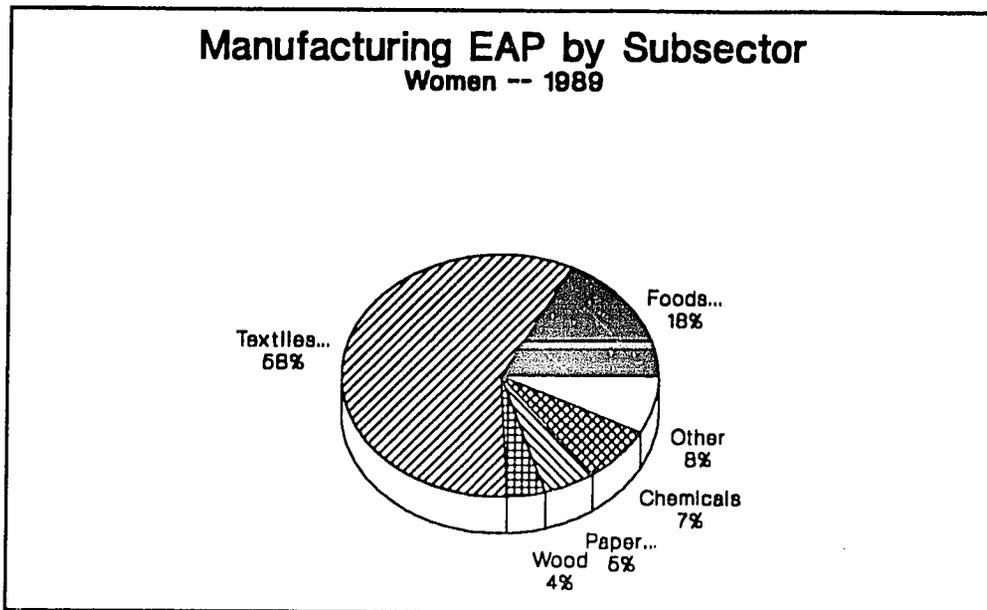


Figure 2

Notably, while the absolute size of the workforce in foods/beverages/tobacco increased by nearly 50% between 1988 and 1990, the share of women in that subsector declined by only 5% -- from 30.2% in 1988 to 25.1% in 1990. Over 24,000 women found employment in this subsector in 1990, compared to 19,633 in 1988. Although chemicals employed a smaller relative proportion of the female manufacturing labor force in 1989 (7.4%), there have been increases both in the share of women employed in chemicals (up to 30.6% in 1990), and in the absolute number of women workers in this sector (a 44% increase between 1988 and 1990, or 3,142 jobs) (Tables 4 and 5).

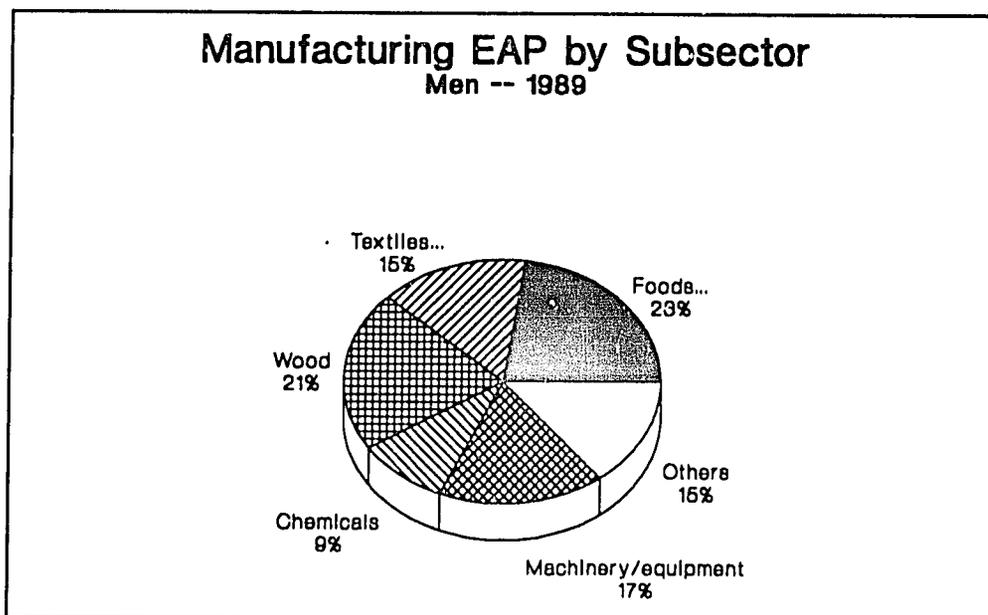


Figure 3

The concentration of women in just a few manufacturing subsectors contrasts sharply with the widespread distribution of men (Figure 3). In 1989, nearly 23% of men in the MLF were employed in

foods/beverages/tobacco; 21.4% in wood; 17% in machinery/equipment; 15% in textiles/clothing/leather; 9.3% in chemicals; and 4.6% in nonmetallic minerals. Together, three subsectors -- chemicals, foods/beverages/tobacco, and textiles/clothing/leather -- employed 83% of the female MLF in 1989, compared to 47% of men (Table 4).

Further analysis of labor force shares provides insight into women and men's relative importance as labor inputs in the manufacturing subsectors (Table 5). As Table 6 illustrates, there are no subsectors where women make up as much as 70% to 95% of the workforce, i.e., that can be categorized as "predominantly female" according to the Guzman-Portocarrero categories used therein.¹¹ Only one subsector -- textiles/clothing/leather -- even comes close to this, with women constituting 64% of the labor force. In comparison, four subsectors can be classified as "predominantly male" according to this system. In some modern subsectors (e.g., relatively new or high tech industries), the workforces appear to be more integrated than in traditional subsectors (i.e., old, well-established industries with a tendency toward low technology and labor intensive production). In chemicals and paper/printing/publishing, for example, women represent approximately 30% or more of the labor force.

The segregation of female labor within manufacturing subsectors can also be measured by comparing the proportion of women workers in one manufacturing subsector with their share in the MLF as a whole. Put in these terms, textiles/clothing/leather is the only markedly female subsector, employing proportionally almost twice as many women as in all other manufacturing subsectors (66% vs. 34.2% in 1989). From the preceding discussion, it is obvious that gender-based segregation is prevalent in manufacturing. Women play an important role in textiles/clothing/leather and are vastly underrepresented in machinery/equipment, wood, and basic metals.

Table 2: Urban EAP in Industry by Gender, 1982 and 1990

Activity	1982			1990		
	Total	Women	Men	Total	Women	Men
Urban EAP	1206854	342846	864008	1920007	615227	1304780
Industrial EAP	304376	51744	252632	403040	85539	317501
%	100	100	100	100	100	100
Mining	2921	261	2660	7962	899	7063
%	1.0	0.5	1.0	2.0	1.1	2.2
Manufacturing	190895	47702	143193	253572	79282	174290
%	62.7	92.2	56.7	62.9	92.7	54.9
Utilities	9733	1110	8623	10120	1699	8421
%	3.2	2.1	3.4	2.5	2.0	2.7
Construction	100827	2671	98156	131386	3659	127727
%	33.1	5.2	38.9	32.6	4.3	40.2
Industrial EAP as % of urban EAP	25.2	15.1	29.2	21.0	13.9	24.3
Manufacturing EAP as % of urban EAP	15.8	13.9	16.6	13.2	12.9	13.3
Manufacturing EAP as % of industrial EAP	62.7	92.2	56.7	62.9	92.7	54.9

Sources: INEC 1985 y 1991, IV y V Censos de Población (1982 y 1990), Resumen nacional, Resultados definitivos

Table 3: Industrial EAP by Gender, 1987-1990

Sector	1987			1988			1989			1990		
	Women	Men	Total	Women	Men	Total	Women	Men	Total	Women	Men	Total
Mining	1,338	5,209	6,547	960	16,506	17,466	1,097	17,862	18,959	1,558	13,727	15,285
%	1.38	1.94	1.80	0.70	3.70	3.00	0.70	4.00	3.20	1.10	2.75	2.36
Manufacturing	89,953	164,881	254,834	129,833	254,170	384,003	137,499	264,355	401,854	139,125	292,801	431,926
%	93.37	61.64	70.00	94.30	57.60	66.30	92.70	58.50	66.90	93.80	58.66	66.70
Utilities	649	5,796	6,445	1,653	15,644	17,297	2,746	16,981	19,727	2,883	21,517	24,400
%	0.67	2.16	1.80	1.20	3.55	3.00	1.80	3.70	3.30	1.90	4.31	3.77
Construction	4,393	91,570	95,963	5,300	155,121	160,421	6,978	152,737	159,715	4,786	171,103	175,889
%	4.56	34.23	26.40	3.80	35.15	27.70	4.70	33.80	26.60	3.23	34.28	27.16
TOTAL	96,333	267,456	363,789	137,746	441,441	579,187	148,320	451,935	600,255	148,352	499,148	647,500
%	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: INEM EPH 1987-1990

Table 4: Manufacturing EAP by Subsector and Gender, 1987-1990

Subsector	1987		1988		1989		1990	
	Women	Men	Women	Men	Women	Men	Women	Men
31. Foods/beverages/tobacco	12,820	29,997	19,633	45,271	24,370	60,447	24,340	72,556
%	14.30	18.20	15.10	17.80	17.70	22.90	17.50	24.77
32. Textiles/clothing/leather	49,267	32,055	77,513	48,380	79,693	39,823	84,981	47,145
%	54.80	19.40	59.70	19.00	58.00	15.00	61.10	16.10
33. Wood products	2,639	29,415	4,654	61,497	5,386	56,458	3,285	58,918
%	2.90	17.80	3.60	24.20	3.90	21.40	2.40	20.12
34. Paper/printing/publishing	5,967	8,585	9,650	14,029	7,434	15,064	6,585	15,316
%	6.60	5.20	7.40	5.50	5.40	5.70	4.70	5.23
35. Chemicals	7,819	16,568	7,108	23,588	10,136	24,535	10,250	23,203
%	8.70	10.10	5.50	9.30	7.40	9.30	7.40	7.92
36. Non-metallic minerals	2,740	8,492	2,573	14,463	3,718	12,290	3,130	15,786
%	3.00	5.20	2.00	5.70	2.70	4.60	2.20	5.39
37. Basic metals	504	3,621	966	4,271	349	2,355	133	4,385
%	0.60	2.20	0.70	1.70	0.20	0.90	0.10	1.50
38. Machinery/equipment	3,453	29,811	3,609	37,097	2,416	44,687	3,699	49,977
%	3.80	18.10	2.80	14.60	1.80	16.90	2.60	17.07
39. Others	4,744	6,337	4,127	5,574	3,997	8,696	2,722	5,515
%	5.30	3.80	3.20	2.20	2.90	3.30	2.00	1.88
TOTAL	89,953	164,881	129,833	254,170	137,499	264,355	139,125	292,801
%	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: INEM EPH 1987-1990

Table 5: Women's Share of Manufacturing EAP by Subsector, 1987-1990

Subsector	1987		1988		1989		1990	
	Total	% Women						
31. Foods/beverages/tobacco	42817	29.9	64904	30.2	84817	28.7	96896	25.1
32. Textiles/clothing/leather	81322	60.6	125893	61.6	119516	66.7	132126	64.3
33. Wood products	32054	8.2	66151	7.0	61844	8.7	62203	5.3
34. Paper/printing/publishing	14552	41.0	23679	40.7	22498	33.0	21901	30.1
35. Chemicals	24387	32.1	30696	23.2	34671	29.2	33453	30.6
36. Non-metallic minerals	11232	24.4	17036	15.1	16008	23.2	18916	16.5
37. Basic metals	4125	12.2	5237	18.4	2704	12.9	4518	2.9
38. Machinery/equipment	33264	10.4	40706	8.9	47103	5.1	53676	6.7
39. Others	11081	42.8	9701	42.5	12693	31.8	8237	33.0
TOTAL	254834		384003		401854		431926	

Source: Table 4 (INEM EPH 1987-1990)

Table 6: Manufacturing Subsectors by Female and Male Predominance, 1989

Female Subsectors More than 95% female	Female Predominance 70-95% female	Mixed Subsectors 25-70% female or male	Male Predominance 70-95% male	Male Subsectors More than 95% male
None	None	31. Foods/beverages/tobacco	33. Wood	None
		32. Textiles/clothing/leather goods	36. Non-metallic minerals	
		34. Paper/printing/publishing	37. Basic metals	
		35. Chemicals	38. Machinery/equipment	
		39. Others		

Source: Table 5 (INEM EPH 1989)

4.3 Firm Size

In manufacturing as a whole, 55% of the 1989 labor force was employed by small firms -- here defined as firms with fewer than 10 employees. Of these workers, slightly more than 40% were women. In comparison, in large establishments (defined as those employing more than 20 people), less than 25% of all employees were female (Table 7).¹² The larger proportion of women workers in small firms might be explained by their subsectoral concentration -- they work in traditionally female industries, such as textiles and dressmaking, where production units are generally small.

Yet in textiles/clothing/leather, as in other subsectors, the proportion of women decreases as firm size increases. For example, in 1989, 74% of all employees in small textiles/clothing/leather firms were women; but in large establishments in that subsector, this figure is only 43%. In chemicals and nonmetallic metals -- more modern industries -- the differences are even more notable. In chemicals, for example, 85% of personnel in small firms are female versus 28% in large firms. Another explanation for the inverse relationship between firm size and the proportion of female workers is that large companies tend to be more automated, capital intensive, and associated with masculinization of the labor force. But in Ecuador's case, there are not enough data to venture this hypothesis (Table 8). One of the important implications of women's concentration in small firms is their reduced access to many of the benefits associated with employment in larger enterprises -- social security membership, overtime pay, bonuses, mandatory maternity benefits, and so forth.

Table 7: Manufacturing EAP by Firm Size and Gender, 1989

		Firm Size by Number of Employees				
		Total	Less than 10	10 to 19	20 or more	Undeclared
1987	Total	254834	130137	18457	106240	0
	%	100	51.1	7.2	41.7	0
	Women	89953	53092	6621	30240	0
	%	100	59.0	7.4	33.6	0
	Men	164881	77045	11836	76000	0
%	100	46.7	7.2	46.1	0	
1988	Total	384003	221382	22748	139323	550
	%	100	57.7	5.9	36.3	0.1
	Women	129833	83903	7895	37617	418
	%	100	64.6	6.1	29.0	0.3
	Men	254170	137479	14853	101706	132
%	100	54.1	5.8	40.0	0.1	
1989	Total	401854	221234	24635	155985	0
	%	100	55.1	6.1	38.8	0
	Women	137499	89409	9186	38904	0
	%	100	65.0	6.7	28.3	0
	Men	264355	131825	15449	117081	0
%	100	49.9	5.8	44.3	0	
1990	Total	431926	245039	23016	163139	732
	%	100	56.7	5.3	37.8	0.2
	Women	139125	90613	7423	40717	372
	%	100	65.1	5.3	29.3	0.3
	Men	292801	154426	15593	122421	361
%	100	52.7	5.3	41.8	0.1	

Source: INEM EPH 1987-1990

Table 8: Manufacturing EAP by Subsector, Firm Size, and Gender, 1989

Subsector	Firm Size by Number of Employees						Totals	
	Less than 10		10 to 19		20 or more		#	%
	#	%	#	%	#	%		
31. Foods/beverages/tobacco								
Total	31165	36.7	2472	2.9	51180	60.3	84817	100
%	100		100		100		100	
Women	11981		927		11462		24370	
%	38.4		37.5		22.4			
Men	19184		1545		39718		60447	
%	61.6		62.5		77.6			
32. Textiles/clothing/leather								
Total	87171	72.9	9334	7.8	23011	19.3	119516	100
%	100		100		100		100	
Women	64763		4911		10019		79693	
%	74.3		52.6		43.5			
Men	22408		4423		12992		39823	
%	25.7		47.4		56.5			
33. Wood								
Total	46690	75.5	4383	7.1	10771	17.4	61844	100
%	100		100		100		100	
Women	3538		1193		655		5386	
%	7.6		27.2		6.1			
Men	43152		3190		10116		56458	
%	92.4		72.8		93.9			
34. Paper/printing/publishing								
Total	9060	40.3	2120	9.4	11318	50.3	22498	100
%	100		100		100		100	
Women	3016		975		3443		7434	
%	33.3		45.0		30.4			
Men	6044		1145		7875		15064	
%	66.7		54.0		69.6			
35. Chemicals								
Total	183	1.4	2156	6.2	32032	92.4	34671	100
%	100		100		100		100	
Women	413		756		8967		10136	
%	85.5		35.1		28.0			
Men	70		1400		23065		24535	
%	14.5		64.9		72.0			
36. Non-metallic minerals								
Total	9720	60.7	1050	6.6	5238	32.7	16008	100
%	100		100		100		100	
Women	2669		96		953		3718	
%	27.5		9.1		18.2			
Men	7051		954		4285		12290	
%	72.5		90.9		81.8			

Firm Size by Number of Employees

Subsector	Less than 10		10 to 19		20 or more		Totals	
	#	%	#	%	#	%	#	%
37. Basic Metals								
Total	—	—	—	—	2704	100	2704	100
%	—	—	—	—	100		100	
Women	—	—	—	—	349		349	
%	—	—	—	—	12.9			
Men	—	—	—	—	2355		2355	
%	—	—	—	—	87.1			
38. Machinery/equipment								
Total	27599	58.6	2519	5.3	16988	36.1	47106	100
%	100		100		100		100	
Women	782		153		1481		2416	
%	2.8		6.1		8.7			
Men	26817		2363		15507		44687	
%	97.2		93.9		91.3			
39. Others								
Total	9205	73.3	604	4.8	2743	21.9	12552	100
%	100		100		100		100	
Women	2247		175		1575		3997	
%	24.3		29.0		57.4			
Men	7099		429		1168		8696	
%	75.7		71.0		42.6			

Source: INEM EPH 1989

4.4 Formal versus Informal Sector¹³ Employment

The statement that more women find employment in the informal than in the formal sector is now almost habitually made in the context of urban Ecuador and elsewhere in Latin America and the Caribbean (LAC). Below, the distribution of the EAP in industry and manufacturing is examined to test this hypothesis for urban Ecuador.

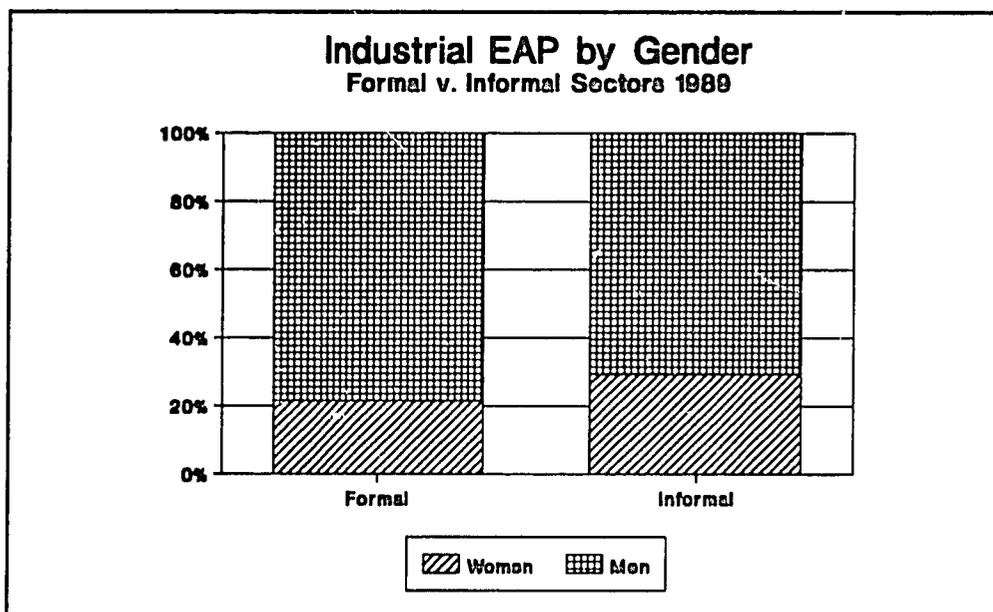


Figure 4

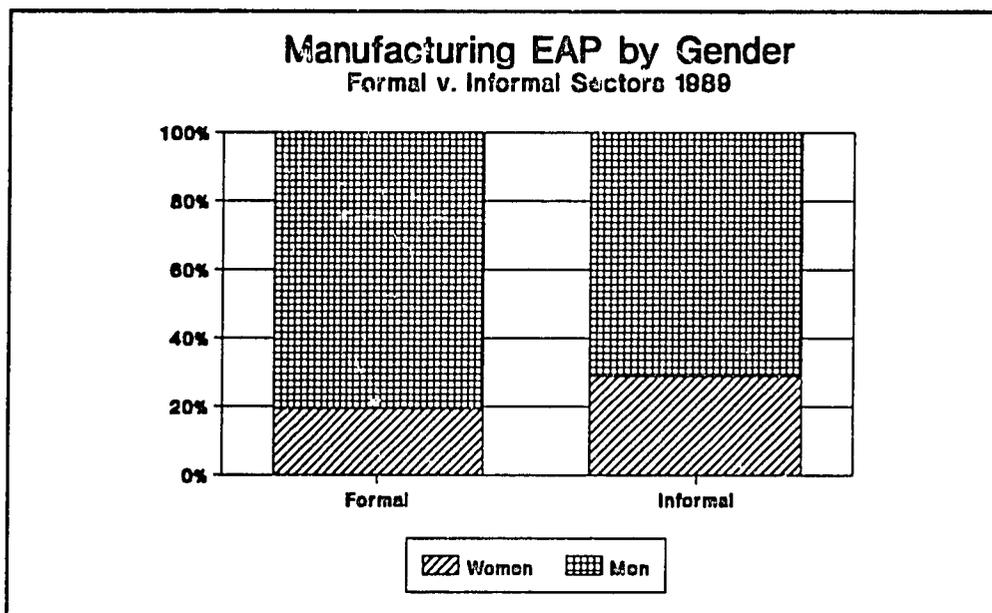


Figure 5

In 1989, women comprised nearly 30% of the informal sector industrial labor force, compared to 22% in the formal sector (Table 9, Figure 4). Further, approximately 55% of female industrial workers were employed in the informal sector compared to 44% of males. In manufacturing, women's share of the informal sector workforce was 29%, while in the formal sector, their share drops to only

19.5%. There is little difference between industry and manufacturing in the importance of the informal sector as a source of employment. In manufacturing, there is a slight rise -- to 57% -- in the proportion of the female work force employed in the informal sector; this compares to 44% of the male workforce (Figure 5). These data show that in both industry as a whole and in manufacturing, more than half of the female labor force works in the informal sector. This finding supports the hypothesis that Ecuadorian women have a greater tendency to work in the informal sector than men.

