

# ENTERPRISE AND LABOR MARKETS: THE BORDER AND THE METROPOLITAN AREAS

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## ABSTRACT

Data from the Encuesta Nacional de Empleo Urbano of 1986 /7 are used to compare labor markets in four border cities (Tijuana, Ciudad Juárez, Nuevo Laredo, and Matamoros) with those of the three principal cities of Mexico (Mexico City, Guadalajara, and Monterrey). The characteristics and incomes of four classes of workers are examined: small-scale entrepreneurs (those owning firms of less than 50 workers), the self-employed, workers in small-scale enterprises, and workers in large-scale enterprises. The hypotheses are tested that the small-scale sector offers higher incomes relative to employment to all its members on the border as compared to the three principal cities, particularly for the self-employed. Logistic regressions were used to determine the salient characteristics of the different classes of worker. In the principal cities, small-scale entrepreneurs were more likely to be found amongst married males in small families, with long work experience in craft occupations, and with low levels of education. In contrast, on the border, entrepreneurs were more likely to be found amongst those with professional and technical occupations and to have higher levels of education. Migration status had effects on the probability of being in particular job statuses and these varied between the Border and the Principal Cities.

## RESUMEN

Utilizando datos de la Encuesta Nacional de Empleo Urbano de 1986/87, el autor compara los mercados de trabajo en cuatro ciudades fronterizas (Tijuana, Ciudad Juárez, Nuevo Laredo y Matamoros) con los mercados respectivos en tres ciudades del interior del país (la ciudad de México, Guadalajara y Monterrey). Se examinan las características e ingresos de cuatro clases de trabajadores: empresarios de pequeña escala (con menos de 50 empleados); trabajadores por cuenta propia; trabajadores en pequeñas empresas, y trabajadores en grandes empresas. El análisis pone a prueba la siguiente hipótesis: que el sector de pequeña escala ofrece ingresos superiores en relación al empleo para sus miembros en la frontera en comparación a las ciudades del interior, especialmente para aquellos que trabajan por cuenta propia. A través de regresiones logísticas se identifican las características sobresalientes de las distintas clasificaciones de trabajadores. Al interior del país, los empresarios de pequeña escala tienden a ser hombres casados con pequeñas familias, con una amplia experiencia laboral en trabajo artesanal y con bajos niveles educativos. Esto se contrasta con la situación fronteriza, donde los empresarios tienden a cumplir ocupaciones profesionales y técnicas, y haber alcanzado niveles más altos de educación, y éstos varían entre la frontera y las principales ciudades.

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## **Introduction<sup>1</sup>**

IN this paper, I explore the operation of labor markets in the northern border cities of Mexico as compared with Mexico City, Guadalajara and Monterrey. My specific concern will be the role played by small-scale employment in these cities, particularly the sectors of the economy in which it flourishes and the incomes it generates for its participants relative to wage employment in large organizations.<sup>2</sup> Both the historical and the geographical context are important in this analysis. The historical context is 1986/87, when the Mexican economy was slowly emerging from the external debt crisis that had begun in 1982. The period of crisis was one of high inflation, rapid devaluation of the peso, and a sharp drop in real incomes that made it increasingly difficult for middle-income as well as low-income families to make ends meet (Benar a, 1991; Grindle, 1989; Escobar and Roberts, 1991). The geographical context is that of the changing spatial economy of Mexico in which the fostering of export industrialization had begun to shift job creation away from the former centers of economic growth -Mexico City, Guadalajara and Monterrey- towards new centers such as the cities of the northern border.

## **The Broader Issues**

Small-scale enterprise is often viewed as having a positive and important role to play in the urban economies of developing countries because scarcity of capital, the fragmentation of markets, and the poverty of the population inhibit economic concentration in large firms. The advantage of small-scale enterprise is its flexibility (Hansen, 1991). The small-scale enterprise can adapt its production

1 My thanks are due to David Blau and Mary-Claire Lennon for helpful advice as to the statistical analysis. I owe Alex Portes an especial debt for suggesting the models used in the analysis, and for his patience in explaining some of the details. But in this case, the normal injunction must be taken most seriously: the defects in the analysis are all mine.

2 I define small-scale enterprise as businesses with less than 30 workers. I choose this size so as to include employment situations which, while small-scale, are likely to be more formal and to have greater possibilities of capital accumulation than those of the micro-enterprise sector (normally defined as five or less workers).

quickly to meet changing demands, thus exploiting new niches in the market. The small-scale enterprise often requires little capital to initiate and can use social relations to subsidize its activities. These relations are usually kinship relationships, particularly among the immediate family, in which labor is contributed for little or no pay to ensure the economic welfare of the family unit. Kinship or friendship ties can also serve to create a continuing community of trust among established small firms that facilitates economic coordination in the absence of formal contracts. Social relations are, then, a form of social capital for the small-scale enterprise which, in appropriate circumstances, can substitute for monetary capital (Granovetter, 1992; Portes, 1993). Where monetary capital is in short supply, as when banks are reluctant to make loans to small-scale businesses, then using social capital -the willingness of kin and close friends to offer services at less than market cost or without contractual guarantees against the expectation of future returns- may be the only means of initiating a business and sustaining it through difficult times. The exploitation of kin and of fellow community members present in many small-scale enterprises and the substantially higher incomes obtained by owners as compared to workers may, however, entail that small-scale enterprise exploits rather than develops its community.

We need, however, to relate the debate over the positive and negative contributions of small-scale enterprise to employment generation to two other closely connected issues. One is the broader issue of the role of the informal economy which, as it is usually defined, consists mainly in small-scale entrepreneurs, their workers, and the self-employed (Portes, 1992; Portes and Sassen, 1987; Rendon and Salas, 1991; Roberts, 1978; Tokman, 1982). In Latin America, the discussion of the role of the informal economy has basically been framed in terms of the extent to which the informal sector contributes to wealth and job creation, or conversely is a repository for economically marginal activities that, at best, allow people to scrape a living but at the cost of considerable self-exploitation.<sup>3</sup> The other issue is the debate over the contribution of ethnic enterprise in the United States (Portes, 1989). In the United States,

3 An important part of this debate is about the role of government regulation in creating the informal sector and in handicapping the potential of small-scale enterprise, with some viewing inefficient bureaucracy and excessive regulation as limiting the potential of small-scale enterprise.

analysts have been divided between what Portes (1989: 930) describes as two basic positions: the ethnic enterprise as an effective vehicle for upward mobility because the social relationships of the ethnic community provide the resources, such as credit, markets and labor, needed by small-scale enterprise (Portes and Bach, 1982, Waldinger, 1986); and the ethnic enterprise as a form of exploitation which offers poorly paid, dead-end jobs and whose beneficiaries are mainly large firms who subcontract from ethnic middlemen (Petras, 1992; Bonacich, 1987).

The overlap between these separate debates underlines, I suggest, a key characteristic of small-scale enterprise -its chameleon-like quality to take on the characteristics of its labor market environment. This can be appreciated in the changing role of the small-scale sector between economic recession and economic expansion. In times of recession, small-scale enterprises are likely to behave counter-cyclically by expanding to absorb employment and activities released by large-scale firms. The apparent vitality of the small-scale sector in terms of job creation is likely, however, to disguise considerable underemployment, particularly in contexts like that of Mexico, where there is little social security provision for unemployment and there are no particular barriers to entry into the small-scale sector (ECLAC, 1989). But the small-scale sector will also act pro-cyclically in periods of economic expansion since the small-scale sector is linked in a variety of ways to demand from the large-scale sector and from workers in that sector (Portes and Walton, Chap. 4, 1981).

The shifting functions of small-scale enterprise can also be seen as the urban economy evolves from one based on an internal market protected by tariffs from outside competition to one closely integrated into a world system of production and distribution. This shift has affected core countries as much as developing countries, creating, for example, new niches for small-scale enterprise in the United States (Fernandez-Kelly, 1992). But the implications of this evolution in the urban economy for small-scale enterprise are likely to be quite different in Mexico and the United States. In the United States, large scale labor-intensive activities, such as assembly plants, have been displaced to Mexico in search of cheap labor. Conversely, small-scale labor-intensive activities in U.S. cities have increased through paying low wages and without trade unions, reducing overhead costs by operating illegally or semi-legally, by using women and Immigrant labor (Fernandez-Kelly and Sassen, 1992). In Mexico, the labor demand of *maquiladoras* and other export-oriented enterprises is likely to compete with that of the small-scale sector, creating difficulties in sectors such as manufacturing which face severe

competition from cheap imports. Small-scale enterprises also lose some of their previous niches. In Mexico, the period of import-substituting industrialization created a niche for informal activities through lines of production for the internal market that did not require an expensive or sophisticated production, and could be organized through small-scale units of employment, sub-contracting and domestic out-work. The new stage of industrialization both for export and for the internal market has different employment implications since it involves consumer durable goods whose production or assembly tends to be based on large-scale units and requires large expenditures of capital. The implications of the two periods for service employment are also different. The first stage of industrialization, accompanied by the rapid concentration of population in Mexico City and a few other centers, created multiple opportunities for small-scale entrepreneurship in commerce and personal services to meet the needs of a low-income urban population. These opportunities still exist in the present stage of urbanization in Mexico, but increasingly the dynamic of service growth concentrates in those services and commercial activities needed by sophisticated production and marketing networks produced both by the new stage of industrialization and by the maturing of the cities:

business services, chain restaurants, and supermarkets.