Table 9: Formal/Informal Sector by Industrial and Manufacturing EAP and Gender, 1989

	Urban Formal Sector	Urban Informal Sector	Total
Industrial EAP			
Women	66751	80472	147223
%	21.6	29.4	25.3
Men	241906	193434	435340
%	78.4	70.6	74.7
Total	308657	273906	582563
%	100	100	100
Manufacturing EAP			
Women	58594	78905	137499
%	19.5	29.0	24.0
Men	241906	193434	435340
%	80.5	71.0	76.0
Total	300500	272339	572839
%	100	100	100

Source: INEM EPH 1989

4.5 Unemployment

The average annual level of open unemployment¹⁴ in manufacturing between 1987 and 1990 was 4.5% (Table 10). For women, the average during this period was 5.9%, compared to 3.8% for men (Figure 6). Perhaps because women's rates were higher to begin with, they declined faster than men's: between 1988 and 1990, they dropped by 37% (from 7% to 4.4%), while men's declined by only 28% (from 3.9% to 2.8%).

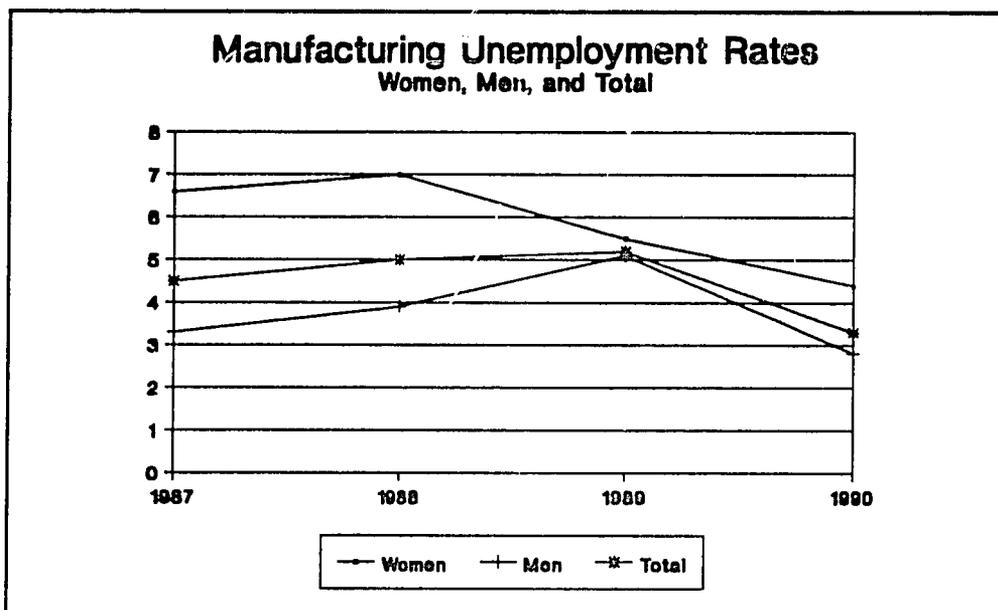


Figure 6

In 1989, women's share of unemployment in manufacturing roughly paralleled their share of the MLF; women accounted for 36% of the unemployed and 34% of the workforce. But on average during 1987-1990, women's share of the manufacturing unemployed (44%) was higher than their share of the workforce (34%) (Tables 3 and 10).

Table 10: Unemployment (UNP) Rates in Manufacturing by Gender, 1987-1990

	1987			1988			1989			1990		
	Total	UNP	%									
Women	89953	5906	6.6	129833	9115	7.0	137499	7578	5.5	139125	6136	4.4
%		51.8			47.6			36.0			42.7	
Men	164881	5497	3.3	254170	10027	3.9	264355	13486	5.1	292801	8236	2.8
%		48.2			52.4			64.0			57.3	
Total	254834	11403	4.5	38003	19142	5.0	401854	21064	5.2	431926	14372	3.3
%		100			100			100			100	

Source: INEM EPH 1987-1991

5. Sociodemographic Characteristics of the Industrial Labor Force

5.1 Migration history

The EPH survey classifies persons as migrants if they have not always lived in the cities where they were polled. According to these criteria, less than 20% of women and 25% of men employed in manufacturing in 1989 can be classified as migrants. Further, the majority of those "migrants" are women and men who have lived at least ten years in their adopted cities. A review of the data for the years 1988-1990 reveals only slight differences between women and men in this respect. As such it can be said that migrant or non-migrant status is not a relevant characteristic of factory workers, nor is it particularly relevant for gender analysis of the manufacturing sector (Table 11).

5.2 Position in the Family

Women's and men's entry into the labor market is generally considered to relate to their differing roles within the family or household structure. The extent and nature of women's participation in the labor market tend to be more dependent than men's on their family responsibilities. In manufacturing, family roles may be a particularly important consideration. For example, factory employment is often characterized by more demanding schedules, less flexibility, and stricter discipline than work in services.¹⁵ While the EPH surveys do not include data on civil status -- which would permit certain conclusions as far as family roles and obligations -- they do provide data on the worker's relationship to the head of household. Some inferences about the reproductive responsibilities of women and men working in manufacturing can be drawn from an assessment of their relationship with the head of household.¹⁶

Around 16% of female manufacturing workers in 1989 were heads of households, 45% were married, and 27% lived with their parent(s) (Table 12). The first two categories imply heavy family responsibilities -- such as cooking, care of children and of the sick, and household management -- that lengthen the workday for those women. For female heads of households, who are the primary or even sole generators of income, heavy domestic responsibilities may make them more willing to accept unfavorable working conditions and low salaries in exchange for the more flexible employment terms found in traditional manufacturing subsectors such as textiles/clothing/leather. Notably, that subsector had a higher percentage of both female (18.5%) and male (80.2%) workers identified as heads of households than any other manufacturing subsector in 1989 (Table 13). Other subsectors, including machinery/equipment, and nonmetallic minerals, have distinctly low proportions of women workers who are household heads -- around 4%. This figure may reflect the demands on workers' time and energy in those subsectors.

The highest percentages of women workers identified living with their parent(s) are found in the relatively modern manufacturing subsectors -- paper/printing/publishing, chemicals, basic metals, and machinery/equipment. In Ecuador, many separated or divorced young women return to their parents' home, where their children can be cared for by relatives while the women work. On average in these subsectors, more than 40% of female workers lived with their parent(s), compared to less than 30% of men and an average of only 27% for the female MLF as a whole. As discussed later in the report, this trend could be associated with the recruitment of younger women into jobs in more modern subsectors. The proportion of women identifying themselves as wives/partners also drops in these subsectors, averaging around 30% versus over 40% in foods/beverages/tobacco, textiles/clothing/leather, and manufacturing as a whole.

Table 11: Manufacturing EAP by Migration Status and Gender, 1988-1990

	1988*		1989		1990	
	Women	Men	Women	Men	Women	Men
Total Manufacturing EAP	129833	254170	137499	264355	139125	292801
%	100	100	100	100	100	100
A. Manufacturing EAP that has not always lived in current city of residence (migrants)	32124	71472	32474	55519	25996	61668
%	24.7	28.1	23.6	21.0	18.7	21.1
B. Of total migrants (in A), those who have lived in current city of residence for 10 years or more	17984	37943	19147	32962	14494	31370
% as a share of A	56.0	53.1	59.0	59.4	55.8	50.9

* The 1987 EPH did not ask any questions concerning migration status. Source: INEM EPH 1988-1990

Table 12: Manufacturing EAP by Household-head Kinship and Gender, 1987-1990

Relationship to Household head	1987		1988		1989		1990	
	Women	Men	Women	Men	Women	Men	Women	Men
Household head	11,533	104,739	21,281	166,289	21,578	168,080	18,678	181,955
%	12.80	63.52	16.40	65.40	15.70	63.60	13.43	62.14
Husband/wife	42,851	570	57,390	807	61,398	407	67,605	534
%	47.60	0.35	44.20	0.30	44.70	0.20	48.59	0.18
Children	25,051	42,979	36,213	63,702	37,472	71,381	41,771	81,015
%	27.80	26.07	27.90	25.10	27.30	27.00	30.02	27.67
Other relatives	9,322	15,192	13,294	21,106	15,163	20,950	9,493	24,508
%	10.50	9.21	10.20	8.30	11.00	7.90	6.82	8.37
Others (not relatives)*	1,196	1,401	1,655	2,266	1,888	3,537	1,460	4,789
%	1.30	0.85	1.30	0.90	1.30	1.30	1.05	1.64
Domestic workers**	--	--	--	--	--	--	118	0
	--	--	--	--	--	--	0.03	0.00
TOTAL	89,953	164,881	129,833	254,170	137,499	264,355	139,125	292,801
%	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

* 1988 EPH includes domestic workers in this category. ** Starting in 1990, the EPH counts domestic workers as a discrete category. Source: INEM EPH 1987-1990

Table 13: Manufacturing EAP by Household-head Kinship, Subsector, and Gender, 1989

Subsector	Total	Percent of Manufacturing EAP				
		Household-head	Husband/wife	Children	Other relatives	Others (not relatives)
Women						
TOTAL	100	15.7	44.7	27.3	11.0	1.3
31. Foods/beverages/tobacco	100	15.4	41.6	27.6	15.3	0.1
32. Textiles/clothing/leather	100	18.5	46.8	22.3	10.1	2.3
33. Wood	100	6.9	52.9	33.7	6.5	0.6
34. Paper/printing/publishing	100	12.9	32.5	42.8	11.8	0.0
35. Chemicals	100	11.0	35.4	42.6	11.0	0.0
36. Non-metallic minerals	100	4.2	58.8	29.6	6.3	1.1
37. Basic metals	100	16.6	0.0	83.4	0.0	0.0
38. Machinery/equipment	100	4.0	25.8	43.6	26.6	0.0
39. Others	100	7.9	57.9	29.8	4.4	0.0
Men						
TOTAL	100	63.6	0.2	27.0	7.9	1.3
31. Foods/beverages/tobacco	100	62.8	0.6	23.1	12.2	1.3
32. Textiles/clothing/leather	100	80.2	0.0	16.3	3.3	0.2
33. Wood	100	61.7	0.0	31.6	5.6	1.1
34. Paper/printing/publishing	100	61.1	0.0	28.9	7.6	2.4
35. Chemicals	100	62.6	0.0	21.7	11.2	4.5
36. Non-metallic minerals	100	54.4	0.0	33.4	11.6	0.6
37. Basic metals	100	54.6	0.0	19.7	25.7	0.0
38. Machinery/equipment	100	58.0	0.1	35.4	6.3	0.2
39. Others	100	56.2	0.0	35.1	4.6	4.1

Source: INEM EPH 1989

5.3 Length of Workweek (hours/week)

Gender-based differences in household and reproductive responsibilities and their reflection in the labor market can be seen in the reasons that women and men give for working less or more than 40 hours per week (the amount considered normal in manufacturing). The data provide an interesting glimpse into gender differences in the supply of labor.

In global terms, 19% of those employed in manufacturing in 1989 worked less than 40 hours per week (Table 14). Yet this encompassed 34% of women workers compared to only 11% of men. Most relevant are their reasons for working less than a normal workweek: 29% of women said they did so for personal reasons, compared to 15% of men. Among the nearly one in every three women workers in manufacturing who cannot or do not want to work a full workweek, domestic concerns and, presumably, responsibilities are likely to be high on the list of personal reasons. For men, a reduced workload was more likely the result of an involuntary reduction in their workweek (e.g., due to a slowdown in production) and their inability to find more work or another job. These results suggest that legislation encouraging part-time work, and even incentives for hiring women in this capacity would benefit women working in manufacturing, and perhaps draw more women into the sector.

Among both women and men working more than 40 hours per week in manufacturing, around 50% stated that this was a "normal" schedule in 1989. ("Normal" was not defined in the survey.) In earlier years, responses to this effect ranged around 75%. The sharp drop in this number reflects legislation limiting the normal workweek to 40 hours. Perhaps as a result, more persons reported working more hours in order to increase earnings in 1989 compared to earlier years, although there is only a slight difference between women and men. Twenty-nine percent of women and 26% of men said they needed more income in 1989, compared with earlier averages of 14% and 16% respectively (Table 15).

Women's family responsibilities (or lack thereof) are a determining factor in their labor supply decisions and in the demand for their labor. On the one hand, employers tend to hire single women in order to reduce expected absenteeism associated with motherhood (e.g., children's illnesses), and to avoid maternity leaves and associated costs. But for women who are heads of households, or married and whose earnings represent a substantial part of the family income, work becomes an unpostponable necessity -- these women are more willing to accept unfavorable working conditions and low salaries, making them more attractive to employers. Additionally, they often are characterized as more docile and obedient, perhaps reflecting their limited employment choices.¹⁷ Finally, these women are less willing and less inclined to participate in labor unions and contract negotiations.¹⁸ At the same time, the family and domestic responsibilities involved limit women's choices for employment and reduce the rate at which they supply their labor.

Table 14: Manufacturing EAP by Reasons for Working Less than 40 Hours per Week and Gender, 1987-1990

	Total manuf. EAP	Manuf. EAP working less than 40 hours/week	Reason Stated for Working Less than 40 Hours per Week									Other
			Normal hours	Do not desire additional hours	Personal or family reasons	Illness or accident	Vacation or holidays	Decreasing economic activity	Lack of materials, financing, or clients	Could not find another job	Could not find additional work	
1987												
Women	89953	32455	6149	4284	10431	788	109	495	1914	1224	1414	5647
%		100	19.0	13.2	32.1	2.4	0.3	1.5	5.9	3.8	4.4	17.4
Men	164881	28711	4232	1372	3020	629	360	945	1755	1296	1359	13743
%		100	14.7	4.8	10.5	2.2	1.3	3.3	6.1	4.2	4.7	47.9
1988												
Women	129833	46557	0	9371	16093	750	573	1858	6251	3236	5594	2831
%		100	0.0	20.1	34.6	1.6	1.2	4.0	13.4	7.0	12.0	6.1
Men	254170	26953	0	5135	4229	920	60	907	5271	5214	3373	1844
%		100	0.0	19.1	15.7	3.4	0.2	3.4	19.6	19.3	12.5	6.8
1989												
Women	137499	46530	0	10991	13328	2575	340	1320	7158	5773	3859	1186
%		100	0.0	23.6	28.6	5.5	0.7	2.8	15.4	12.4	8.3	2.5
Men	264355	28462	0	5560	4270	806	274	562	4752	6126	4226	1886
%		100	0.0	19.5	15.0	2.8	9.6	19.7	16.7	21.5	14.8	6.6
1990												
Women	139125	40216	0	8403	13580	429	0	1667	5833	2187	4575	3542
%		100	0.0	20.9	33.8	1.1	0.0	4.1	14.5	5.4	11.4	8.8
Men	292801	26153	0	5267	4998	804	0	1248	2097	2791	3426	5522
%		100	0.0	20.1	19.1	3.1	0.0	4.8	8.0	10.7	13.1	21.1

Source: INEM EPH 1987-1990

Table 15: Manufacturing EAP by Reasons for Working More than 40 Hours per Week and Gender, 1987-1989*

	Total manuf. EAP	Manuf. EAP working more than 40 hours/week	Reasons Stated for Working More than 40 Hours per Week					Other
			Normal hours	Overtime hours	Too much work or too many clients	Need more hours to maintain adequate income		
1987								
Women	89953	51592	38218	3449	1369	8087	469	
%		100	74.1	6.7	2.7	15.7	0.8	
Men	164881	130673	91245	8756	5710	24952	0	
%		100	69.8	6.7	4.4	19.1	0.0	
1988								
Women	129833	71972	54772	6171	2150	8356	523	
%		100	76.1	8.6	3.0	11.6	0.7	
Men	254170	209986	159487	13007	10498	25560	1434	
%		100	76.0	6.2	5.0	12.2	0.6	
1989								
Women	137499	29881	14751	3240	3063	8827	0	
%		100	49.4	10.8	10.3	29.5	0.0	
Men	264355	100250	49412	16233	8426	25830	349	
%		100	49.3	16.2	8.4	25.8	0.3	

* This question was not asked in the 1990 EPH. Source: INEM EPH 1987-1990

5.4 Age and Permanency in the Labor Market

According to EPH data for 1989, around 72% of female and 68% of male workers in manufacturing are between the ages of 20 and 44 (Table 16). These figures are in line with the 1990 age curve for the total urban labor force in Ecuador, shown in Figure 7. This curve represents labor force participation rates by gender for each age group, i.e., the share of the population in each group that is economically active.

The curve has basically the same shape for women and men. There are no large declines in women's participation associated with the childbearing years; this suggests that mothers do not leave their jobs to the same degree observed in the past. Nevertheless, the slope of the curve for women is markedly flatter between the ages of 12 and 29, indicating that young women join the labor force more slowly than young men between those ages, perhaps delaying entry in part to accommodate reproductive responsibilities. Men also maintain higher rates of participation than do women age 45 and over. This pattern is reflected in the manufacturing sector as well. Compared to their share of the workforce as a whole in manufacturing (68% in 1989), men are overrepresented among younger and older workers. Men make up 73% of the manufacturing EAP aged 19 and under, and 81% of those aged 64 and above.

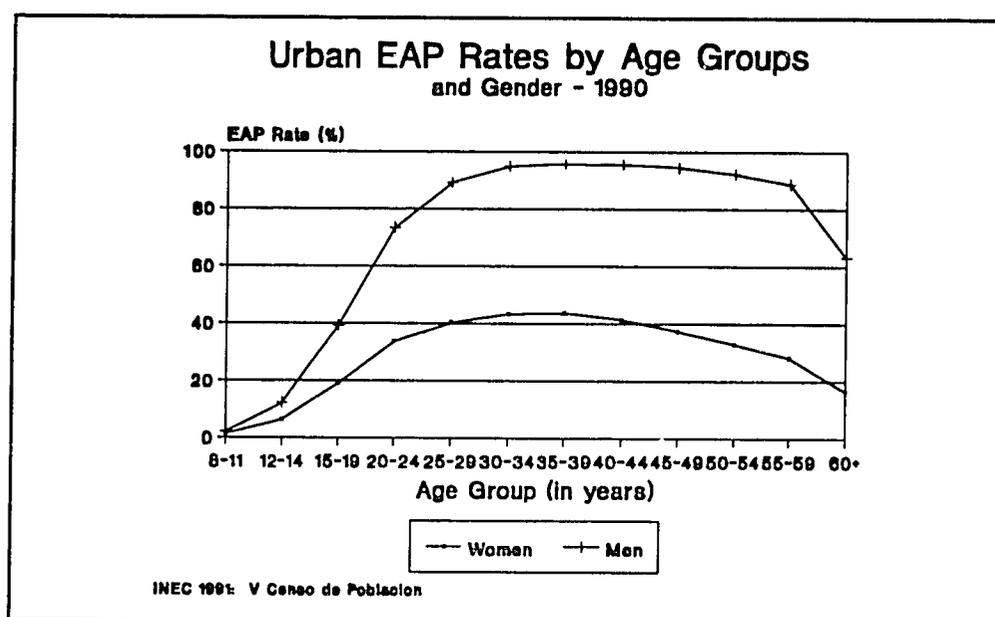


Figure 7

Among the manufacturing subsectors, there are some notable differences in the age distribution of the female labor force, again using 1989 as the reference year (Table 17 and Figure 8). In more traditional industries -- such as textiles/clothing/leather and foods/beverages/tobacco -- more than half of the female workers were between 25 and 44 years old. Further, in these subsectors, 20% of the labor force was over age 45; and there were women aged 65 and over still employed. Here, the age distribution for men is similar to women's. The relative maturity of the workforce in textiles and foods is influenced by the prevalence of employees who work at homes (e.g., doing piecework). In contrast, in three of the more modern subsectors -- paper/printing/publishing, chemicals, and machinery/equipment -- 48% of female workers (compared to only 27% of male) were under age 25 in 1989, very few were over age 45, and none were over 64. This suggests that modern enterprises prefer younger female

workers, who very possibly have fewer family responsibilities and more education, as discussed below. Alternatively or additionally, younger women may be actively seeking and finding employment in modern industries rather than offering their labor in traditional subsectors such as textiles/clothing/leather and foods/beverages/tobacco.