The role of the small-scale sector in Mexico is, then, likely to be contradictory, moving on the one hand towards a demand for greater skills and qualifications than previously, while, on the other, becoming more economically marginal. The income heterogeneity of the small-scale sector is thus likely to increase, as are also regional differences in the significance of the small-scale sector. These changes in the income opportunities offered by the small-scale sector are important because this sector has been a key element in household job strategies in Mexico (González de la Rocha, 1986; Roberts, 1989). The flexibility in terms of hours and even place of work that self-employment or domestic out-work provides can make them the only feasible employment opportunities for women who must also attend to domestic chores. Since the small-scale sector is often seen as an easy entry sector requiring relatively few skills and accessed through neighborhood contacts, it offers opportunities for unmarried young males and females just entering the labor market. Since these workers are usually still living in the parental household, the wages of the small-scale sector are, in effect, a supplementary household income. In contrast, the large-scale sector is usually seen as more likely to offer secure and long-term employment, with the benefits of social security, and, consequently, to be the type of

employment taken by the main breadwinner in a household (Escobar, 1986).

Migration status can also affect employment chances. An important issue in the early literature on urbanization was whether or not migrants were disadvantaged compared to those born in the city in terms of the types of jobs they obtained (Balan, Browning, and Jelin, 1973). Though evidence suggests that migrant status brings relatively little labor market disadvantage once human capital variables are held constant, there are likely to be differences between the social networks of migrants and natives, and the types of jobs to which these give access. Other things being equal, natives are likely to have the best contacts in long-established economic sectors, while migrants will enter those sectors that are opening up or provide easy access such, for example, as construction or personal services.

I shall confine my analysis to a preliminary exploration of these issues. Its main focus will be the contrast between the border cities and the three principal cities. The border epitomizes Mexico's new economic direction, while the three major principal cities, though themselves changing, I shall take to represent the older economic order. My aim will be to explore the implications of these contrasting urban economic contexts for the operation of the labor market, particularly the significance of the small-scale sector, the kinds of people it attracts, and its significance for household income strategies. My data are taken from the Mexican urban employment surveys for 1986/7. These surveys contain only limited information on economic and social relationships external to the household; but they do contain detailed information on income at both individual and household level and on a range of individual and employment characteristics.<sup>4</sup>

4 The Mexican urban employment survey (Encuesta Nacional de Empleo Urbano) is administered by the Instituto Nacional de Estadística, Geografía e Informática (INEGI) on a quarterly basis in 32 cities of Mexico. It is a multi-stage, stratified sample of metropolitan areas with sample sizes ranging from 5000 in Mexico City to 2000 in the smaller cities. The data used here are only for seven of these cities—Mexico City, Guadalajara, Monterrey, Tijuana, Ciudad Juárez, Nuevo Laredo, and Matamoros. Also, the surveys were carried out at different time periods, 1986 for Mexico City, the first quarter of 1987 for Guadalajara and Monterrey, and the second quarter of 1987 for the four border cities. I use these surveys because they are the ones that contain the Módulo de Migración Interna for the Encuesta Nacional de Migración en Áreas Urbanas, allowing the analysis of migration as well as labor market variables.

### The Spatial Context

The seven cities that are the basis for this study are grouped into two categories for analysis -Border Cities and Metropolitan Cities. The rationale for this grouping is that the border economy provides a markedly different context for small-scale enterprise than do the urban economies of the cities of the interior. While the border cities have not gained equally from maquiladora-led employment expansion, they have all gained from the expansion of border trade, including tourist traffic, from people on the U.S. side seeking cheaper medical and dental services, and from the spending of residents who commute to work in the United States.<sup>5</sup> Manufacturing on the border is also different from that of the metropolitan centers in that it is primarily concentrated in the *maquiladora* sector, mainly in very large firms in electronics, textiles, and autoparts. The demand for semi-skilled and low-cost labor in that sector -resulting in a young, unmarried, and primarily female labor force- contrasts with the labor demand in the longer established and less-export oriented industries of the interior in which skills and work experience have a greater premium (Carrillo, 1989a, 1989b, Gonz lez-Ar chiga and Barajas Escamilla, 1989). The fostering of the *maquiladora* program during the 1980s brought such a rapid expansion of both plants and employed personnel that some 60% of the expansion in manufacturing jobs throughout Mexico between 1980 and 1990 occurred through the *maquiladora* program.