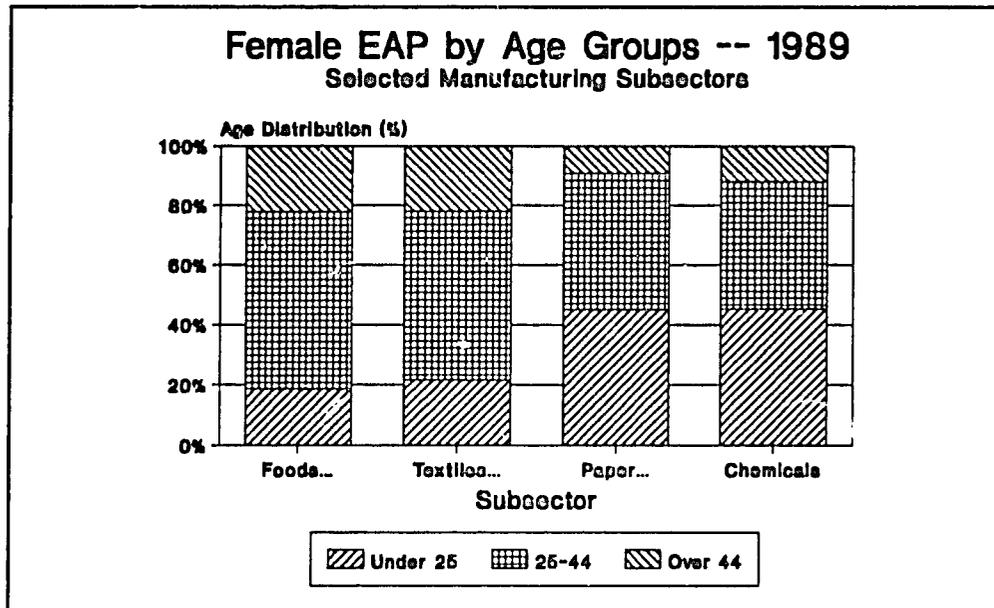


Figure 8

Table 16: Manufacturing EAP by Age Groups and Gender, 1987-1990

Age Group	1987		1988		1989		1990	
	Women	Men	Women	Men	Women	Men	Women	Men
age 8 - 11	0	0	0	0	0	0	263	664
%	0	0	0	0	0	0	0.19	0.23
age 12 - 14	827	1792	1841	4412	1677	4523	562	6761
%	0.92	1.09	1.42	1.74	1.22	1.71	0.40	2.31
age 15 - 19	5942	15826	7392	21707	9224	24247	10957	31258
%	6.61	9.60	5.69	8.54	6.71	9.17	7.88	10.68
age 20 - 24	18072	28998	27365	43911	24167	42707	22313	46333
%	20.09	17.59	21.08	17.28	17.58	16.16	16.04	15.82
age 25 - 44	51920	85810	69919	130963	75468	136659	85349	145748
%	57.72	52.04	53.85	51.53	54.89	51.70	61.35	49.78
age 45 - 54	9816	18546	16576	29123	15770	29866	13774	34898
%	10.91	11.25	12.77	11.46	11.47	11.30	9.90	11.92
age 55 - 64	2829	9940	4098	14738	9026	17034	4329	17602
%	3.14	6.03	3.16	5.80	6.56	6.44	3.11	6.00
age 65 and above	547	3969	2642	9316	2167	9319	1578	9537
%	0.61	2.40	2.03	3.67	1.57	3.52	1.13	3.26
Total	89953	164881	129833	254170	137499	264355	139125	292801
%	100	100	100	100	100	100	100	100

Source: INEM EPH 1987-1990

Table 17: Manufacturing EAP by Age Group, Subsector, and Gender, 1989

Subsector	Age Group							
	Total	12 to 14	15 to 19	20 to 24	25 to 44	45 to 54	55 to 64	65 +
Women								
TOTAL	137499	1677	9224	24167	75468	15770	9026	2167
		1.2	6.7	17.6	54.9	11.5	6.6	1.5
31. Food/beverage/tobacco	24370	236	1400	2929	14429	3403	1621	352
%		1.0	5.7	12.0	59.2	14.0	6.7	1.4
32. Textiles/clothing/leather	79693	1227	4644	11450	44978	10013	5727	1654
%		1.5	5.8	14.4	56.4	12.6	7.2	2.1
33. Wood products	5386	118	246	1189	2452	733	487	161
%		2.2	4.6	22.1	45.5	13.6	9.0	3.0
34. Paper/printing/publishing	7434	0	968	2376	3393	310	387	0
%			13.0	32.0	45.6	4.2	5.2	
35. Chemicals	10136	0	1397	3183	4332	874	350	0
%			13.8	31.4	42.7	8.6	3.4	
36. Non-metallic minerals	3718	96	58	729	2448	96	291	0
%		2.6	1.6	19.6	65.8	2.6	7.8	
37. Basic metals	349	0	0	58	291	0	0	0
%				16.6	83.4			
38. Equipment/machinery	2416	0	406	1188	822	0	0	0
%			16.8	49.2	34.0			
39. Others	3997	0	105	1065	2323	341	163	0
%			2.6	26.6	58.1	8.5	4.1	
Men								
TOTAL	264355	4523	24247	42707	136659	29866	17034	9319
		1.7	9.2	16.2	51.7	11.3	6.4	3.5
31. Food/beverages/tobacco	60447	1357	5162	10759	27954	8607	4430	2178
%		2.2	8.5	17.8	46.2	14.2	7.3	3.6
32. Textiles/clothing/leather	39823	340	1385	4625	23464	4636	4064	1309
%		0.9	3.5	11.6	58.9	11.6	10.2	3.3
33. Wood products	56458	1377	6437	9205	26781	6323	3858	2477
%		2.4	11.4	16.3	47.4	11.2	6.8	4.4
34. Paper/printing/publishing	15064	253	557	3449	7610	1631	757	807
%		1.7	3.7	22.9	50.5	10.8	5.0	5.4
35. Chemicals	24535	0	1819	2874	15846	3218	641	137
%		0.0	7.4	11.7	64.6	13.1	2.6	0.6
36. Non-metallic minerals	12290	448	1730	1470	6634	1084	485	439
%		3.6	14.1	12.0	54.0	8.8	3.9	3.6
37. Basic metals	2355	0	585	133	1464	58	57	58
%		0.0	24.8	5.6	62.2	2.5	2.4	2.5
38. Equipment/machinery	44687	549	5542	7878	22917	3994	2039	1768
%		1.2	12.4	17.6	51.3	8.9	4.6	4.0
39. Others	8555	199	1030	2277	3989	211	703	146
%		2.3	12.0	26.6	46.6	2.5	8.2	1.7

Source: INEM EPH 1989

5.5 Education

Education is often used to explain gender differences in the demand for labor. In some countries and economic sectors, women workers have lower educational levels than men, and their inferior position in the labor force is considered to result largely from this one factor. Yet female workers in the Ecuadorean manufacturing sector are fairly well educated. Indeed, most are better educated than their male co-workers. As seen in Figure 9, approximately 45% of male manufacturing workers in 1990 listed gradeschool as the extent of their education, compared to 33% of women. Conversely, almost 53% of women manufacturing workers in 1990 had attended secondary school, compared to 44% of men. Even at the level of advanced studies,¹⁹ the female work force surpasses the male work force (Table 18). Although statistical tests do not reveal significant differences in the means between female and male educational levels (see Annex B), these results suggest, at least, that in the aggregate, lack of education among the female MLF probably is not a major determinant of their inferior position in manufacturing relative to male's.

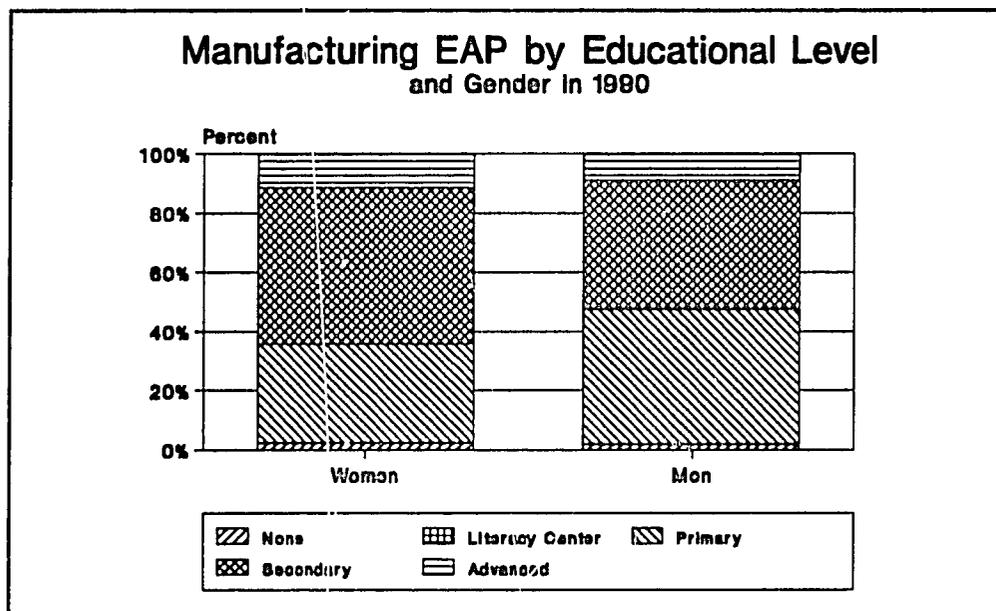


Figure 9

Further, the data confirm the hypothesis that in more modern industries, women workers are not only younger, but also better educated. For example, in 1989 around 57% of female workers in foods/beverages/tobacco and textiles/clothing/leather were between the ages of 25 and 44; around 40% of these women had attended primary school (compared to 46% of men), and another 50% had attended high school (compared to 40% of men). In contrast, in paper/printing/publishing and chemicals, around 45% of women workers (and 28% of men) in 1989 were in the 12-24-year age group; of these women, the vast majority (86%) had attended high school or above (compared to 71% of men). More specifically, 63% of women aged 20-24 in chemicals had advanced education, compared to just 10% of men that age. Even among female workers aged 25-44 in paper/printing/publishing and chemicals, the majority had either secondary or advanced education (as did the men), compared to the majority in foods/beverages/tobacco and textiles/clothing/leather, who had either primary or secondary (Table 19 and Figure 9).

Clearly, women's restricted access to industrial employment across subsectors and job types is not due to a relative lack of education compared to men. These data demonstrate discrimination at work in the labor market. In spite of the fact that women are at least as, if not better, educated than their male colleagues, they are generally paid less than men (as discussed in Section 7) and are more frequently employed in the informal sector. At some level, it seems that in order for women to enter the labor market -- in more modern subsectors in particular -- they must be better educated and trained than their male counterparts. The next section shows that although better-educated, women workers do not necessarily hold better jobs than men; and in fact, women are concentrated in distinct occupational categories and groups.

Table 18: Manufacturing EAP by Educational Level and Gender, 1987-1990

	1987		1988		1989		1990	
	Women	Men	Women	Men	Women	Men	Women	Men
Total	89953	164881	129833	254170	137499	264355	139125	292801
%	100	100	100	100	100	100	100	100
None	1711	1391	1621	3679	1395	3627	3239	5430
%	1.90	0.84	1.25	1.45	1.01	1.37	2.33	1.85
Literacy	217	217	180	475	205	805	111	621
%	0.24	0.13	0.14	0.19	0.15	0.30	0.08	0.21
Primary school	30924	68239	51560	110079	52652	106807	46599	133193
%	34.38	41.39	39.71	43.30	38.29	40.40	33.49	45.49
Secondary school	46207	70381	61637	112845	64665	118935	73397	127745
%	51.37	42.69	47.47	44.40	47.03	44.99	52.76	43.63
Higher education	10894	24653	14835	27092	18582	34181	15779	25812
%	12.11	14.95	11.43	10.66	13.51	12.93	11.34	8.82

Source: INEM EPH 1987-1990

Table 19: Manufacturing EAP by Educational Level, Age Group, and Gender in Selected Subsectors, 1989

Subsector and Educational Level	Age Group											
	TOTAL		12-19 years		20-24 years		25-44 years		45-64 years		65 +	
	Wom.	Men	Wom.	Men	Wom.	Men	Wom.	Men	Wom.	Men	Wom.	Men
31. Foods/beverages/tobacco												
Age Distribution	24370	60447	1636	6519	2929	10759	14429	27954	5024	13037	352	2178
% in each age group	100.0	100.0	6.7	10.8	12.0	17.8	59.2	46.2	20.6	21.6	1.4	3.6
Educational Level (%)												
None	0.4	2.7	—	—	—	2.7	—	1.7	2.0	4.6	—	12.6
Primary school	41.9	46.1	53.4	50.9	10.2	24.1	42.6	46.5	50.8	61.1	100.0	60.1
Secondary school	43.8	41.2	46.6	49.1	52.3	62.0	43.6	40.0	41.4	24.4	—	27.3
Higher education	13.8	9.6	—	—	37.5	11.2	13.8	11.8	5.8	9.9	—	—
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
32. Textiles/clothing/leather												
Age Distribution	79693	39823	5871	1725	11450	4625	44978	23464	15740	8700	1654	1309
% in each age group	100.0	100.0	7.4	4.3	14.4	11.6	56.4	58.9	19.7	21.8	2.1	3.3
Educational Level (%)												
None	1.3	3.2	—	—	2.2	—	0.4	—	2.2	8.7	16.3	40.3
Primary school	44.3	45.0	36.5	38.7	43.8	14.4	38.2	46.9	61.9	55.3	74.4	59.7
Secondary school	47.6	40.0	63.5	61.3	46.7	78.3	51.4	39.1	35.3	23.9	9.3	—
Higher education	6.8	11.7	—	—	7.3	7.3	10.0	14.0	0.5	12.1	—	—
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
34. Paper/printing/publishing												
Age Distribution	7434	15064	968	810	2376	3449	3393	7610	697	2388	—	807
% in each age group	100.0	100.0	13.0	5.4	32.0	22.9	45.6	50.5	9.4	15.9	—	5.3
Educational Level (%)												
None	13.9	16.5	—	20.4	—	—	—	—	—	—	—	—
Primary school	65.1	57.9	95.5	79.6	1.6	13.6	11.7	18.0	86.2	20.2	—	—
Secondary school	21.0	25.6	4.5	—	83.6	73.3	54.1	53.6	13.8	31.5	—	88.1
Higher education	—	—	—	—	14.8	13.1	34.2	28.4	—	48.2	—	11.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	—	—	100.0
35. Chemicals												
Age Distribution	10136	24535	1397	1819	3183	2874	4332	15846	1224	3859	—	137
% in each age group	—	—	13.8	7.4	31.4	11.7	42.7	64.6	12.1	15.7	—	0.6
Educational Level (%)												
None	—	—	—	—	—	—	—	—	—	—	—	—
Primary school	15.7	28.7	11.0	41.0	—	20.3	26.4	26.9	23.9	33.9	—	100.0
Secondary school	49.1	47.0	68.1	59.0	36.9	70.1	59.0	46.2	23.9	28.8	—	—
Higher education	35.2	24.3	20.9	—	63.1	9.6	14.5	26.9	52.2	37.3	—	—
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	—	100.0

Source: INEM EPH 1989

6. Gender and Position in the Work Force

6.1 Category and Occupational Group

A review of women's and men's relative position in the MLF suggests that the type of jobs women hold are lower status and have fewer paid benefits than those held by men. Five categories are used to describe the labor force in the INEM survey: employers; self-employed; unpaid family worker; salaried or wage worker in the public sector; and salaried or wage worker in the private sector (Table 20).

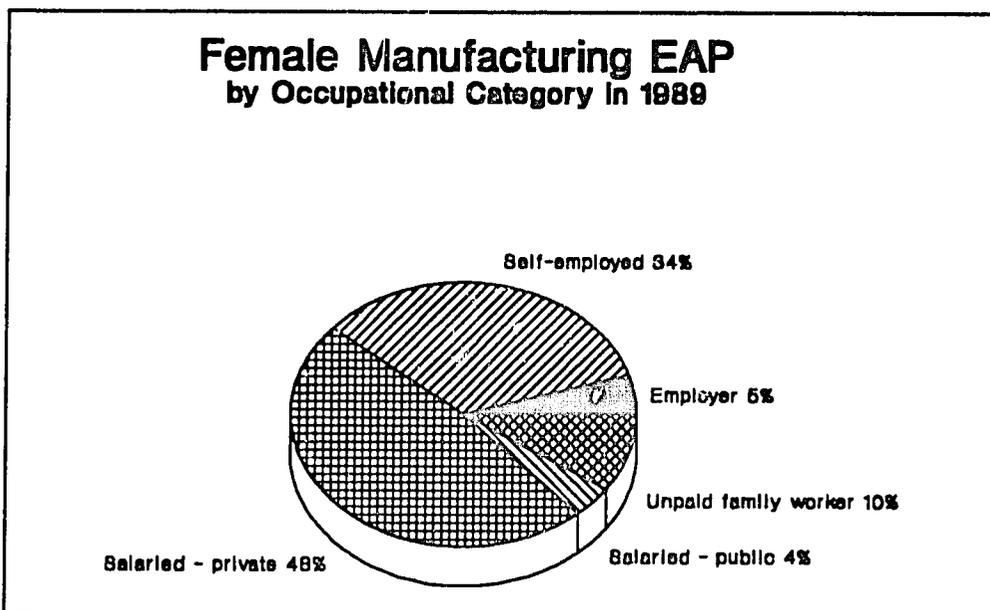


Figure 10

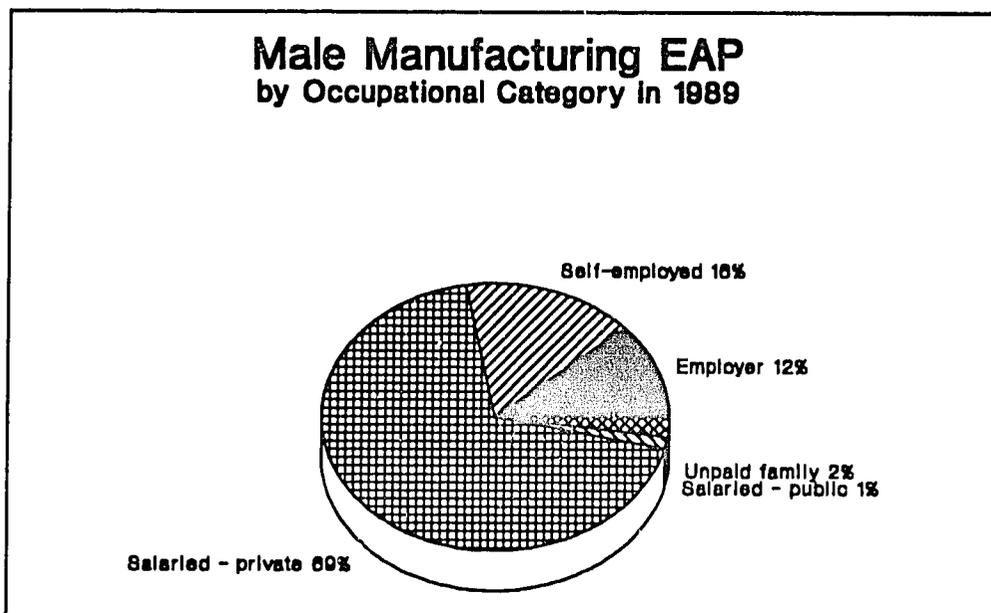


Figure 11

As shown in **Figure 10**, only around half of female manufacturing workers in 1989 were waged or salaried employees, while 35% were self-employed. In comparison, nearly 70% of their male colleagues were waged or salaried, and only 16% self-employed (**Figure 11** and **Table 21**). At almost 12% of the male EAP in manufacturing in 1989, the proportion of men who were employers was more than double that of women (5%), while women far outnumbered men in the unpaid family workers category (9.9% versus 2.3%) (**Table 21**). Additionally, although women account for around one-third of all manufacturing employees, in 1989 they represented nearly 70% of all unpaid family workers, over half of all the self-employed, 27% of all private sector salaried and wage workers, and only 18% of employers (**Table 20**).

In some manufacturing subsectors, an extremely high percentage of women is self-employed or unpaid family members, skewing the sectoral averages illustrated above. In textiles/clothing/leather, for example, 52% of the female labor force in 1989 was self-employed, and another 8% were unpaid family members (more than twice the proportion of men in these categories) (**Table 21**). The presence of many small cottage industries in garment manufacture and handicrafts accounts for much of this employment. However, these figures also reflect piecework stitchers (i.e., homeworkers) operating in their homes and considered self-employed.²⁰

The data indicate that a large proportion of women employed in some manufacturing subsectors do not work in factories, and therefore are almost always unregistered personnel. Clearly, then, standard manufacturing survey statistics underestimate -- perhaps by as much as 50% -- the true levels of female employment in manufacturing, especially in textiles/clothing/leather. The same phenomenon is observed in nonmetallic minerals, including the manufacture of clay, glazed earthenware, and porcelain objects -- industries similarly characterized by a large number of artisans. In this subsector, 27% of women and 11% of men in 1989 were self-employed, while 21% of women and 5% of men were unpaid family workers (**Table 21**). Among male manufacturing workers, self-employment is most common in textiles/clothing/leather and in wood, where around one-fourth of men employed in each of those subsectors were self-employed in 1989 (e.g., as tailors, cabinetmakers, and carpenters).

In addition to employment categories, occupational groups were examined in order to identify gender-based distributions in type of employment. Detailed codes for each group are presented in **Box 2**. At the main group (one-digit) level, the data illustrate that the majority of both the female and male MLF is employed in Groups 6 and 7, as machine operators, artisans, and laborers in primarily "blue collar" jobs. In 1989, these two categories accounted for 71% of all female and 67% of all male manufacturing workers. Women held a sizeable share of these jobs, making up 36% of the workforce in Groups 6 and 7 in 1989.

There are noticeable gender differences, however, in the proportion of manufacturing workers who are managers and administrators (Group 1) and administrative employees (Group 2). In 1989, 4% of men and less than 1% of women were in Group 1, while 10% of women and only 3% of men were in Group 2 (**Table 22**). In terms of their relative share of each of these two occupational groups, women represented around 10% of all manufacturing managers and administrators, and 66% of all administrative workers in 1989.

At the next level of specificity, the two-digit subgroup level, women's concentration in certain types of jobs becomes more apparent. Among female administrative employees (Group 2) in 1989, nearly

65% were employed in secretarial work and text production (Subgroup 22), whereas men were more evenly distributed across all types of administrative work (Table 23).

Table 20: Manufacturing EAP by Occupational Category and Gender, 1987-1990

	Total	Occupational Category					Others **
		Employer	Self-employed	Unpaid family worker*	Salary or wage worker in public sector	Salary or wage worker in private sector	
1987							
Women	89953	3667	26750	7017	1088	50580	851
%	35.3	15.8	56.1	66.8	37.5	30.6	16.7
Men	164881	19614	20901	3490	1816	114810	4250
%	64.7	84.2	43.9	33.2	62.5	69.4	83.3
Total	254834	23281	47651	10507	2904	165390	5101
%	100	100	100	100	100	100	100
1988							
Women	129833	8669	43818	8800	868	67598	80
%	33.8	22.9	47.0	58.1	15.3	29.2	33.9
Men	254170	29257	49369	6348	4811	164229	156
%	66.2	77.1	53.0	41.9	84.7	70.8	66.1
Total	384003	37926	93187	15148	5679	231827	236
%	100	100	100	100	100	100	100
1989							
Women	137499	6998	48208	13614	684	67995	0
%	34.2	18.4	53.2	69.4	15.1	27.3	
Men	264355	30979	42432	5994	3833	181117	0
%	65.8	81.6	46.8	30.6	84.9	72.7	
Total	401854	37977	90640	19608	4517	249112	0
%	100	100	100	100	100	100	
1990							
Women	139125	4224	49176	12674	1164	71887	0
%	32.2	15.1	46.0	58.6	15.7	26.8	
Men	292801	23704	57806	8960	6258	196073	0
%	67.8	84.9	54.0	41.4	84.3	73.2	
Total	431926	27928	106982	21634	7422	267960	0
%	100	100	100	100	100	100	

* In the 1987 EPH, this term refers to unpaid apprentices. ** In the 1987 EPH, this term refers to paid apprentices, but in 1988, it refers to domestic workers. Source: INEM EPH 1987-1990

Table 21: Manufacturing EAP by Occupational Category, Subsector, and Gender, 1989

Subsector	Occupational Category					
	Total	Employer	Self-employed	Unpaid family worker	Salaried or wage worker in public sector	Salaried or wage worker in private sector
Women						
TOTAL	137499	6998	48208	13614	684	67995
%	100	5.1	35.0	9.9	0.5	49.5
31. Food/beverages/tobacco	24370	1972	3026	3914	236	15222
%	100	8.1	12.4	16.1	1.0	62.4
32. Textiles/clothing/leather	79693	3450	41447	3664	389	28043
%	100	4.3	52.0	8.0	0.5	35.2
33. Wood products	5386	887	944	1296	0	2259
%	100	16.5	17.5	24.1		41.9
34. Paper/printing/publishing	7434	236	324	616	0	6258
%	100	3.2	4.3	8.3		84.2
35. Chemicals	10136	292	153	58	59	9574
%	100	2.8	1.5	0.6	0.6	94.5
36. Non-metallic minerals	3718	102	999	799	0	1818
%	100	2.7	26.9	21.5		48.9
37. Basic metals	349	0	0	0	0	349
%	100					100
38. Equipment/machinery	2416	0	0	0	0	2416
%	100					100
39. Others	3997	59	1315	567	0	2056
%	100	1.5	32.9	14.2		51.4
Men						
TOTAL	264355	30979	42432	5994	3833	181117
%	100	11.7	16.1	2.3	1.4	68.5
31. Food/beverages/tobacco	60447	5011	4504	1396	2549	46987
%	100	8.3	7.5	2.3	4.2	77.7
32. Textiles/clothing/leather	39823	5506	10869	435	332	22681
%	100	13.8	27.3	1.1	0.8	56.9
33. Wood products	56458	9388	14719	2647	291	29413
%	100	16.6	26.1	4.7	0.5	52.1
34. Paper/printing/publishing	15064	1595	1296	0	0	12173
%	100	10.6	8.6			80.8
35. Chemicals	24535	445	0	103	294	23693
%	100	1.8		0.4	1.2	96.6
36. Non-metallic minerals	12290	1584	1335	621	0	8750
%	100	12.9	10.9	5.0		71.2
37. Basic metals	2355	58	75	0	0	2222
%	100	2.4	3.2			94.4
38. Equipment/machinery	44687	5544	6785	772	367	31219
%	100	12.4	15.2	1.7	0.8	69.9
39. Others	8696	1848	2849	20	0	3979
%	100	21.3	32.8	0.2		45.7

Note: In 1989 and 1990, all workers were placed in one of the five categories listed above; the sixth category, "other," is therefore not shown in this table. Source: INEM EPH 1989

**Box 2: International Standard Classification of Occupations (ISCO) Codes
(1 & 2 digit level)**

Main Group 0: Professionals and Technicians

- 00 architecture, city planning, engineering, draftsmanship and industrial engineering technology
- 01 chemistry, physics, astronomy, geology, bacteriology, industrial laboratories
- 02 agronomy and veterinary science, biology, natural sciences and farming technology
- 03 medicine, surgery, dentistry, pharmacology, medical technology, paramedical and health inspection workers
- 04 art, literature, sports, recreation, broadcasting, publicity, social organization and welfare.
- 05 religion and sects
- 06 teaching and research
- 07 mathematics and statistics, economics, administration and accounting, social sciences.
- 08 law and jurisprudence
- 09 sea, water and air transport, and communications

Main Group 1: Managers and Administrators

- 10 public administration (Executive-Legislative-Judicial)
- 11 autonomous, semi-autonomous, and private enterprise in agricultural, industrial and commercial production
- 12 private and autonomous service enterprises (excluding commerce and public administration)

Main Group 2: Administrative (clerical) Employees of Government, Autonomous Institutions, and Private Enterprise

- 20 administrative, accounting, financial employees in public administration at the central, regional, provincial or municipal level and in private enterprise
- 21 accounting and budget employees
- 22 employees in secretarial work and text production
- 23 office machine and accounting equipment operators
- 24 employees in inspection, dispatching and control in transportation and communications
- 25 messengers
- 26 operators of radiotelephone, radiotelegraph and telecommunications equipment
- 27 other administrative employees

Main Group 3: Merchants and Salespeople

- 30 businessmen/women
- 31 sales clerks and street vendors
- 32 commercial travel agents and wholesale or manufacturing sales representatives
- 33 other salespeople and agents, ordinary and on commission

Main Group 4: Farmers, Ranchers and Agricultural Workers

- 40 head overseers
- 41 farmers and ranchers (owners)
- 42 farm hands
- 43 fishermen
- 44 hunters and trappers
- 45 forest rangers

Box 2: Continued

Main Group 5: Occupations Related to Driving and Control of Vehicles of Transportation

- 50 drivers of land transport vehicles
- 51 railroad engineers and machinists
- 52 air and sea navigators and crew
- 53 signalling and traffic control operators

Main Group 6: Occupations in the Textiles, Garment, Carpentry and Masonry, Painting and Plumbing, Mechanics and Electricity Trades and Industries

- 60 textile workers
- 61 workers in garment manufacture and repair (except footwear and leather goods)
- 62 shoemakers, leather workers and other makers of footwear (any type)
- 63 carpenters, cabinetmakers and other woodworkers
- 64 masons, roofers, and other construction workers
- 65 painters of vehicles and machinery, etc. (except glass and ceramic painters and decorators)
- 66 plumbers and other pipelayers and workers in installation of metal structures and welders in general
- 67 electricians and workers in electronics, electrical and electronic installations operators and repairmen
- 68 metal fitters, tool makers, mechanics for agricultural, industrial, construction and transportation machinery
- 69 optic watchmakers and precision mechanics, jewelers, silversmiths and goldsmiths and other workers in jewelry and precious metals

Main Group 7: Occupations in Handicraft and Industrial Production in Graphics, Chemistry, Mining, Metal Melting, Foods and Beverages, Ceramics, Leather Goods, Tobacco and Other Industrial Goods

- 70 craftsman and machine operators in graphic arts
- 71 miners, stonecutters and machine operators in mineral extraction
- 72 foundrymen, rolling mill operators and workers in metals processing
- 73 ceramists, potters, and glassmakers
- 74 workers and machine operators in the chemicals industry, wood industry and paper and carton processing
- 75 workers and machine operators in the foods and beverages industry
- 76 workers in tobacco processing and cigarette manufacture
- 77 workers in tanneries and leatherworks and hide and fur preparation
- 78 other tradesmen and machine operators

Main Group 8: Occupations in Stowage, Cargo, Storage, and Warehouses

- 80 workers in stowage, cargo, storage, and warehouses

Main Group 9: Occupations in Personal and Allied Services

- 90 workers in guarding, protection and security
- 91 kitchen workers, servants, and waiters
- 92 laundrymen and pressers
- 93 doormen, concierges and janitors
- 94 workers in beauty salons
- 95 other workers in personal services
- 96 workers in non-identifiable occupations

Table 22: Manufacturing EAP by Occupational Group and Gender, 1987-1990

Occupational Group (one-digit)	1987		1988		1989		1990	
	Women	Men	Women	Men	Women	Men	Women	Men
Total Manufacturing EAP	89953	164881	129833	254170	137499	264355	139125	292801
%	100	100	100	100	100	100	100	100
0. Professional/technicians	3597	5731	5433	9250	3997	11185	2886	6440
%	4.0	3.5	4.2	3.6	2.9	4.2	2.1	2.2
1. Managers/administrators	1921	11808	1663	11542	1215	11461	1184	10661
%	2.1	7.2	1.3	4.5	0.9	4.3	0.9	3.6
2. Administrative (clerical)	12196	6236	15703	6908	13603	6949	15795	9330
%	13.6	3.8	12.2	2.7	9.9	2.6	11.4	3.2
3. Merchants/salespeople	6190	10630	2005	8774	9823	22758	5069	13329
%	6.9	6.4	1.5	3.5	7.1	8.6	3.6	4.6
4. Farmers/ranchers/ agricultural workers	0	287	105	653	1040	6444	0	200
%	0	0.2	0	0.3	0.7	2.4	0	0.1
5. Drivers, operators of vehicles of transportation	0	2845	504	5887	0	3588	0	5209
%	0	1.7	0.4	2.3	0	1.3	0.0	1.8
6. Operators and laborers*	44488	79155	73798	133927	75796	127452	85482	152082
%	49.5	48.0	56.8	52.7	55.1	48.2	61.4	51.9
7. Other operators and laborers**	15824	34601	22516	59522	22496	50673	22531	72900
%	17.6	21.0	17.4	23.4	16.4	19.2	16.2	24.9
8. Occupations in stowage, cargo, storage, warehouses	3597	10393	6880	14997	8652	17385	4591	15123
%	4.0	6.3	5.3	5.9	6.3	6.6	3.3	5.1
9. Occupations in personal and allied services	2140	3195	1226	2710	877	6460	1587	7527
%	2.4	1.9	0.9	1.1	0.6	2.4	1.1	2.6

* Refers to occupations in the textiles, garment, carpentry and masonry, painting and plumbing, mechanics and electricity trades and industries. ** Refers to occupations in handicraft and industrial production in graphics, chemistry, mining, metal melting, foods and beverages, ceramics, leather goods, tobacco, and other industrial goods. See Box 2 for full listing of one- and two-digit occupational groups. Source: INEM EPH 1987-1990

Table 23: Manufacturing EAP in Selected Two-Digit Occupational Groups by Gender, 1989

Occupational Group (two-digit)	Women	%	Men	%
1. Managers/Administrators	1215	100.0	11461	100.0
11 agriculture/industrial/commercial enterprises	923	76.0	10670	93.1
12 service enterprises	292	24.0	791	6.9
2. Administrative (clerical)	13603	100.0	6949	100.0
20 administrative/accounting/financial	999	7.3	685	9.9
21 accounting and budget employees	3197	23.5	2493	35.9
22 secretarial work and text production	8766	64.4	697	10.0
23 office machine/accounting equip. operators	583	4.3	692	10.0
24 transportation/communications	0	0.0	134	1.9
25 messengers	0	0.0	1886	27.1
26 radiotelephone/telegraph etc. operators	0	0.0	123	1.8
27 other administrative	58	0.4	239	3.4
6. Operators and laborers	75796	100.0	127452	100.0
60 textile workers	9405	12.4	9306	7.3
61 garment manufacture/repair	61435	81.1	12901	10.1
62 shoemakers/leather workers/footwear	2692	3.6	8123	6.4
63 carpenters/cabinetmakers/other	1586	2.1	47124	37.0
64 masons/roofers/other construction	18	0.0	867	0.7
65 painters of vehicles/machinery	57	0.1	1716	1.3
66 plumbers/pipelayers/etc.	0	0.0	15898	12.5
67 electricians/operators/repairman	332	0.4	3449	2.7
68 metal fitters/tool makers/mechanics etc.	58	0.1	23612	18.5
69 watchmakers/precision mechanics/jewelers/etc.	213	0.3	4456	3.5
7. Other operators and laborers	22496	100.0	50673	100.0
70 craftsman/operators in graphic arts	2441	10.9	4846	9.6
71 miners/stonecutters/etc.	0	0.0	0	0.0
72 foundrymen/rolling mill operators/etc.	291	1.3	3037	6.0
73 ceramists/potters/glassmakers	2205	9.8	7919	15.6
74 chemicals/wood/paper/et.	1778	7.9	5627	11.1
75 foods and beverages	8685	38.6	23183	45.8
77 tanneries/leatherworks/hide and fur prep.	236	1.0	896	1.8
78 other tradesman and machine operators	6860	30.5	5165	10.2

See Box 2 for full listing of one- and two-digit occupational groups. Source: INEM EPH 1989

The concentration of female workers and the relative dispersion of male workers in the two largest occupational groups (6 and 7) in manufacturing are displayed in Figures 12 and 13.

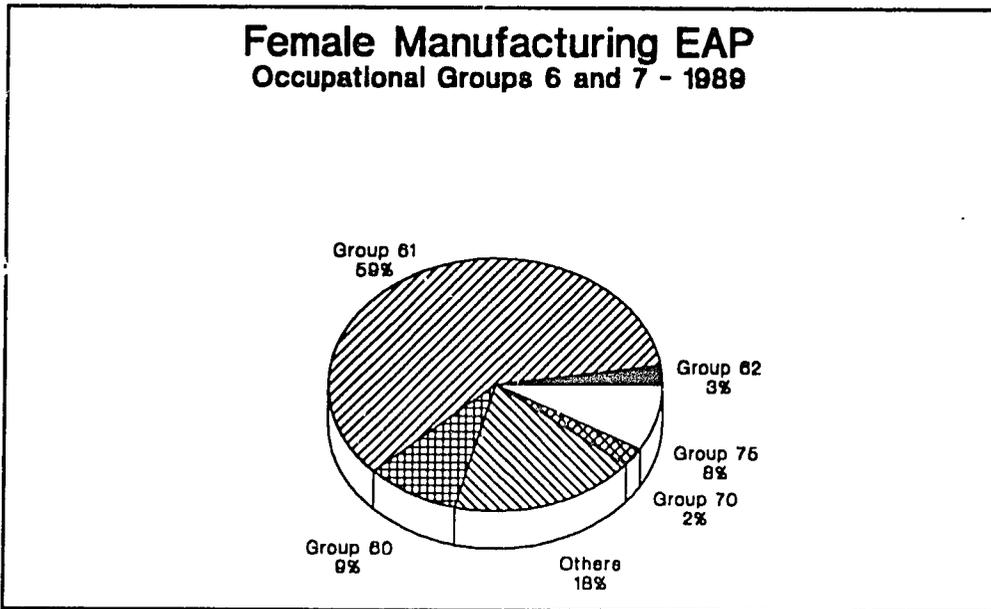


Figure 12

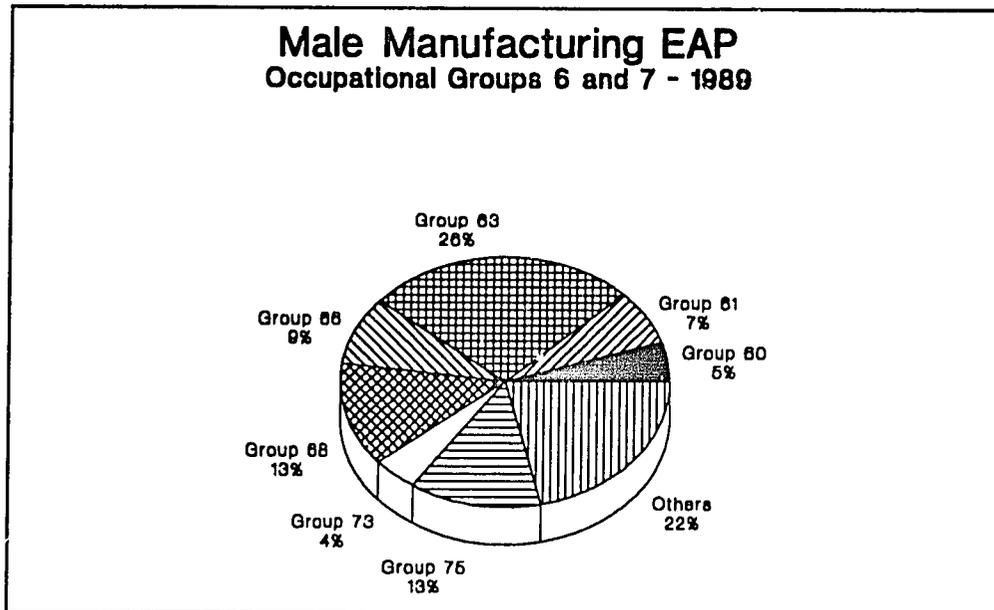


Figure 13

In 1989, over 80% of women employed as machine operators, artisans, and laborers were concentrated in just three subgroups:

- around 62% were workers in garment manufacture and repair (Subgroup 61),
- 10% were textile workers (Subgroup 60), and
- 9% were workers and machine operators in the foods and beverages industry (Subgroup 75),

while the rest were scattered in small numbers throughout the remaining subgroups. Conversely, men working in these two main occupational groups were not overly concentrated in any one subgroup but rather distributed throughout the subgroups:

- around 26% worked as carpenters, cabinetmakers, and other woodworkers (Subgroup 63),
- 13% were metal fitters, tool makers, and mechanics (Subgroup 68),
- 13% were workers and machine operators in the foods and beverages industry (Subgroup 75),
- 9% were plumbers and other pipelayers (Subgroup 66), and
- various other subgroups each absorbed between 3% and 7% of these men.

In terms of women's and men's relative share of occupational subgroups among machine operators, artisans, and laborers (Groups 6 and 7), the data in Table 23 illustrate that, in 1989, women represented:

- over 80% of all garment workers (Subgroup 61);
- half of all textile workers (Subgroup 60);
- one-third of all craftworkers and machine operators in graphic arts (Subgroup 70); and
- around one-fourth of all shoemakers and leather workers (Subgroup 62), ceramists, potters, and glassmakers (Subgroup 73), workers and machine operators in chemicals, wood, and paper and carton processing (Subgroup 74), workers and machine operators in the foods and beverages industry (Subgroup 75), and workers in tanneries and leatherworks, and hide and fur preparation (Subgroup 77).

Although outside the scope of the present analysis, further classification within these occupational groups is necessary, particularly in Groups 6 and 7, in order to differentiate between supervisors and helpers or workers. At the two-digit level, the exact nature of the work performed by those persons classified as machine operators, artisans, and laborers, as well as the internal hierarchical differences by gender, are unknown. For example, are female potters more or less likely than male potters to have some supervisory duties? Likewise for the large group of employees labeled textile workers; while persons in this subgroup (60) are not managers, they may be line supervisors.

Nevertheless, the data do suggest a resistance to change in female employment patterns over time, in spite of, for example, women's educational achievements in recent decades. Women in manufacturing are less likely than men to be employers or salaried/wage workers, and more likely to be self-employed and unpaid family workers. Among blue-collar workers (machine operators, artisans, and laborers), women are highly concentrated in textiles, garment manufacture, and foods and beverages industries. In contrast, men are fairly well distributed throughout a wide range of jobs. Further, in more traditional subsectors, women constitute a substantial share of the workforce: in the garment industry, they make up the vast majority (80%) of blue collar workers; and among blue collar textile workers, women represent around half of the workforce.

These patterns of employment, rooted in longstanding ideas about women's and men's roles in society, are reinforced and sustained by the orientation of the educational and professional training systems in Ecuador. Similarly, the fact that few women hold positions of responsibility is due in part to the widely held view that women have certain feminine characteristics -- such as docility, submissiveness, and lack of initiative -- that are unsuitable in managerial and other authority positions.²¹

6.2 Social Security Membership

The rate of worker membership in the national social security system (IESS) is considered a good proxy for the quality of employment in an industry. Membership in IESS entails employers' contributions and employee registration, for example. It also somewhat increases the chance that a firm will be subject to a government inspection of compliance with labor laws, including health and safety regulations, therefore encouraging better work conditions. An examination of social security membership among industrial workers in Ecuador reveals a statistically significant difference between women and men at the sectoral level in 1989, although their membership rates for industry as a whole are similar (32% of women and 35% of men). While women in construction and mining have a greater chance than men of being affiliated with IESS, in manufacturing – where the majority of women are employed – only 30% of women are members compared to 40% of men (Table 24). In general, affiliation with IESS is directly related to firm size (Table 25). In small manufacturing firms, less than 15% of employees were members in 1989, compared to 70% of workers in large companies. Whereas less than 30% of female manufacturing employees worked in large firms in 1989 (of which 66% had social security), almost 45% of male workers were employed by large firms (and 70% had social security); this partially explains the 10% difference in membership rates for women and men at the aggregate level.