These developments were part of a general process of economic restructuring in Mexico, based on the lowering of tariff barriers and the fostering of an internal political and economic environment that would encourage foreign investment and make Mexican industries export competitive. Restructuring also affected the economies and employment structure of the three principal cities, particularly Monterrey and Guadalajara, as export-oriented industries, including *maquiladoras*, were located there, and as others retooled to meet the export challenge (Pozas, 1992). But in 1986/7 the most evident signs of restructuring in the three metropolitan cities were the

<sup>5</sup> This is a significant proportion of the economically active population in Tijuana and Ciudad Ju rez, amounting to 6%. They have been excluded from the analysis of income distribution because of the substantially higher earnings they report than do those employed on the Mexican side.

negative consequences for employment and income, as large and small-scale firms closed down or laid off workers in face of a weak internal market and increased competition from abroad. Also, government austerity programs had a particularly severe impact in these three cities, especially Mexico City, because of their high proportion of government and government-related workers who were particularly affected by wage controls. There are differences between the cities in each group and these should be kept in mind during the subsequent analysis of inter-group contrasts. Tijuana and Nuevo Laredo have lower proportions of their employment in manufacturing than do Ciudad Juárez and Matamoros, and the two former cities have the most intensive U.S.-Mexico trade and traffic. The major difference between Guadalajara, Monterrey, and Mexico City in the manufacturing sector is the relative weighting of the basic goods, intermediate goods, capital goods, and consumer durable goods branches.

Guadalajara's manufacturing is heavily concentrated in basic goods industries, often small and medium scale, serving the regional and national markets (Pozas, F. 1992, Arias and Roberts, 1984). Monterrey, in contrast, has concentrated on the intermediate and capital goods branches, though, during the 1980s, these sectors were restructured to increase their productivity and modern basic and consumer durable goods industries have been developed (Pozas, M.A., 1991; Pozas, F. 1992).

Of the three metropolitan centers, the manufacturing sector in Mexico City has shown the most even distribution between basic, intermediate, capital, and consumer durable goods industries. The other major difference between the three principal cities is the higher proportion of Mexico City's population employed in government and social services.

Table One outlines the distribution of employment in the border and metropolitan cities by industrial sector. The border cities have a slightly higher proportion of employment in manufacturing than do the metropolitan cities, but the major difference is in the category of other industry, reflecting the importance of the electronic and autoparts sections of the *maquiladora* industry.<sup>6</sup>

<sup>6</sup> Textiles is another important *maquiladora* sector, contributing a substantial proportion of basic industrial employment on the border. The distinction between basic manufacturing and other is made because the types of goods produced in the basic sector (shoes, garments, furniture) can more easily be organized through small-scale production than can those in sectors such as electronics and autoparts.

**TABLE 1**  
**JOB SECTOR AND INCOME IN TWO GROUPS**  
**OF MEXICAN CITIES**

Sector	Border Cities <sup>1</sup>		Principal Principal Cities	
	% of Employment <sup>A</sup>	Average Income <sup>2</sup>	% of Employment	Average Income <sup>2</sup>
Basic Manufacturing <sup>B</sup>	9.5	172	14.1	185
Other Manufacturing <sup>C</sup>	21.9	179	15.7	208
Repair Industries <sup>D</sup>	6.5	193	4.4	182
Construction	8.5	167	6.3	193
Trade	16.5	200	18.5	186
Transport	5.9	251	4.7	235
Producer Services <sup>E</sup>	4.6	221	5.4	268
Social Services <sup>F</sup>	7.6	223	10.3	204
Government	3.5	217	6.1	198
Personal Services <sup>G</sup>	15.5	164	14.5	146
Total	100.0	191	100.0	191

SOURCE: Inegi/Enmau, 1986/87.

NOTES: \* Less than ten cases in the cell. 1. The border cities are Tijuana, Ciudad Juárez, Nuevo Laredo, and Matamoros. The principal cities are Mexico City, Guadalajara, and Monterrey. 2. Average monthly income earned in each sector is reported in 000s of pesos, with the three principal cities standardized to the average income distribution of the border cities as of the second quarter of 1987.

A. This is the percentage of all workers employed in the particular sector. B. Basic Manufacturing covers beverages, food processing, textiles, garments, shoes, furniture. C. Other Manufacturing covers intermediate, capital and consumer durable goods. D. Repair industry covers automotive and other repair and maintenance activities. E. Producer services are finance, real estate, technical and accountancy services. F. Social services are health and education. G. Personal services are hotels, restaurants, entertainment, beauty shops, and domestic service, including laundry.