Membership rates are also related to the occupational categories and subsectors within manufacturing. Among employers and the self-employed, membership rates are lower than among salaried or wage workers – averaging around 25% and 7% respectively, compared to rates of around 50% for private salaried or wage workers in 1989. There are only slight differences between women and men within occupational categories; however, self-employed men and male unpaid family workers are more likely to be affiliated with social security than their female counterparts (Table 26).

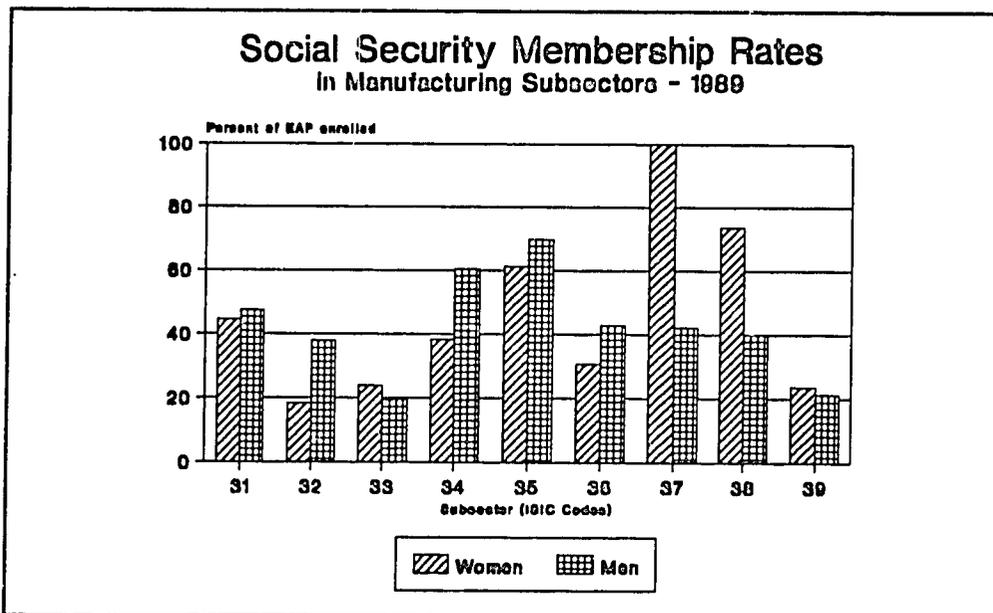


Figure 14

Among manufacturing subsectors, gender differences do arise in social security membership rates (Figure 14), although they are partially explained by the distribution of women and men across occupational categories. In textiles/clothing/leather (ISIC 32) – where only 18% of the female compared to 38% of the male labor force were IESS members in 1989 – half of female workers and one third of

male workers in 1989 were self-employed, probably as seamstresses, tailors, or home workers. As noted above, self-employed persons are highly unlikely to be affiliated with social security; in 1989, less than 6% of women and 10% of men were members. In contrast, in modern subsectors, global membership rates are notably higher than the average for manufacturing: 54% of chemicals workers (ISIC 35) were affiliated with IESS in 1989 versus just 37% of all manufacturing workers. Women and men in chemicals have similarly high rates of social security membership, 61% and 70% respectively in 1989. In this subsector, around 95% of the labor force is employed as a salaried or wage worker, which increases the likelihood of social security enrollment. In machinery/equipment (ISIC 38), fewer men than women are IESS members (40% versus 74%). This is partially explained by the fact that while around one-fourth of men in this subsector are employers or self-employed, all of the women were listed as salaried or wage workers in 1989 (Tables 21 and 27).

Table 24: Industrial EAP by Social Security Membership and Gender, 1987-1990

Sector	1987		1988		1989		1990	
	Total	% Members						
Total	363789	40.5	579187	34.9	600255	34.0	647500	33.8
Mining	6547	87.3	17466	37.9	18959	45.4	15285	47.6
Manufacturing	254834	42.9	384003	39.0	401854	36.6	431926	35.8
Utilities	6445	95.5	17297	84.6	19727	91.7	24400	89.1
Construction	95963	27.1	160421	19.6	159715	22.1	175889	20.0
Women								
Total	96333	33.8	137746	33.4	148320	31.8	148352	29.6
Mining	1338	81.1	960	68.6	1097	81.5	1558	50.0
Manufacturing	89953	32.1	129833	31.2	137499	29.1	139125	26.9
Utilities	649	100.0	1653	80.6	2746	78.8	2883	100.0
Construction	4393	44.7	5300	65.4	6978	58.0	4786	61.1
Men								
Total	267456	42.9	441441	35.4	451935	35.0	499148	35.1
Mining	5209	88.9	16506	36.2	17862	43.2	13727	47.3
Manufacturing	164881	48.8	254170	43.0	264355	40.4	292801	40.1
Utilities	5796	95.0	15644	85.0	16981	93.7	21517	87.7
Construction	91570	26.2	155121	18.0	152737	20.5	171103	18.9

Source: INEM EPH 1987-1990

Table 25: Manufacturing EAP by Social Security Membership, Firm Size, and Gender, 1989

	Firm size by Number of Employees				
	Total	Less than 10	10 to 19	20 or More	Undeclared
1987					
Total	254834	130137	18457	106240	0
% members	42.9	14.2	46.5	77.5	0
Women	89953	53092	6621	30240	0
% members	32.1	10.4	32.4	70.2	0
Men	164881	77045	11836	76000	0
% members	48.8	16.8	54.4	80.4	0
1988					
Total	384003	221382	22748	139323	550
% members	39.0	14.5	53.1	75.9	
Women	129833	83903	7895	37617	418
% members	31.2	14.4	59.8	63.2	
Men	254170	137479	14853	101706	132
% members	43.0	14.5	49.5	80.5	
1989					
Total	401854	221234	24635	155985	0
% members	36.6	13.1	38.7	69.5	0
Women	137499	89409	9186	38904	0
% members	29.1	11.0	47.2	66.4	0
Men	264355	131825	15449	117081	0
% members	40.4	14.5	33.6	70.5	0
1990					
Total	431926	245039	23016	163138	733
% members	35.8	12.5	48.6	68.7	97.8
Women	139125	90613	7423	40717	372
% members	26.9	11.2	36.9	59.1	100
Men	292801	154426	15593	122421	361
% members	41.1	13.3	54.2	72.0	95.6

Source: INEM EPH 1987-1990

Table 26: Manufacturing EAP by Occupational Category, Social Security Membership, and Gender, 1987-1990

Occupational Category	WOMEN		MEN	
	Total	% members	Total	% members
1987				
Employer	3667	23.5	19614	25.4
Self-employed	26750	3.2	20901	14.8
Salaried or wage worker (public sector)	1088	80.0	1816	67.6
Salaried or wage worker (private sector)	50580	52.0	114810	61.9
Paid apprentice	851	0.0	4250	1.2
Unpaid apprentice	7017	0.0	3490	3.1
1988				
Employer	8669	31.2	29257	16.6
Self-employed	43818	7.4	49369	11.3
Salaried or wage worker (public sector)	868	100.0	4811	96.0
Salaried or wage worker (private sector)	67598	49.8	164229	57.3
Unpaid family worker	8800	0.9	6348	0.0
Domestic worker	80	0.0	156	0.0
1989				
Employer	6998	25.9	30979	23.4
Self-employed	48208	5.6	42432	9.6
Salaried or wage worker (public sector)	684	77.6	3833	76.0
Salaried or wage worker (private sector)	67995	50.4	181117	51.1
Unpaid family worker	13614	5.0	5994	0.7
1990				
Employer	4224	15.8	23704	22.6
Self-employed	49176	8.0	57806	7.4
Salaried or wage worker (public sector)	1164	100.0	6258	87.3
Salaried or wage worker (private sector)	71887	43.3	196073	52.2
Unpaid family worker	12674	3.8	8960	1.2

See Table 21 for notes on definition of categories in 1987 and 1988. Source: INEM EPH 1987-1990

Table 27: Manufacturing EAP by Social Security Membership, Subsector, and Gender, 1987-1990

Subsector	1987		1988		1989		1990	
	Total	Members (%)						
TOTAL								
Total	254834	43.0	384003	39.0	401854	36.6	431926	35.8
31. Food/beverages/tobacco	42817	54.9	64904	54.0	84817	46.5	96896	42.9
32. Textiles/clothing/leather	81322	31.8	125893	28.2	119516	24.8	132126	26.3
33. Wood products	32054	21.2	66151	21.7	61844	19.9	62203	14.2
34. Paper/printing/publishing	14552	60.3	23679	54.7	22498	53.1	21901	60.1
35. Chemicals	24387	66.3	30696	76.4	34671	67.3	33453	66.7
36. Non-metallic minerals	11232	57.1	17036	46.4	16008	40.0	18916	45.5
37. Basic metals	4125	90.4	5237	41.1	2704	49.7	4518	50.2
38. Equipment/machinery	33264	50.4	4070	38.6	47103	41.7	53676	40.2
39. Others	11081	12.3	9701	38.4	12693	22.0	8237	21.9
WOMEN								
Total	89953	32.1	129833	31.2	137499	29.1	139125	26.9
31. Food/beverages/tobacco	12820	45.9	19633	44.7	24370	44.4	24340	31.6
32. Textiles/clothing/leather	49267	21.8	77513	21.1	79693	18.4	84981	18.8
33. Wood products	2639	35.9	4654	51.5	5386	23.9	3285	18.6
34. Paper/printing/publishing	5967	51.4	9650	57.9	7434	38.3	6585	65.4
35. Chemicals	7819	54.1	7106	65.8	10136	61.2	10250	51.2
36. Non-metallic minerals	2740	51.1	2573	34.1	3718	30.6	3130	39.2
37. Basic metals	504	71.4	966	33.3	349	100.0	133	0.0
38. Equipment/machinery	3453	60.8	3609	32.6	2416	73.6	3699	45.6
39. Others	4744	4.4	4127	10.4	3997	23.6	2722	21.7
MEN								
Total	164881	48.8	254170	43.0	264355	40.4	292801	40.1
31. Food/beverages/tobacco	29997	58.8	45271	58.0	60447	47.4	72556	46.6
32. Textiles/clothing/leather	32055	47.2	48380	39.6	39823	37.8	47145	39.7
33. Wood products	29415	19.9	61497	19.5	56458	19.5	58918	14.0
34. Paper/printing/publishing	8585	66.6	14029	52.4	15064	60.5	15316	57.8
35. Chemicals	16568	72.1	23588	79.6	24535	69.8	23203	73.6
36. Non-metallic minerals	8492	59.1	14463	48.6	12290	42.7	15786	46.7
37. Basic metals	3621	93.0	4271	42.8	2355	42.2	4385	51.7
38. Equipment/machinery	29811	49.2	37097	39.2	44687	40.0	49977	39.8
39. Others	6337	18.2	5574	35.9	8696	21.2	5515	21.9

Source: INEM EPH 1987-1990

7. Gender-based Wage Discrimination and Differences in Job Search Methods

7.1 Gender-based Wage Discrimination

The INEM survey gathers information on an individual's total monthly income; for salaried and wage workers, the total includes overtime, tips, etc. The survey thus can identify individuals who work at least forty hours per week but earn less than the legal minimum wage over the course of a month. By looking at the distribution of the female and male labor force across several income brackets, and then across subsectors and occupational groups, one can assess if and to what degree gender-based wage discrimination is a problem in manufacturing.

Box 3: Definition of Income Brackets (per INEM)		
Bracket:	Monthly Income:	Amount in 1989:
1	< 1 minimum wage	< 27,000 Sucres
2	1 to < 2 minimum wages	27,000-39,999 Sucres
3	2 to < 3 minimum wages	40,000-79,999 Sucres
4	≥ 3 minimum wages	80,000+ Sucres

The wage gap between women and men workers in industry (Table 28) is clearly evident in the manufacturing sector. Over 37% of the female MLF earned less than the legal minimum wage in 1989 compared to 16% of men (Box 3, Figure 15, and Table 29a). Conversely, the share of the male labor force in the top two income brackets was double that of women in 1989 -- 60% versus 31%. Further, more than 10% of the female labor force was unsalaried, i.e., unpaid family workers. This is four times the rate for men. It should be noted that the sharp drop between 1988 and 1990 in the share of workers in the lowest income brackets probably reflects the fact that employers adjusted salaries and wages upward to keep real income from eroding, because increases in the legal minimum wage were less than the inflation rate during those years.

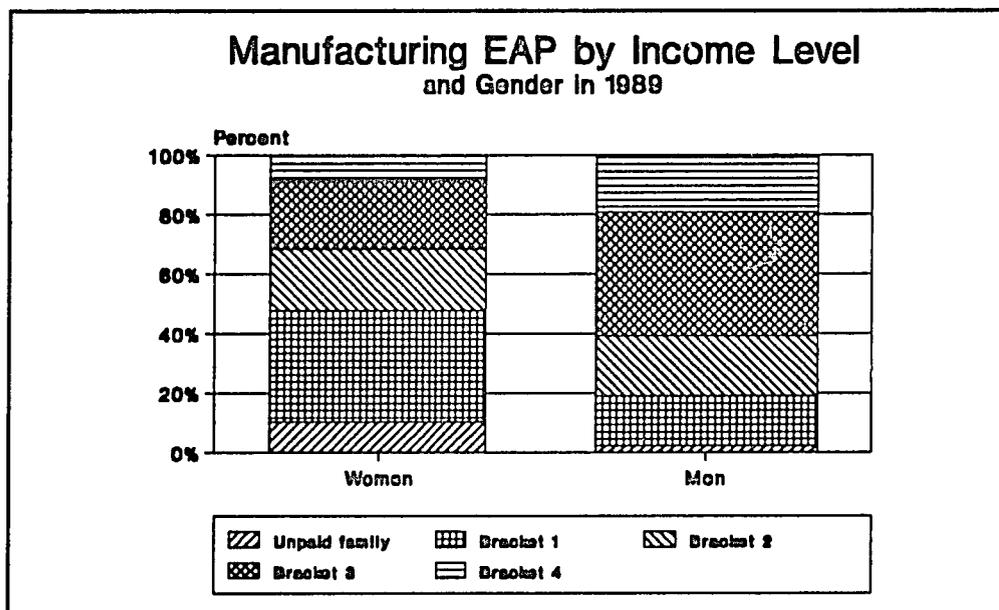


Figure 15

Table 28: Industrial EAP by Monthly Income and Gender, 1987-1990

	Total	Income Bracket				Undeclared	Unpaid family worker
		1	2	3	4		
1987							
Total	347908	76203	132878	31080	93750	3050	10943
%	100	21.9	38.2	8.9	26.9	0.9	3.1
Women	89848	30621	30060	4008	16913	7126	1120
%	100	34.1	33.5	4.5	18.8	7.9	1.2
Men	258060	45582	102818	27072	76837	3817	1934
%	100	17.7	39.8	10.5	29.8	1.5	0.7
1988							
Total	551314	180538	207914	73572	66328	7153	15809
%	100	32.7	37.7	13.3	12.0	1.3	2.9
Women	127637	56501	39899	9977	11008	1377	8875
%	100	44.3	31.3	7.8	8.6	1.0	7.0
Men	423677	124037	168015	63595	55320	5776	6934
%	100	29.3	39.7	15.0	13.1	1.4	1.5
1989							
Total	567029	119162	120322	209785	93808	3729	20223
%	100	21.0	21.2	37.0	16.5	0.7	3.6
Women	139897	48931	29014	34171	13338	591	13849
%	100	35.0	20.7	24.4	9.5	0.4	9.9
Men	427132	70231	91308	175611	80470	3138	6374
%	100	16.4	21.4	41.1	18.8	0.7	1.5
1990							
Total	625173	85052	179493	160198	140499	34983	24948
%	100	13.6	28.7	25.6	22.5	5.6	4.0
Women	141747	36299	41664	24719	17365	8685	13015
%	100	25.6	29.4	17.4	12.3	6.1	9.2
Men	483426	48753	137829	135479	123134	26298	11933
%	100	10.1	28.5	28.0	25.5	5.4	2.5

Source: INEM EPH 1987-1990

In virtually half of the manufacturing subsectors, the share of women in the lowest two income brackets is higher than the industry average for that subsector (Tables 29a and 29b). In textiles/clothing/leather and paper/printing/publishing, the share of the female labor force in Brackets 1 and 2 is 20 percentage points higher than those industries' averages. Women are also overrepresented among low-wage earners in foods/beverages/tobacco, and machinery/equipment. Among the group of lowest paid workers -- those earning less than the legal minimum wage -- women as a whole appear to be worse off than men in several industries. In 1989, 49% of women working in textiles/clothing/leather received less than the minimum wage, compared to 18% of men and an industry average of 39%. In paper/printing/publishing, these figures were 39%, 10%, and 19%, respectively. For foods/beverages/tobacco, they were 18%, 11%, and 13%.

Table 29a: Manufacturing EAP by Monthly Income, Subsector, and Gender, 1989

Subsector	Total	Income Bracket				Undeclared	Unpaid family worker
		1	2	3	4		
WOMEN							
TOTAL	129921	48328	27066	30156	10485	272	13614
%	100.0	37.2	20.8	23.2	8.1	0.2	10.4
31. Foods/beverages/tobacco	22880	4198	4521	7420	2691	136	3914
%	100.0	18.3	19.8	32.4	11.8	0.6	17.1
32. Textiles/clothing/leather	77523	38110	15681	14078	3172	118	6364
%	100.0	49.2	20.2	18.2	4.1	0.2	8.2
33. Wood products	5327	1132	940	967	974	18	1296
%	100.0	21.3	17.6	18.2	18.3	0.3	24.3
34. Paper/printing/publishing	5873	2285	1688	368	916	0	616
%	100.0	38.9	28.7	6.3	15.6	0.0	10.5
35. Chemicals	8128	389	1750	4446	1485	0	58
%	100.0	4.8	21.5	54.7	18.3	0.0	0.7
36. Non-metallic minerals	3505	1028	180	884	614	0	799
%	100.0	29.3	5.1	25.2	17.5	0.0	22.8
37. Basic Metals	349	0	0	349	0	0	0
%	100.0	0.0	0.0	100.0	0.0	0.0	0.0
38. Machinery/equipment	2339	270	623	918	528	0	0
%	100.0	11.5	26.6	39.2	22.6	0.0	0.0
39. Others	3997	916	1683	726	105	0	567
%	100.0	22.9	42.1	18.2	2.6	0.0	14.2
MEN							
TOTAL	250869	41472	51168	103778	46720	1796	5935
%	100.0	16.5	20.4	41.4	18.6	0.7	2.4
31. Foods/beverages/tobacco	57136	6393	11914	23557	13376	500	1396
%	100.0	11.2	20.9	41.2	23.4	0.9	2.4
32. Textiles/clothing/leather	39153	7104	7941	16886	6787	0	435
%	100.0	18.1	20.3	43.1	17.3	0.0	1.1
33. Wood products	55585	12654	11851	20808	7058	567	2647
%	100.0	22.8	21.3	37.4	12.7	1.0	4.8
34. Paper/printing/publishing	13614	1426	3089	4732	3932	435	0
%	100.0	10.5	22.7	34.8	28.9	3.2	0.0
35. Chemicals	21816	1563	4180	10189	5781	0	103
%	100.0	7.2	19.2	46.7	26.5	0.0	0.5
36. Non-metallic minerals	12136	2762	2742	3436	2575	0	621
%	100.0	22.8	22.6	28.3	21.2	0.0	5.1
37. Basic metals	2063	369	352	745	597	0	0
%	100.0	17.9	17.1	36.1	28.9	0.0	0.0
38. Machinery/equipment	41010	6815	7533	19551	6162	236	713
%	100.0	16.6	18.4	47.7	15.0	0.6	1.7
39. Others	8356	2386	1566	3874	452	58	20
%	100.0	28.6	18.7	46.4	5.4	0.7	0.2

Source: INEM EPH 1989

Table 29b: Income Distribution of Manufacturing EAP by Subsector and Gender, 1989

Subsector	Percent of Manufacturing EAP in . . .					
	Bottom Half of Earners in 1989 (Less than 40,000 Sucres/month)			Top Half of Earners in 1989 (40,000 or more Sucres/month)		
	Total	Women	Men	Total	Women	Men
TOTAL	44.1	58.0	36.9	50.2	31.3	60.0
31. Foods/beverages/tobacco	33.8	38.1	32.1	58.8	44.2	64.6
32. Textiles/clothing/leather	59.0	69.4	38.4	35.1	22.3	60.4
33. Wood products	43.6	38.9	44.1	48.9	36.5	50.1
34. Paper/printing/publishing	43.6	67.6	33.2	51.0	21.9	63.7
35. Chemicals	26.3	26.3	26.4	73.1	73.0	73.2
36. Non-metallic minerals	42.9	34.4	45.4	48.0	42.7	49.5
37. Basic Metals	29.9	0	35.0	70.1	100.0	65.0
38. Machinery/equipment	35.2	38.1	35.0	62.7	61.8	62.7
39. Others	53.0	35.0	47.3	41.7	20.8	51.8

Note: Percent of respondents "undeclared" or "unpaid family workers" are omitted in this table. Therefore, total percentages across women and men in this table do not necessarily equal 100%; refer to Table 29a for representation in the two omitted categories.

Source: Table 29a (INEM EPH 1989)

The reverse is true for gender representation in the higher income brackets. Above-average shares of men were in the top two income brackets in more than half of the subsectors. Particularly in textiles/clothing/leather and paper/printing/publishing, men are disproportionately represented among high income earners. In textiles/clothing/leather in 1989, 60% of the male EAP were in Brackets 3 and 4 compared to an industry average of 35%, while in paper/printing/publishing, the figures were 64% and 51%, respectively. Even in chemicals, where around three-fourths of both the female and male labor forces were in the top two income brackets in 1989, a smaller share of women were in Bracket 4: only 18% of women versus 26% of men.

Across occupational groups, a similar pattern arises, whereby a larger share of the female labor force is in the low income brackets, and a larger share of the male labor force falls into the high income brackets (Table 30a). In general, women's salaries are lower than those of men in similar occupational groups. In 1989, the share of the female EAP in Brackets 1 and 2 was higher than for men in seven of the ten occupational groups -- by an average of around 20 percentage points (Table 30b). Among women employed as machine operators, artisans, and laborers (Groups 6 and 7), for example, 67% were in Brackets 1 and 2 compared to 41% of their male counterparts (Table 30a). Female managers also earned less than male managers (Group 1): 19% of women were in the bottom two brackets but only 2% of men. In contrast, the share of the male EAP in the top two brackets was higher than for women in eight of the ten occupational groups in 1989 -- by an average of around 30 percentage points (Table 30b). Among farmers, ranchers, and agricultural workers (Group 4), machine operators, artisans, and laborers (Groups 6 and 7), and stowage, cargo, and storage workers, the percentage of male workers in Brackets 3 and 4 was at least double that for female workers: an average of 56% of men in those occupations versus only 25% of women. Only in Groups 0 and 2 (professionals and technicians, and administrative workers) were a relatively higher percentage of women than men in the top two income brackets.

Comparison of women's and men's earnings across selected occupational groups in three subsectors (foods/beverages/tobacco, textiles/clothing/leather, and chemicals) provides additional depth to the analysis. Results confirm the hypothesis that the gender-based wage gap, whereby women earn less than men for similar work, is more distinct in traditional industries, such as textiles/clothing/leather, than in modern industries, such as chemicals.

Among machine operators, artisans, and laborers (Groups 6 and 7) in foods/beverages/ tobacco in 1989, 31% of female employees were in Bracket 1 compared to 13% of men; conversely, twice as many men (70%) as women (35%) were in Brackets 3 and 4 (Table 31). In textiles/clothing/leather, the contrast is even greater, and the inverse relationship even clearer: 51% of females and 20% of males in Groups 6 and 7 were in the lowest income bracket, while 20% of females and 55% of males in those groups were in the top two brackets. While there are relatively few female managers in these two subsectors (15% of all managers), they have a better chance of earning more than do their male counterparts: all of the women employed in 1989 as managers in both foods/beverages/tobacco, and textiles/clothing/leather earned incomes in the top two brackets compared to only 56% of male managers.

By comparison, in chemicals both female and male machine operators, artisans, and laborers are concentrated in the middle of the earnings scale, although differences persist between the proportion of women and men in the lower income brackets. In 1989, 72% of women and 84% of men were in Brackets 2 and 3. However, nearly twice the proportion of men as women (61% versus 34%) were in Bracket 3, earning between two and three minimum wages per month. Among the highest earners in chemicals, both women and men were well-represented in 1989 – 10% and 8% respectively. This suggests that some women in this subsector may be able to rise through the ranks faster than in traditional industries. Finally, because of the nature of the chemicals industry, we looked at professionals and technicians (Group 0) and administrative workers (Group 2), rather than managers, to compare women's and men's earnings in "white collar" jobs. Here, there is little difference in the distribution between income brackets: women are somewhat more likely than men to be in Bracket 3 while men are slightly more likely than women to be in Brackets 2 and 4. Among administrative workers in chemicals, not only are there more women, but they tend to earn more than men -- 90% of these women were in the top two income brackets compared to 64% of men.

From these data, we can conclude that gender-based wage discrimination in manufacturing is more prevalent in the traditional industries than in the modern ones, although it is likely to persist even there, particularly among lower status workers. According to Joeke (1987), there is growing evidence that standard job classification methods are inherently discriminatory, in that jobs traditionally held by women are classified as lower status (and so receive lower wages) than similar jobs traditionally held by men. Consequently, the wage gap between women and men is probably deeper than these and other statistics suggest.

Table 30a: Manufacturing EAP by Monthly Income, Occupational Group, and Gender , 1989

Occupational Groups (one-digit)	Total	Income Bracket			Undeclared	Unpaid family worker	
		1	2	3			
WOMEN							129921
0. Professional, technicians	3997	98	585	1982	1332	0	0
%	100.0	2.5	14.6	49.6	33.3	0.0	0.0
1. Managers/administrators	1215	0	236	291	584	0	104
%	100.0	0.0	19.4	24.0	48.1	0.0	8.6
2. Administrative (clerical)	13173	397	2419	6793	2760	136	668
%	100.0	3.0	18.4	51.6	21.0	1.0	5.1
3. Merchants/salespeople	8652	1413	1766	2358	1313	0	1802
%	100.0	16.3	20.4	27.3	15.2	0.0	20.8
4. Farmers/ranchers/agricultural workers	1040	240	590	105	105	0	0
%	100.0	23.1	56.7	10.1	10.1	0.0	0.0
5. Drivers, operators of vehicles of transportation	0	0	0	0	0	0	0
%	0	0	0	0	0	0	0
6. Operators and laborers*	73899	36619	15278	12943	2441	136	6482
%	100.0	49.5	20.6	17.5	3.3	0.2	8.8
7. Other operators/laborers**	19813	6791	3769	3646	1493	0	4114
%	100.0	34.3	19.0	18.4	7.5	0.0	20.8
8. Occupations in stowage/cargo/storage/warehouses	7398	2471	2300	1934	457	0	236
%	100.0	33.4	31.1	26.1	6.2	0.0	3.2
9. Occupations in personal and allied services	734	299	123	104	0	0	208
%	100.0	40.7	16.8	14.2	0.0	0.0	28.3
MEN							250869
0. Professional/technicians	9020	18	1787	2448	4767	0	0
%	100.0	0.2	19.8	27.1	52.8	0.0	0.0
1. Managers/administrators	11225	133	136	2716	7812	428	0
%	100.0	1.2	1.2	24.2	69.6	3.8	0.0
2. Administrative (clerical)	6554	394	1895	2442	1689	134	0
%	100.0	6.0	28.9	37.3	25.8	2.0	0.0
3. Merchants/salespeople	21816	3076	2295	9430	5904	0	1111
%	100.0	14.1	10.5	43.2	27.1	0.0	5.1
4. Farmers/ranchers/agricultural workers	6348	851	2530	2309	524	134	0
%	100.0	13.4	39.9	36.4	8.3	2.1	0.0
5. Drivers, operators of vehicles of transportation	3259	140	1046	1309	764	0	0
%	100.0	4.3	32.1	40.2	23.4	0.0	0.0
6. Operators and laborers*	123850	26189	25780	53703	14063	625	3490
%	100.0	21.1	20.8	43.4	11.4	0.5	2.8
7. Other operators and laborers**	47382	8178	10045	19113	8255	475	1316
%	100.0	17.3	21.2	40.3	17.4	1.0	2.8
8. Occupations in stowage/cargo/storge/warehouses	14955	1700	3347	7951	1939	0	18
%	100.0	11.4	22.4	53.2	13.0	0.0	0.1
9. Occupations in personal and allied services	6460	793	2307	2357	1003	0	0
%	100.0	12.3	35.7	36.5	15.5	0.0	0.0

* Refers to occupations in the textiles, garment, carpentry and masonry, painting and plumbing, mechanics and electricity trades and industries.

** Refers to occupations in handicraft and industrial production in graphics, chemistry, mining, metal melting, foods and beverages, ceramics, leather goods, tobacco, and other industrial goods. See Box 2 for full listing of one- and two-digit occupational groups. Source: INEM EPH 1989.

Table 30b: Income Distribution of Manufacturing EAP by Occupational Group and Gender

Occupational Group	Percent of Manufacturing EAP in . . .					
	Bottom Half of Earners in 1989 (Less than 40,000 Sucres/month)			Top Half of Earners in 1989 (40,000 or more Sucres/month)		
	Total	Women	Men	Total	Women	Men
TOTAL	44.1	58.0	36.9	50.2	31.3	60.0
0. Professionals/technicians	19.1	17.1	20.0	80.9	82.9	79.9
1. Managers/administrators	4.1	19.4	2.4	91.7	72.1	93.8
2. Administrative (clerical)	25.9	21.4	34.9	69.4	72.6	63.1
3. Merchants/salespeople	28.1	36.7	24.6	62.4	42.5	70.3
4. Farmers/ranchers/agricultural workers	57.0	79.8	53.3	41.2	20.2	44.7
5. Drivers, operators of vehicles of transportation	36.4	0	36.4	63.6	0	63.6
6. Operators and laborers*	52.5	70.1	41.9	42.0	20.8	54.8
7. Other operators and laborers**	42.8	53.3	38.5	48.4	25.9	57.7
8. Occupations in stowage, cargo, storage, warehouses	43.9	64.5	33.8	54.9	32.3	66.2
9. Occupations in personal and allied services	49.0	57.5	48.0	48.2	14.2	52.0

* Refers to occupations in the textiles, garment, carpentry and masonry, painting and plumbing, mechanics and electricity trades and industries. ** Refers to occupations in handicraft and industrial production in graphics, chemistry, mining, metal melting, foods and beverages, ceramics, leather goods, tobacco, and other industrial goods. See Box 2 for full listing of one- and two-digit occupational groups. Note: Percent of respondents "undeclared" or "unpaid family workers" are omitted in this table. Therefore, total percentages across women and men in this table do not necessarily equal 100%; refer to Table 29a for representation in the two omitted categories. Source: Table 30a (INEM EPH 1989)

Table 31: Manufacturing EAP in Selected Subsectors and Occupational Groups by Monthly Income and Gender, 1989

Selected Occupational Groups and Subsectors	Total	Income Bracket				Undeclared	Unpaid family worker
		1	2	3	4		
31. Foods/beverages/tobacco							
Group 1: Managers/administrators							
Women	292	—	—	—	292	—	—
%	100				100	—	—
Men	3020	—	—	873	2051	96	—
%	100			28.9	67.9	3.1	—
Total	3312	—	—	873	2343	96	—
Groups 6 and 7: Operators and laborers*							
Women	7560	2311	235	2275	405		2334
%	100	30.6	3.1	30.1	5.3		30.9
Men	26411	3383	4248	12177	6182	136	285
%	100	12.8	16.1	46.1	23.4	0.5	1.1
Total	33971	5694	4483	14452	5925	136	2619
32. Textiles/clothing/leather goods							
Group 1: Managers/administrators							
Women	333	—	—	—	333	—	—
%	100				100	—	—
Men	472	—	—	236	236	—	—
%	100	—	—	50.0	50.0	—	—
Total	805	—	—	236	569	—	—
Groups 6 and 7: Operators and laborers*							
Women	73315	37529	15254	12500	2090	118	5824
%	100	51.2	20.8	17.0	2.8	0.2	8.0
Men	32253	6382	7509	13902	4025	—	435
%	100	19.8	23.3	43.1	12.4	—	1.3
Total	105568	43911	22763	26402	6115	118	6259
35. Chemicals							
Group 0: Professional/technicians							
Women	1111	—	291	584	236	—	—
%			26.2	52.6	21.2		
Men	752	—	236	341	175	—	—
%			31.4	45.3	23.3		
Total	1863	—	527	925	411	—	—
Group 2: Administrative (clerical)							
Women	3642	—	291	2280	1013	—	58
%			8.0	62.6	27.8		1.6
Men	1627	—	584	692	351	—	—
%			35.9	42.5	21.6		
Total	5269	—	875	2972	1364	—	58

Selected Occupational Groups and Subsectors	Total	Income Bracket				Undeclared	Unpaid family worker
		1	2	3	4		
Groups 6 and 7: Operators and laborers*							
Women	2265	389	877	763	236	—	—
%		17.2	38.7	33.7	10.4		
Men	7146	396	1673	4366	608	—	103
%		5.5	23.4	61.1	8.5		1.4
Total	9411	785	2550	5129	844	—	103

* Refers to occupations in the textiles, garment, carpentry and masonry, painting and plumbing, mechanics and electricity trades and industries. ** Refers to occupations in handicraft and industrial production in graphics, chemistry, mining, metal melting, foods and beverages, ceramics, leather goods, tobacco, and other industrial goods. See Box 2 for full listing of one- and two-digit occupational groups. Source: INEM EPH 1989

7.2 Job Search Methods

An examination of the way in which unemployed industrial and manufacturing workers seek employment found little difference between women and men. More than half of the unemployed, both men and women, resort to friends for help in finding jobs. While the newspaper and radio were important channels for finding a job prior to 1990, they became insignificant as a resource in 1990. It would seem that almost no one in industry relies on these sources nowadays; instead, increasing numbers of both women and men make direct inquiries to employers (Tables 32a and b).

Table 32a: Industrial Unemployed by Job Search Method and Gender, 1987-1990

	Total	Job Search Method						
		Friends or relatives	Direct contact with employers	Public employment agency	Newspaper or radio ads	Private employment agency	Trying to start own business	Other
1987								
Women	10166	4280	1709	471	3235	471	0	0
%	100	42.10	16.81	4.63	31.82	4.63	0.00	0.00
Men	15765	6674	3541	625	3918	899	108	
%	100	42.33	22.46	3.96	24.85	5.70	0.69	
1988								
Women	12075	5599	1957	1271	3126	70	52	0
%	100	46.37	16.21	10.53	25.89	0.58	0.43	0.00
Men	24484	13243	4664	1226	4318	497	536	0
%	100	54.09	19.05	5.01	17.64	2.03	2.19	0.00
1989								
Women	9015	5271	1159	472	1893	104	116	0
%	100	58.47	12.86	5.24	21.00	1.15	1.29	0.00
Men	26913	15493	4801	1168	4970	310	171	0
%	100	57.57	17.84	4.34	18.47	1.15	0.64	0.00
1990								
Women	6999	3789	2459	331	89	331	0	0
%	100	54.14	35.13	4.73	1.27	4.73	0.00	0.00
Men	16422	8735	5503	1265	415	426	78	0
%	100	53.19	33.51	7.70	2.53	2.59	0.47	0.00

Source: INEM EPH 1987-1990

Table 32b: Manufacturing Unemployed by Job Search Method and Gender, 1987-1990

	Total	Job Search Method						
		Friends or relatives	Direct contact with employers	Public employment agency	Newspaper or radio ads	Private employment agency	Trying to start own business	Other
1987								
Women	8899	3810	1601	253	2982	253	0	0
%	100	42.81	17.99	2.84	33.51	2.84	0.00	0.00
Men	9001	3641	2001	337	2519	503	0	0
%	100	40.45	22.23	3.74	27.99	5.59	0.00	0.00
1988								
Women	10663	5048	1522	1219	2752	70	52	0
%	100	47.34	14.27	11.43	25.81	0.66	0.49	0.00
Men	14389	7229	2338	903	3040	445	434	0
%	100	50.24	16.25	6.28	21.13	3.09	3.02	0.00
1989								
Women	8170	4612	1089	472	1893	104	0	0
%	100	56.45	13.33	5.78	23.17	1.27	0.00	0.00
Men	14636	7813	2369	875	3269	310	0	0
%	100	53.38	16.19	5.98	22.34	2.12	0.00	0.00
1990								
Women	6669	3459	2459	331	89	331	0	0
%	100	51.87	36.87	4.96	1.33	4.96	0.00	0.00
Men	8236	4443	2406	329	361	0	0	697
%	100	53.95	29.21	3.99	4.38	0.00	0.00	8.46

Source: INEM EPH 1987-1990

8. Conclusions

Following is a summary of the main findings from the present study. These findings are presented as conclusions that can be drawn regarding the nature of women's and men's participation in the industrial labor force in Ecuador.

- **General Trends.** The industrialization process in Ecuador during the last 20 years has opened the doors to participation by women in areas that, until recently, were underdeveloped and predominantly male territory. Women's entry into the industrial labor force, however, has not translated into equal opportunities for women and men. Rather, the structure and dynamics of the labor market -- as captured by the EPH data -- are strongly influenced by societal attitudes about what is female and male, what are "appropriate" activities for women and for men, and about how natural capacities differ by gender.
- **Sectoral Segregation.** Within industry, women are overwhelmingly concentrated in manufacturing -- 93% in 1990. A little over 4% are found in construction and a minimum percentage in mining or utilities. Women represented an average of one-third of the MLF between 1987 and 1990. The subsectoral distribution of the labor force, however, shows distinct patterns of gender-based segregation. For example, in 1989, 58% of the female MLF was employed in textiles/clothing/leather, followed by 18% in foods/beverages/tobacco, and 7% in chemicals. The concentration of women in just a few manufacturing subsectors contrasts sharply with the widespread distribution of men; less than one-fourth of the male labor force was employed in any one subsector.
- **Firm Size.** In manufacturing as a whole, small firms (< 10 hires) employed more than half the labor force in 1989. Of these workers, slightly more than 40% were women. In comparison, in large establishments (> 20 people), less than one-fourth of all employees were female. In textiles/clothing/leather, as in other subsectors, the proportion of women decreases as firm size increases. For example, in 1989, three-fourths of all textile employees in small firms were women, whereas in large establishments, this proportion was less than one-half. In more modern industries such as chemicals and nonmetallic metals, the differences are even more notable. In chemicals, for example, 85% of personnel in small firms are female versus 28% in large firms. The data reviewed for the present report, however, were insufficient for adequately testing the hypothesis that an inverse relationship exists between firm size and masculinization of the work force. Nevertheless, one of the important implications of women's concentration in small firms is their reduced access to many of the benefits associated with employment in larger enterprises - - social security membership, overtime pay, bonuses, mandatory maternity benefits, etc.
- **Formal versus Informal Sector.** The data indicate that, in both industry as a whole and in manufacturing, more than half of the female labor force works in the informal sector (55% and 57% respectively, compared to 44% of men). These findings support the hypothesis that Ecuadorian women have a greater tendency to work in the informal sector than do men.
- **Unemployment.** The average annual level of open unemployment in manufacturing between 1987 and 1990 was 4.5%. For women, this figure was almost 6%, compared to less than 4% for men. Perhaps because women's rates were higher to begin with, they declined faster than men's between 1988 and 1990. On average during the period 1987-1990, however, women's share of the unemployed (44%) was higher than their share of the workforce (34%).

- **Labor Supply and Demand.** Gender-based differences in household and reproductive responsibilities are reflected in the labor market and in the reasons women and men give for working less than 40 hours per week. Nearly one in every three women in manufacturing cannot or does not want to work a 40-hour week because of domestic concerns and, presumably, responsibilities. For men, a reduced workload was more likely the result of an involuntary reduction in their workweek (e.g., due to a slowdown in production) and their inability to find more work or another job. These results suggest that legislation encouraging part-time work, and even incentives for hiring women in this capacity, would benefit women manufacturing workers, and perhaps draw more women into the sector.
- **Age Distribution.** The economy-wide age curve -- which represents labor force participation rates by gender for each age group -- has basically the same shape for women and men. There are no large declines in women's participation associated with the childbearing years; this suggests that motherhood does not cause women to leave their jobs to the same degree observed in the past. Nevertheless, the slope of the curve for women is markedly flatter between the ages of 12 and 29 years, indicating that young women join the labor force more slowly than young men between those ages, perhaps delaying their entrance into the labor force in part to accommodate reproductive responsibilities. Men also maintain higher rates of participation than do women in the age 45 and over groups. These general patterns are reflected in manufacturing as well. Compared to their share of the workforce as a whole in manufacturing (68% in 1989), men are overrepresented among younger and older workers.

The data confirm that workers in traditional industries tend to be older than those in modern subsectors, reflecting in part differences in working conditions and educational requirements. The relative maturity of the workforce in textiles/clothing/leather and foods/beverages/tobacco, for example, is linked to the prevalence of employees who work in their homes doing, e.g., piecework. In contrast, in modern industries -- such as paper/printing/publishing, chemicals, and machinery/equipment -- around half of women workers (compared to only one-fourth of men) are under age 25. This suggests that modern enterprises prefer younger female labor, who very possibly have fewer family responsibilities and more education (see below), and/or that younger women are choosing these jobs over more traditional female employment in textiles/clothing/leather and foods/beverages/tobacco.

- **Education.** The data confirm the hypothesis that in modern manufacturing industries, women workers are not only younger, but also better educated. Clearly, women's restricted access to industrial and manufacturing employment across subsectors and job types is not due to a relative lack of education compared to men. The data allow us to observe discrimination at work in the labor market. In spite of the fact that women are at least as, if not better, educated than their male colleagues, they are generally paid less than men and are more frequently employed in the informal sector.
- **Occupational Categories.** A review of women's and men's relative position in the MLF suggests that the type of jobs women hold are lower status and have fewer paid benefits than those held by men. In relation to their total numbers, the proportion of women who are self-employed or unpaid family workers is inordinately high. Conversely, women are underrepresented among employers. The larger proportion of women in the self-employed category may be explained by the existence of homeworkers, particularly in

textiles/clothing/leather. It should be emphasized that 86% of self-employed females are found in this subsector, while self-employed males are more evenly distributed throughout all manufacturing subsectors. The productive process in textiles/clothing/leather can be fragmented, decentralized, and externalized; and certain tasks -- such as stitching -- can be transferred to home workshops as a business strategy to avoid labor regulations and higher wages. Such contractual practices tend to be particularly damaging to women workers, who have fewer choices in the labor market. The predominance of female self-employed or home workers is basically explained by the fact that this type of work permits women to combine their domestic responsibilities -- especially child care -- with a paying job. Furthermore, small children often help out with these productive activities, thus increasing the family's income.

The data on occupational categories indicate that a large proportion of women employed in some manufacturing subsectors do not work in factories but rather in their homes, and therefore are almost always unregistered personnel. The same phenomenon is observed in the production of nonmetallic minerals, including the manufacture of clay, glazed earthenware, and porcelain objects -- industries similarly characterized by a large number of artisans.

- **Occupational Groups.** The data on occupational groups suggest significant traditionalism in female employment patterns. Women in manufacturing are less likely than men to be employers or salaried/wage workers, and more likely to be self-employed and unpaid family workers. Among blue-collar workers (machine operators, artisans, and laborers), women are concentrated in textiles, garment manufacture, foods, and beverages, while men are fairly well distributed throughout a wide range of jobs. Further, in some traditional industries, women are a substantial share of the workforce. In the garment industry, for example, women make up the vast majority (80%) of blue collar workers; and among blue collar textile workers, they represent around half the workforce. These traditional patterns of employment are reinforced and sustained by the orientation of the educational and professional training systems in Ecuador. Similarly, the fact that few women hold positions of responsibility is due in part to the widely held view that women have certain feminine characteristics -- such as docility, submissiveness, and lack of initiative -- which are not suitable in managerial positions and other positions of authority.
- **Social Security Membership.** Membership in the national social security system (IESS) is a good indicator of job quality. IESS membership rates for industrial workers reveal no statistically significant difference between women (32%) and men (32%) in 1989. However, in manufacturing, men outpace women by about 10%. The greater or lesser rates of affiliation to social security are directly related to gender distributions across small versus large firms, occupational categories, and subsectors.
- **Wage Discrimination.** Women earn less than men in industry and manufacturing to a greater degree than can be explained by the different positions they occupy. These differences persist across occupational categories. These findings confirm the hypothesis that gender also affects earnings levels by determining (to various degrees) a person's occupation. It will be difficult to end wage discrimination against women so long as society defines men as providers and women as mothers and secondary workers. Further, gender-based wage discrimination in manufacturing is more prevalent in the traditional industries than in the modern ones, although it is likely to persist even there, particularly among lower status workers.

- **Industrial Employment Trends.** There is some question about the impact on women workers of recent trends in industrial employment. In some manufacturing subsectors, a growing number of women are self-employed; or they work in small, less organized firms; or they do piecework or other poorly regulated forms of employment. This trend suggests the expansion of a type of productive organization that does not bode well for workers. These jobs are often precarious sources of income, and they leave workers vulnerable to exploitation and unsafe and unhealthy work conditions. Outwork (e.g., piece work conducted in the home) generally is among the lowest quality employment in the manufacturing sector: jobs are insecure; wages are low and no benefits are provided (including social security, overtime pay, and bonuses); and workers are sometimes exposed to job-related health and safety hazards. Data on working conditions in Ecuadorian factories are only recently beginning to be available, and comparisons have not yet been made between conditions for female and male workers. Yet, in non-systematic observations of textiles and clothing factories, researchers have found cramped quarters and lax (or no) observance of occupational health and safety regulations. This does not necessarily mean that working conditions are better in predominately male than female industries, but the former do enjoy stronger labor unions.

The sexual division of labor cannot be explained or justified solely by economic factors and inherent masculine and feminine attributes. On the contrary, there is every indication that this is a social construction -- a product of a multifactorial process in which cultural aspects play an essential role. In the context of Ecuador's economic development process, the sexual division of labor will influence how women and men benefit from economic growth in the industry and other areas. Along with the reopening of the Andean market, economic and industrial development based on exports of primary products and a few processed foods and beverages could favor indirect job growth. To respond to the need to diversify exports and take advantage of Ecuador's comparative advantages, new products are currently being developed, especially tropical fruit preserves and to a lesser degree, wood and metal-mechanic products. Although these activities are not directly labor intensive, they may exercise a positive influence on agricultural employment. They might also increase demand for female as well as male labor, since women already supply a sizeable portion of labor in the processed foods industry.

The descriptive analysis presented in this report is useful in that the existence and degree of gender discrimination in employment are documented along with the need for taking this information into account when formulating development policy. Nonetheless it should be remembered that this examination stops at industry's door. A qualitative study would be useful for exploring the complex mechanisms underlying gender-based segmentation of the labor market. Future research should also take a harder look at current models of development and industrialization and their effects on women's participation in, and benefits from, the labor market.

ENDNOTES

1. In the CEPLAES study, *Gender Identity and Violence against Women* (Cuvi et al. 1992), an examination of three distinct social groups -- the indigenous population, rural populations in the coastal areas, and the middle class -- found that motherhood is the central pillar of female identity for women in those groups.
2. A study of female factory workers in Quito found that more than 60% of the women also had domestic or reproductive (e.g., child care) responsibilities (Mauro 1989). An earlier survey of the labor force in Quito (Pérez 1987) found a similar pattern: 60% of women working outside the home spent one or more hours per day performing domestic chores.
3. In a study of female factory workers (Mauro 1989) in Quito, the women interviewed stated that one of the requisites for employment is to be single. Once employed, the women are exhorted not to marry or have children as they may subsequently be fired. This pattern is also noted by Idelfonso (1990) in his study of women working in a financial institution in Quito.
4. In a survey of female factory workers in Quito (Mauro 1989), there was little evidence of upward mobility among women workers, even when they had relatively long tenure in a company: 28% of women workers had spent more than 10 years in one position, and another 30% had spent between 5 and 10 years.
5. In case study research undertaken during 1990-1991 as part of CEPLAES' Family and Social Policies Project, the women interviewed confirmed the existence of clear, gender-based differences in intrahousehold expenditure patterns. Generally speaking, men do not spend their entire salary for family support; a portion is reserved for drinking and other leisure-related activities. Women, on the other hand, allot their earnings to household expenses or savings.
6. The International Standard Industrial Classification (ISIC) establishes nine principal sectors of economic activity. These are frequently regrouped under three headings: Agriculture, Industry, and Service. Industry encompasses four of the nine sectors: mining, including oil production; manufacturing; construction; and utilities (electricity/water/gas).
7. Manufacturing activities are divided in groups and subgroups. At the two-digit level, the primary groups are: foods/beverages/tobacco (32); textiles/clothing/leather production (32); wood/wood and cork products (33); paper/printing/publishing (34); manufacture of chemicals and chemical products (35); manufacture of nonmetallic mineral products (36); basic metals industry (37); manufacture of metallic products and machinery/equipment (38); and other manufacturing industries (39). For the 3 digit level, see Box 1.
8. The economically active population (EAP) -- elsewhere referred to as the labor force -- is defined by INEM as those persons 12 years old and over who work at least one hour during the reference week; are employed but did not work during the reference week; or who are unemployed but actively seeking work during the reference week. This definition was modified for the 1990 survey to include persons 10 years of age and older. Whenever possible, the author eliminated the 10 - 12 year group to maintain comparability in the present analysis; however, the number of workers in this group is very low.
9. The INEC Manufacturing Survey covers only those factories that employ 9 or more people.

10. In a 1985 CEPLAES study of the impact of urban expansion in Quito on outlying rural areas, Water and Almeida observed the transformation of agricultural workers into construction workers. Once these primarily male workers reached the master level, and so some degree of autonomy, they augmented their own labor with the unpaid, unrecorded labor of their wives and children.
11. This classification was proposed and presented for Peru by Virginia Guzmán and Patricia Portocarrero (1989).
12. According to results of a 1985 labor force survey in Quito (Pérez 1987), 47% of employed women versus 25.6% of men work in establishments of 1-2 people. In contrast, 31.3% of men work in establishments of 100 or more people compared to 18.7% of women.
13. In this report, the formal and informal sector are defined as follows. The formal sector is composed of those employed in establishments with more than 5 workers; professionals or technicians employed in establishments of less than 6 workers as either employers or on their own; and persons employed in establishments of up to 5 people in sectors that cannot be classified as informal, such as money exchanges, travel agencies, computer centers, transportation services, etc. The formal sector also includes unemployed persons -- both those previously employed and new entrants to the labor force -- under the assumption that job-seeking is a characteristic of the formal sector. The informal sector consists of those persons who are self-employed or employers in establishments of up to 5 people (except those performing professional or technical activities) and unpaid family workers.
14. The open unemployment rate refers only to previously employed persons who are now seeking employment; it does not include first-time job-seekers.
15. A study by San Ildefonso (1990) found that Ecuadorian employers consider motherhood to be problematic for female workers' performance. For example, women are believed to have higher rates of absenteeism due to children's illnesses. Women's work histories collected under the *Family and Social Policies Project* (CEPLAES 1990-1991) demonstrate that women's employment choices are limited by childcare requirements. This is especially true for women who are heads of household and receive no support from other relatives. Furthermore, many of the women interviewed for that study left work when their children were born or when one of them developed a serious illness that required long term and constant care.
16. According to the 1990 Population Census (INEC 1991), 30% of urban women who are married or have a live-in partner are active in the labor force; this compares to 20% in 1982. Almost half (48%) of the female labor force in urban areas is either married or has a live-in partner.
17. In Ecuador, high-ranking managers characterized women workers as having these two feminine characteristics -- docility and obedience (San Ildefonso 1990). A study of female factory workers also observed such behavior among women (Mauro 1989). In Peru, and particularly in the factories of Lima, this same conclusion regarding women is deduced from the many interviews conducted by Guzmán and Portocarrero during 1986-1987 and 1991.
18. Mauro (1989) noted the extremely limited participation by female factory workers in unions in Quito; furthermore, when women were union members, they were never officials and rarely attended meetings.
19. "Advanced" includes technical (e.g., secretarial, accounting) as well as university education.

20. A survey of the peoples of the Ecuadorean high plateau noted that in the town of Pasa in Tungurahua Province, the principal occupation is the making of shirts for merchants or industrialists in Ambato, who provide the raw materials and the technical specifications of the final product (Pachano 1986). This survey revealed that women make up 53.2% of the total number of people employed in this manner. Martinez (1991) found empirical evidence of piecework done at home in rural areas of Tungurahua. In particular, the textiles and clothing industries take advantage of this employment mechanism, tapping an abundant supply of labor already skilled in handicraft production and having access to additional family resources (e.g., children's labor). In the study area, Martinez found that 30% of artisans did not work on their own, but rather as home workers dependant on raw materials supplied by merchant capital and the subsequent marketing services. Women make up a significant number of these home workers. According to data from the 1990 Population Census, 16.1% of the rural EAP in the Province of Tungurahua are employed in manufacturing, as compared to the national average of 8.1%.

21. See studies cited in endnote 17.

Annex A: *Scope of Work*

GENESYS PROJECT SCOPE OF WORK

I. BACKGROUND

Research indicates that gender is one of the sources of segmentation in the Ecuadorian labor market; other sources include race, labor legislation and unionization. A discussion of related research which helped to frame the scope of work for this proposal is included below.

Disaggregated Socioeconomic Analysis: Development programs which affect employment levels or structure must be carefully designed and monitored in order to maximize the positive effects and minimize the negative effects. An analysis of the impact of free trade, for example, should look at aggregate data on the creation of jobs and expected export earnings, for example, *as well as* disaggregated data on the distribution of those jobs and benefits across the population. Disaggregation should include gender, age, race and other related variables in order to identify patterns of distribution which favor one group to the detriment of other groups.

Ruth Dixon-Mueller (1991) indicates that this type of analysis provides an understanding of "the complex pattern of incentives and disincentives that influence the effective utilization of human resources and the achievement of sustainable economic growth. Most importantly, we can visualize the human as well as the financial dimensions of investing in particular economic subsectors and passing over others." Dixon-Mueller continues, stating that "gender and generation [age] are essential analytical tools [in] the study of the sectoral and subsectoral structure and characteristics of the economy as they related to the distribution across households and geographic areas of the production assets, such as land, labor and capital, and the structure of opportunities in wage labor markets."

Labor Market Distortions: Ecuador's urban labor markets are segmented into formal and informal components as a result of labor laws and unions that restrict entry into formal sector employment. The literature on labor markets for developed countries includes over 30 years of analytical work in problems of segmentation, occupational distribution and wage discrimination and usually includes attention to gender as a variable of interest. Segmentation can result from protective legislation, union's "closed shop" practices, or discrimination based on gender or race. In Ecuador, reports assessing the degree of segmentation have been conducted for A.I.D. (Sigma One 1990) and the U.S. Embassy. The American Embassy in Quito (1990) reports: "Ecuador has a highly segmented labor market, with a minority of workers in skilled, usually unionized positions, and the vast majority -- about 60% of the economically active population -- either unemployed or underemployed in the informal economy."

Segmentation into formal and informal sector labor pools "has serious implications for the distribution of income" such that a "relatively small portion of the labor force employed in the sector shares in the high income generated in the modern economy, whereas a large number of workers are left more or less permanently in the low wage-low productivity sector (Mazumbar 1989). In the current policy and cultural environment in Ecuador, more women than men are likely to remain in the low wage-low productivity sector.

Research by Schultz for the World Bank (1989) tested the proposition that women's losses are greater than men's losses in developing countries as a result of protective legislation, especially minimum wage legislation. He points out that these "interventions in the labor market may slow women's transition from nonmarket and family work to employment by firms ... [which in turn] may affect the rate and structure of economic growth." In Latin America, "the entry of women into the market labor force and particularly into wage employment is noticeably retarded in sectors such as manufacturing which generally absorb more women workers. ... The puzzle is, what has held women back from obtaining a larger share of wage jobs in manufacturing?" Women's educational levels are nearly equal to men's in Latin America, and women's rates of labor force participation are "increasing rapidly." Nevertheless, Schultz finds that women "appear to be deflected from firm employment, possibly by pervasive minimum wage legislation." The result is increasing numbers of women in the informal sector or working in family ventures. Latin women are particularly affected by labor market distortions (e.g., protective legislation), which slow

"the expansion of employment by firms and impact most strongly on women who are paid less than men and thus are more likely excluded from minimum wage-regulated employment by firms."

Increased employment opportunities for women (and men) are unquestionably a positive outcome of reducing the amount of legislated protection afforded women and men workers. Nevertheless, there are obvious drawbacks to the deregulation, including possible negative health effects for women of childbearing age. The positive employment effects are discussed in some detail here. The negative effects of reducing protection in general are relatively obvious and well treated in the literature.

As Ecuador's industrial sector responds to trade incentives and policy changes that promote job creation, including reducing protective legislation, new hires in manufacturing are expected to include a significant portion of women. Estimates of women's share of the manufacturing labor force range from 25% at the national level (1982 population census) to 40% of urban, private sector manufacturing employment (CEDATOS/IECAIM survey 1988). Women's employment in the protected formal sector may have been limited by employers' perceptions of female labor as more costly than male labor, partially due to generous maternity benefits. With a reduction in legislated benefits, discriminatory hiring patterns favoring men over women can be expected to change, other things equal.

The proposed analysis will provide a gender disaggregated profile of the industrial sector labor force and will identify the possible policy implications for programs designed to change the structure of the economy and so the nature of labor demand. Patterns of recruitment to formal industrial sector employment, especially in manufacturing, will be explored indirectly in the proposed study. Critical additional information about barriers to employment opportunities for women (and men) may be provided through future work on how firms recruit new employees that would suggest policies to promote more efficient and equitable access to desirable employment.

II. RESEARCH OBJECTIVES

The GENESYS Project is charged with investigating gender issues related to the promotion of trade and investment by A.I.D. in the Andean region. GENESYS proposes to conduct research on the occupational and sectoral distribution of labor in the industrial sector. The study will identify the distribution of labor by occupational group, subsector, sex, age, education, family status, earnings and other related variables, using national employment data. It will assess gender specific barriers to industrial sector employment in Ecuador.

III. SCOPE OF WORK

The research team must include a gender specialist with experience in analyzing labor market issues in the industrial sector and a statistician with experience in household level survey data. The team leader will be a social scientist with qualitative and quantitative analytical skills.

The contractor will be responsible for the following tasks:

1. *Develop a workplan and schedule.* The contractor shall develop a workplan and schedule for approval by GENESYS, using the information in this SOW and the appendix as a guide. The workplan and schedule shall specify the members of the research team who will be responsible for the components of the research activity and provide expected level of effort and completion dates for each component. The workplan also will identify the tables the research team plans to produce and provide a draft outline of the final report.
2. *Obtain sex disaggregated data for the following variables from INEM.* Upon approval of the workplan, the contractor shall obtain gender disaggregated data from the annual employment survey for the years 1987, 1988, 1989, and 1990 for those persons employed in the industrial sector (i.e., ISIC one-digit codes, sectors 2,3,4,5). A description of each variable is contained in the appendix to this scope of work.

VARIABLE	QUESTION # ^{***}
Demographic:	
Age	6
Sex	7
Education	8
Migration status/history	12-14
Employment-related:	
Social security membership	11
Job search methods	32
Sector of employment (2 digit level, ISIC codes)	50
Occupational group (2 digit level, ISCO codes)	51
Occupational category	52
Firm size	54
Wages	60

^{***} Question # refers to INEM's 1989 "Encuesta Permanente de Hogares"

3. *Conduct the data analysis.* The contractor shall use a standard statistical package, such as SAS or SPSS, to analyze the data. The analysis should produce simple correlations and simple descriptive analyses like frequency and probability distributions, cross-tabulations, means, standard deviations and errors, and significance tests, designed to identify patterns and characteristics of the sample for the desired variables.

The primary variables will be sector of employment at the two-digit level (e.g., textile manufacturing) and sex; these variables will then be sorted against the other demographic variables, and employment related characteristics such as wages, firm size, and occupational group and category. The contractor will develop a data analysis plan which will be submitted to and approved by GENESYS. This will include at a minimum: (a) comparison of the demographic characteristics of men and women employed in each 2-digit subsector, sorted by wage level and social security membership; (b) identification of the degree of correlation between migration status (of women versus men) and occupational category, wages or firm size; and (c) population means and standard errors for samples sorted by two digit ISIC sectors, sex, and age (the next levels of specificity, for example, might include sorting by sector, sex, age, and education level).

A maximum of 24 tables will be produced and form the basis of interpretation for the final report. All information should be reported for both males and females, such that we are able to compare the situation across sex; the values for males and females should be presented in the same table to facilitate comparisons. Both absolute and relative values should be presented wherever possible.

4. *Prepare a mid-term report.* The contractor shall prepare a mid-term report and submit it to GENESYS upon completion of the empirical analysis. This report will be no longer than five pages of text highlighting the key results of the data analysis. The data tables will accompany the report. The report may be submitted in Spanish or English.

5. *Analyze the empirical results* to identify gender issues in the industrial sector labor market and the implications of the promotion of trade and investment for women and men in Ecuador's industrial sector labor force. The subcontractor will produce a profile of the current industrial labor force in tabular form with textual analysis for the period 1987-90, including composition by sex, age, education and other variables.
6. *Prepare a draft final report* for submission to GENESYS upon completion of the interpretation of empirical results. This report should be no longer than 30 pages (excluding data appendices) and may be submitted in Spanish or English. The report should include the following components:
 - a) discussion of methodology and analytical questions
 - b) results of empirical analysis
 - c) discussion of the gender issues in the industrial sector labor market that were identified during the analysis of the empirical results; discussion of the implications of the promotion of trade and investment in Ecuador for the industrial sector labor force; assessment of gender-specific barriers to formal sector industrial employment which promote segmentation in the industrial labor force; suggestions for policy changes or incentives to help overcome gender-based barriers to employment; and implications for other trade and investment programs in the Andean region if such conclusions are considered valid by the research team
 - d) recommendations for future research on gender issues in the industrial sector in Ecuador
 - e) executive summary (five pages maximum)
 - f) technical annex discussing the validity of the data
7. *Respond to comments from GENESYS's review of the draft report and prepare the report in final.* Two versions of the final report should be submitted to GENESYS, one in English and one in Spanish.

V. TIMING AND REPORTING REQUIREMENTS

The research study will take place over a period of three - four months (to allow for Washington review of deliverables), with approximately 8 weeks of time required during that period by the research group. After negotiating the subcontract with the research group (referred to hereinafter as the "research team"), the research team will prepare a research design and schedule. The design will go through an approval process, after which appropriate revisions will be made and the design operationalized.

Reporting requirements will be as follows:

- * research design and schedule submitted to GENESYS prior to operationalizing the study no later than two weeks after subcontract is signed
- * five page midterm report including a complete set of tables as an appendix, submitted to GENESYS upon completion of the empirical work and prior to initiating the indepth analysis and report writing stage; this report will describe key findings from the data analysis
- * draft report (30 pages maximum) of the research study submitted to GENESYS (see page 6, item 6 for description of contents)
- * 5 copies and a diskette copy of the final report and statistical appendices submitted to GENESYS in English and Spanish no later than July 31, 1992

Illustrative schedule of the activity:

- Weeks 1-2:**
- (1) Prepare and submit research design**
 - (2) Initiate data collection effort (i.e., obtain appropriate tabulations of the existing data from relevant sources)**
- Week 3:**
- (1) Data analysis**
- Week 4:**
- (1) Prepare and submit 5 page midterm report**
 - (2) Initiate second stage of the analysis, i.e., interpretation of empirical results**
- Weeks 4-7:**
- (1) Second stage analysis**
 - (2) Prepare and submit draft report**
- Week 8:**
- (1) Revisions to draft report**
 - (2) Submit final report**

ATTACHMENT A TO SCOPE OF WORK

DESCRIPTION OF INEM VARIABLES

Education in question 8 can be keyed for none, literacy, primary school, secondary school, or higher education.

Migration status/history is covered in three questions. The questionnaire asks if the person has always lived in this city. If they moved there, then it asks how many years they have been there and where did they live before (province, district and place).

Social security membership indicates membership in IESS, a benefit usually associated with protected formal sector employment and a good indicator of job quality. Among other things, IESS provides health insurance for its members.

Job search methods is asked of those persons who are unemployed but looking for work (i.e., by definition, they are part of the labor force). The question asks how the person looked for work; the answers include friends or relatives, direct contact with employers, newspaper or radio, public employment agency, private employment agency, or trying to start their own business.

Sector of employment provides space for a written description of the principal activity of the business where the person works. INEM then uses the International Standard Industrial Classification (ISIC) codes to categorize the activity to the four digit level. The industrial sector is defined as four, one-digit sectors: (1) mining/quarrying, including oil production, (2) manufacturing, (3) electricity, gas and water, and (4) construction. The next level of refinement, two-digit coding, will provide the information needed for the proposed analysis, namely sorting by subsector for the industrial sector. For example, in manufacturing, the two-digit divisions are food/tobacco/beverages; textiles/clothing/leather; wood products; paper/printing; chemicals; nonmetallic minerals; basic metals; equipment/machinery; and other.

Occupational group provides space for a written description of the principal activity of the person in his/her primary job. These descriptions are coded by INEM using the International Standard Classification of Occupations (ISCO) codes. The seven major one-digit ISCO groups are: professional, technical and related workers; administrative and managerial workers; clerical and related workers; sales workers; service workers; agriculture, animal husbandry and forestry workers, fishermen and hunters; and production and related workers, transport equipment operator and laborers. The INEM 1989 report describes eight groups, as they break down "production workers" into two groups (see INEM 1989 for further details). The questionnaire allows for a three-digit classification, although this is not discussed in the report and so would have to be verified.

Occupational category can be keyed by volunteer/trustee, self employed, unpaid family worker, salaried or wage earner in the public sector, salaried or wage earner in the private sector, or domestic worker.

Firm size asks for the number of persons working in the business, with answers grouped by less than 10, 10-19, and 20 or more.

Wages information is provided for those persons employed as salaried or wage earners in the public or private sectors, or as domestics. The question has three parts, asking for basic wages, amount and period of last payment/paycheck, and type and amount of any deductions.

Annex B: *Methodology and Chi-Square Test Results*

METHODOLOGY AND CHI-SQUARE TEST RESULTS

The data used in this study were drawn from the Household Survey (EPH) of the National Employment Institute (INEM), with special emphasis on the results of the 1989 survey. The survey was applied to a national sample of 10,291 urban homes, resulting in a sample population of 44,000 people. The sample results were subsequently extrapolated by INEM to give estimates for a population of 5,892,206, with an average expansion factor of 133.9. This study focused on the industrial labor force, which is defined as those persons employed (or unemployed and actively seeking work) in the following sectors: mining, manufacturing, utilities, and construction. The tabulations of the industrial unemployed include only those persons who previously were employed in these sectors.

According to the EPH, industry employed 647,000 persons in 1990, compared to the 1990 population census count of 403,400 persons. Because of the large difference between these two estimates, the INEM expansion factor must be viewed with some caution. For example, the numbers (as opposed to the percentages) shown in the tables in this report have a general confidence interval of 0.62. The author decided against including this explanation in the main text, as the EPH results are official results issued by INEM.

The basic test of statistical significance in the study was the chi-square test of hypothesis. It was used to determine whether observed differences between sample distributions of the male and female EAP are significant -- i.e. do these differences reflect gender-based discrimination or segregation or can they be attributed merely to chance. In other words, the chi-square test makes inferences about the standard deviation of a population. The test assumes that the populations are normally distributed.

The results are presented in the table below. (Additional test results are available from the author, along with further data tables.) For each relationship, the calculated chi-square is listed, along with the degrees of freedom (which determine the form of the probability density curve) and whether the result is significant or not. In all cases, the chi-square was calculated using a 5% level of significance. To determine significance, the calculated chi-square is compared to the chi-square value listed in a standard chi-square statistical table. The decision rule varies according to the degrees of freedom (df) and the level of significance (%). Chi-square at 5% and 1 df has a listed value of 3.84. If the calculated chi-square is greater than or equal to the table value, the result is significant; otherwise, it is insignificant.

A significant result in this study indicates that gender or gender-related factors in part determine the distribution of the labor force across the variable under consideration (e.g., across subsectors or occupational categories). An insignificant result means that the differences in the distribution are not enough to infer anything about the role of gender, i.e., the sample distributions are similar enough that the two populations (female and male EAP) could have the same shape. The results of the analysis are considered valid for all subsectors, with the exception of the manufacturing subsector ISIC 37 (metals), where there were no more than 20 persons in the sample.

Table No.	Variables (relationship tested) (1989)	Degrees of freedom	Calculated chi-square	Significant?
4	gender vs. distribution across subsectors in manufacturing	1	51.48	yes
7	gender vs. firm size in manufacturing	1	9.10	yes
9	gender vs. formal/informal sector in industry	1	2.09	no
9	gender vs. formal/informal sector in manufacturing	1	3.35	no
14	gender vs. selected reasons for working less than 40 hrs/wk (do not desire more hours, personal or family reasons, declining economic activity, or could not find another job) in manufacturing	1	19.35	yes
16	gender vs. age groups in manufacturing	1	1.37	no
18	gender vs. educational level in manufacturing	1	0.22	no
20	gender vs. occupational category in manufacturing	1	18.04	yes
22	gender vs. occupational group in manufacturing	1	10.87	yes
24	gender vs. social security membership rates in industry (one-digit sectors)	1	27.62	yes
28	gender vs. monthly income in manufacturing	1	20.33	yes

Annex C: EPH Questionnaire (1989)

INSTITUTO NACIONAL DE EMPLEO
 MINISTERIO DE TRABAJO Y RECURSOS HUMANOS
 "ENCUESTA PERIODICA DE EMPLEO Y DESEMPLEO EN EL AREA URBANA DEL ECUADOR"
 AÑO: 19 MES

TODOS LOS DATOS PROPORCIONADOS POR EL INFORMANTE SON ESTRICTAMENTE RESERVADOS Y SERAN UTILIZADOS UNICAMENTE CON FINES ESTADISTICOS

BLOQUE 1: INFORMACION GENERAL

PROVINCIA	CIUDAD	ZONA	SECTOR	SubSec	ESTRATO	M	SEGMENTO	VIVIENDA	HOGAR	FORM

INICIO ENTREVISTA	<table style="width: 100%; border-collapse: collapse;"> <tr><td style="border: 1px solid black; width: 15px; height: 15px;"></td></tr> <tr><td style="text-align: center; font-size: 8px;">horas</td></tr> </table>		horas	<table style="width: 100%; border-collapse: collapse;"> <tr><td style="border: 1px solid black; width: 15px; height: 15px;"></td></tr> <tr><td style="text-align: center; font-size: 8px;">minutos</td></tr> </table>		minutos		FIN ENTREVISTA	<table style="width: 100%; border-collapse: collapse;"> <tr><td style="border: 1px solid black; width: 15px; height: 15px;"></td></tr> <tr><td style="text-align: center; font-size: 8px;">horas</td></tr> </table>		horas	<table style="width: 100%; border-collapse: collapse;"> <tr><td style="border: 1px solid black; width: 15px; height: 15px;"></td></tr> <tr><td style="text-align: center; font-size: 8px;">minutos</td></tr> </table>		minutos
horas														
minutos														
horas														
minutos														

2. DATOS DEL INFORMANTE Y HOGAR

2.1. Nombre del informante 22. Relación o parentesco con el jefe del hogar

2.3. Número de miembros del hogar

3. IDENTIFICACION Y UBICACION DEL HOGAR

3.1 Calle/Camino/Km 3.2 Manzana

3.3 Nº Vivienda/bloque/lote 3.4 Piso

3.5 Departamento

3.6 Otras características de la vivienda

BLOQUE 2: INFORMACION PARA TODOS LOS MIEMBROS DEL HOGAR

PARA TODAS LAS PERSONAS		6 AÑOS Y MAS		10 Años y +	12 Años y más		
4. ¿Cuál es el nombre de cada miembro del hogar ? (COMIENCE CON EL JEFE DEL HOGAR)	5. ¿Qué parentesco o relación tiene con el jefe del hogar ? 1. Jefe 2. Cónyuge 3. Hijo o Hija 4. Yerno-Nuera 5. Padres o suegros 6. Nieto o nieta 7. Otros parientes 8. Empleado doméstico 9. Otros no parientes (anote el código)	6. Cuántos años cumplidos tiene ? (Si tiene menos de un año (anote 00))	7. ¿Cuál es el sexo ? 1. Masculino 2. Femenino (anote el código)	8. ¿Qué nivel y año de instrucción tiene ? 1. Ninguna 2. C. Alfabetización 3. Primaria 4. Secundaria 5. Superior (anote el código) nivel año	9. ¿Asiste actualmente ? Si..... 1 No..... 2 (anote el código)	10. ¿Sabe leer y escribir ? (Para quienes contestaron en PB Código 1 o 2) Si..... 1 No..... 2 (anote el código)	11. ¿Es Ud. afiliado al IESS ? Si..... 1 No..... 2 (anote el código)
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

NOMBRE

PERSONA

Nº de línea del informante

PARENTESCO

EDAD

BLOQUE 3: POBLACION DE 12 AÑOS Y MAS

12. ¿Siempre vivió en esta ciudad?

SI 1 → 15 NO 2

13. ¿Cuántos años vive en esta ciudad?

Nº años

(Si NS/NR anote 99. Si es menos de 6 meses 88)

14. ¿Dónde vivió antes?

USO INEM

Provincia
Cantón
Lugar

15. ¿Trabajó la semana de referencia al menos 1 hora

SI 1 → 17 NO 2

16. La semana de referencia realizó alguna actividad dentro o fuera de su casa para ayudar al mantenimiento de su hogar tal como:

- Negocio propio 3
- Fabricando algún producto 4
- Haciendo algo en casa por un ingreso 5
- Brindando algún servicio 6
- Ayudando en algún negocio familiar 7
- Como aprendiz remunerado 8
- Estudiante que realizó algún trabajo 9
- Trabajó para otra familia 11
- Alguna otra actividad por un ingreso (especifique) 12
- Ninguna actividad similar 10 → 20

17. ¿Cuántas horas trabajó la semana de referencia? (en todos sus trabajos) Nº HORAS

Si el total es de 40 horas → 22
Si el total es menos de 40 horas → 18
Si el total es mas de 40 horas → 19

18. ¿Por qué razón trabajó menos de 40 horas la semana de referencia?

Horario Normal SI 1 NO 2

- No desea trabajar más horas 2
 - Desea trabajar más horas pero: 3
 - No ha podido conseguir otro trabajo 4
 - No ha podido conseguir más trabajo 4
 - Reducción de actividad económica 5
 - Falta de materias primas, financiamiento, clientes o maquinaria 6
 - Motivos personales o familiares 7
 - Enfermedad o accidente 8
 - Vacaciones o días feriados 9
 - Otros 10
- (especifique)

Pase pregunta 22

19. ¿Por qué razón trabajó la semana de referencia más de 40 horas?

- Horario normal 4
 - Horas extras 5
 - Exceso de trabajo o clientes 6
 - Horas de trabajo necesarias para obtener un ingreso suficiente 7
 - Otros 8
- (especifique)

PASE PREGUNTA 22

20. ¿Aunque no trabajó tenía trabajo la semana pasada?

SI 1 NO 2 → 30

21. ¿Por qué no trabajó la semana de referencia?

- Vacaciones o días feriados 5
 - Enfermedad o accidente 6
 - Huelga o paro 7
 - Licencia con sueldo 8
 - Suspensión temporal del trabajo 9
 - Licencia sin sueldo 10
 - Otros 11
- (especifique)

22. ¿Cuántas horas trabaja habitualmente por semana? (en todos sus trabajos) Nº HORAS

40 horas → 25
menos de 40 horas más de 40 horas → 24

23. ¿Por qué razón trabaja habitualmente menos de 40 horas por semana?

- Horario Normal SI 1 NO 2
- No desea trabajar más horas 2
 - Desea trabajar más horas pero: 3
 - No ha podido conseguir otro trabajo 4
 - No ha podido conseguir más trabajo 4
 - Reducción de actividad económica 5
 - Falta de materias primas, financiamiento, clientes o maquinaria 6
 - Motivos personales o familiares 7
 - Enfermedad o accidente 8
 - Otros 9
- (especifique) Pase pregunta 25

24. ¿Por qué razón trabaja habitualmente más de 40 horas por semana?

- Horario normal 5
 - Horas extras 6
 - Exceso de trabajo o clientes 7
 - Horas de trabajo necesarias para obtener un ingreso suficiente 8
 - Otros 9
- (especifique)

25. ¿Cuántos trabajos tiene?

Pase pregunta 50 Nº Trabajos

30. ¿Buscó trabajo la semana de referencia?

SI 1 → 32 NO 2

31. ¿Buscó trabajo las 4 semanas anteriores? (la semana de referencia)

SI 1 NO 2 → 34

32. ¿Qué medios utilizó para buscar trabajo?

- Amigos o parientes 4
- Directo ante empleadores 5
- Prensa, radio 6
- Agencia Pública de empleo 7
- Agencia Privada de empleo 8
- Esta tratando de establecer su propio negocio o empresa 9

33. ¿Cuánto tiempo hace que busca trabajo?

Pase pregunta 40 MESES

(Si NS/NR. anote 99. Si es menos de 15 días 88)

34. ¿Cuáles son los motivos por los que no buscó trabajo?

- No tiene necesidad o deseos de trabajar 1
- No tiene tiempo 2
- Está enfermo 3
- No está en edad de trabajar 4
- Piensa que no le darán trabajo 5
- No cree poder encontrar 6
- Espera respuesta a una gestión para empresa o negocio propio 7
- Espera respuesta de un empleador u otras gestiones para conseguir empleo 8

35. Desea usted trabajar?

SI 1 NO 2

36. USTED ES:

- Rentista 3
- Jubilado o pensionado 4
- Estudiante 5
- Ama de casa 6
- Incapacitado 7
- Otros 8

Si en la pregunta 34 respondieron opciones 1,2,3 ó 4 PASE PREGUNTA 62.
Si respondió opciones 5 6 7 ú 8 PASE PREGUNTA 40

40. ¿Cuántas horas está dispuesto a trabajar a la semana?

Nº Horas

41. ¿Que ingreso espera o tiene arreglado percibir por ese trabajo?
valor en sures

42. ¿Usted trabajó anteriormente?

SI 1 NO 2 → 62

43. ¿Cuánto tiempo hace que usted no trabaja?

Meses

(Si NS/NR. Anote 99 Si menos de 15 días 00)

50. RAMA DE ACTIVIDAD

Describe la actividad a la que se dedica principalmente la empresa o negocio donde trabaja (ba) (trabajo principal)

51. GRUPO DE OCUPACION

Describe el puesto de trabajo u ocupación que realiza (ba) (trabajo principal)

USO INEM

PASE PREGUNTA 52

52. CATEGORIA DE OCUPACION

En cuál de estas alternativas desempeña (ba) su trabajo (trabajo principal)

- Patrono o Socio Activo 3
- Trabajador por cuenta propia 4 → 53
- Trabajador familiar no remunerado 5
- Asalariado de Gobierno 6
- Asalariado de Empresa Privada 7 → 54
- Empleado Doméstico 8 → 60

53. ¿Dónde se ubica (ba) ese establecimiento?

- Dentro de la vivienda 5
 - Taller o local junto a la vivienda 6
 - Taller o local independiente 7
 - Establecimiento en la calle 8
 - Otro 9
- (especifique)

54. ¿Cuántas personas trabajan (ban) usualmente en el negocio o empresa?

- Menos de 10 1
 - de 10 a 19 2
 - 20 o más 3
- Cuántas?

Si en la pregunta 52 respondió:
opciones 3 ó 4 PASE PREGUNTA 61
Opción 5 PASE PREGUNTA 62
Opción 6 ó 7 PASE PREGUNTA 60

SOLO ASALARIADOS Y EMPLEADOS DOMESTICOS

Esta pregunta se realizará si hay respuesta en la pregunta 25 y en la 52 respondió 6, 7, ú 8.

60 a) ¿Cuánto es su salario básico? S/.

60 b) ¿Cuánto fue lo que recibió en el último pago?

mes 1 quincena 2 semana 3 S/.

60 c) Tuvo deducciones por:

- Comisariato 1 S/.
- Préstamos 2 S/.
- Otros 3 S/.

PASE PREGUNTA 62

SOLO PATRONO O SOCIO ACTIVO Y TRABAJADOR POR CUENTA PROPIA.

Esta pregunta se realizará únicamente si hay respuesta en la pregunta 25 y en la pregunta 52 respondió 3 ó 4

61. Cuanto retiró en el último mes de su negocio para sus gastos familiares y personales.

- En efectivo S/.
- En mercaderías S/.

62. Tuvo el mes pasado ingresos (no del trabajo) por:

- Rentas 1 S/.
- Jubilación 2 S/.
- Otros 3 S/.

63.Cuál fue su condición de actividad en cada uno de los últimos 12 meses?
(anote el código respectivo)

OCUPADO=1

Nov. Dic. Ene. Feb. Mar. Abr. May. Jun. Jul. Ago. Sep. Oct.

BUSCANDO TRABAJO=2

INACTIVO=3

BLOQUE 4: RESUMEN GENERAL DE LA ENTREVISTA
4.1 RESULTADO DE LA ENTREVISTA

COMPLETA _____ 1 VIVIENDA DESOCUPADA _____ 2
 INCOMPLETA _____ 3 RECHAZO _____ 4
 PERSONAS AUSENTES _____ 5 OTROS (especifique) _____ 6
 NUMERO DE VISITAS

4.2 NUMERO DE MIEMBROS DEL HOGAR

SEXO \ EDAD	POBLACION MENOR DE 12 AÑOS	POBLACION DE 12 AÑOS Y MAS	TOTAL
HOMBRES			
MUJERES			
TOTAL			

4.3 POBLACION DE 12 AÑOS Y MAS

SEXO	OCUPADOS	DESOCUPADOS	INACTIVOS	TOTAL
HOMBRES				
MUJERES				
TOTAL				

OBSERVACIONES GENERALES

INFORMACION DE CONTROL (INEM)

Nombre del Encuestador _____	Fecha (encuestamiento) _____
Nombre del Supervisor _____	Fecha (supervisión) _____
Nombre Revisor _____	Fecha (revisión) _____
Nombre Critico, Codificador _____	Fecha (critica codif.) _____
Nombre Digitador _____	Fecha (digitación) _____

Bibliography

BIBLIOGRAPHY

- Abril, Galo y Rafael Urriola. 1990. *Incentivos de Fomento Industrial en el Ecuador: 1972-1986*. Quito: CEPLAES-CIID.
- Banco Central del Ecuador. 1992. "Boletín de cuentas nacionales. No. 15, 1982-1992. Síntesis para uso interno" (junio). Quito: Banco Central del Ecuador.
- Cuvi, Marfa, Alexandra Martínez, e Iván Oñate. "La octava puerta. Identidad de género y violencia contra la mujer. Informe final." Quito.
- Guzmán, Virginia y Patricia Portocarrero. 1989. "Segregación sexual en cifras." En: *Una nueva mirada. Crisis, mercado de trabajo e identidad de género*. Lima: Flora Tristán.
- Instituto Nacional de Estadística y Censos (INEC). 1985. "IV Censo nacional de Población de 1982. Resumen nacional. Resultados definitivos." Quito: INEC.
- _____. 1991. "V Censo nacional de población de 1990. Resumen nacional. Resultados definitivos." Quito: INEC.
- _____. Varios años. "Encuesta de Manufactura y Minería." Desde 1982 a 1988. Quito: INEC.
- Joekes, Susan. 1987. *La mujer y la economía mundial*. México: Siglo XXI.
- Martínez, Luciano. 1991. "Situación de los campesinos-artesanos en la Sierra Central del Ecuador: provincia de Tungurahua" (mimeo). Quito.
- Mauro, Amalia. 1992. "Mujer, trabajo y políticas de empleo." En: *Entre los límites y las rupturas. Las mujeres ecuatorianas en los 80*. Quito: CEPLAES-ACDI.
- _____. 1989. "Mujeres trabajadoras. Las obreras industriales de Quito." Informe para la Dirección Nacional de la Mujer-Ministerio de Bienestar Social. Quito: CEPLAES.
- Pérez, Armando. 1987. "La fuerza de trabajo en Quito." *Cuaderno Economía 2*. Quito: Universidad Central del Ecuador, Instituto de Investigaciones Económicas-CONUEP.
- Portocarrero, Patricia. 1991. "Por una capacitación integral." En: Virginia Guzmán, Patricia Portocarrero, y Virginia Varga, eds., *Una nueva lectura: Género en el desarrollo*. Lima: Flora Tristán.
- San Ildefonso, Esmeraldas. 1990. "La mujer en el sector medio: relato de una experiencia." En: *Mujer y Trabajo*. Quito: CEPLAES-UNFPA.