The three principal cities have higher proportions of their labor force in the mainly non-manual services (producer, social and government), 20.4% compared to 15.7% on the border. Conversely, manual activities, such as personal services, including repair and maintenance services, and construction are larger proportions of employment on the border than they are in the three principal cities (30.5% compared to 25.2%).

The most interesting contrasts in Table One are found, however, in the average incomes earned by sector. These incomes have been standardized so that the average income of each group of cities is the same.<sup>7</sup> The average income in the repair industries, trade, transport, the social services, government, and the personal services is higher on the border than in the three principal cities. In contrast, incomes are higher in the three principal cities than on the border for those working in manufacturing, construction, and producer services. Those sectors, then, have a relative income advantage of the order that could be expected to benefit from cross-border traffic: trade, repair industries, transport, health and education, and personal services (that include hotels and restaurants). The higher border earnings in government are not readily explained, but this is a proportionately small sector on the border and does not include the lows of income found in the principal cities. The fact that the principal cities offer better relative income opportunities in producer services and construction compared to the border is to be expected given their size and their importance as national and regional service centers. More significant, perhaps, is their relative income advantage in manufacturing: the *maquiladora* manufacturing sector on the border pays less relative to other sectors than does the manufacturing firms of the principal cities.

Analysis of the data that I will not present in tabular form shows that the two groups of cities also contrast in the distribution of the workforce by job

7 Setting the same average Incomes for both groups of cities facilitates the presentation of data and highlights the differences between the two groups of cities in the sectors and Job positions that earn the most or least. The mean Income of three principal cities was adjusted to that of the border cities by dividing individual income by the mean Income of each metropolis and multiplying it by the mean Income of the border cities (191000 pesos of the second quarter of 1987). This adjustment also has the advantage of correcting for the fact that the INEGI/ENMAU surveys were conducted over the course of a year, at different intervals in the different cities, and during a period of high inflation. There are, of course, real income differences between the cities, but these are not the subject of this analysis. The border cities show a higher average Income than do the metropolitan cities in surveys conducted at the same time point, but this Income advantage of the border is compensated by a higher cost of living.

position. The border cities have greater proportions of their workforce who are owners of small enterprises or are self-employed than do the principal cities (24.8% and 20.1% respectively). The metropolitan cities have greater proportions who work for a wage in firms of less than 50 workers (40.3% compared to 33.3% on the border). In contrast, workers in large-scale organizations are proportionately slightly more important on the border (41.9% compared to 39.6%). The border, then, has a certain polarization in its employment structure with employment opportunities divided between large-scale firms, often maquiladoras, self-employment, and ownership of very small businesses. The metropolitan cities are more balanced in scale of employment, with small-scale employment being in larger organizations than is the case on the border (average of 5.4 workers per firm of under 50 workers in metropolitan cities compared to 4.3 on the border).

Small-scale enterprise in both groups of cities is concentrated in certain economic sectors. It is more likely to be found in basic industries than in intermediate, capital and consumer durable goods. It provides almost all employment in the repair industry sector (automotive repair, electrical and plumbing repair and maintenance). It provides the majority of employment in construction, trade and in personal services. In the transport sector, there is a difference in the distribution of employment between the two groups of cities -large-scale employment in transport is more important in the metropolitan centers than it is on the border.

Turning now to Table Two, we can look more closely at small-scale employment and take account of its gender distribution. Note that in both groups of cities, the gender differential in income is similar, with women earning, on average, 25% less than men. Where women earn less income differs, however, between the two groups of cities. On the border, women are concentrated in large firms, but earn less in those firms than if they were owners of small businesses and about the same as if they were self-employed. In the metropolitan cities, less than a third of women work in large firms, but earn substantially more in such firms than if they were self-employed. The income distribution by job position for men shows a similar tendency. On the border, men earn most as owners or self-employed relative to working in large firms. In the metropolitan cities, owning a small firm brings, on average, a higher income, but self-employment earns less than employment in a large firm.

**TABLE 2**  
**JOB POSITION, GENDER AND INCOME IN TWO GROUPS**  
**OF CITIES**

Job Position	Border Cities <sup>1</sup>				Principal Cities <sup>2</sup>			
	Male		Female		Male		Female	
	% Emp	Av. Inco <sup>e</sup>	% Emp	Av. Inco	% Emp	Av. Inco	% Emp	Av. Inco
Own Small Firm <sup>a</sup>	11.0	304	2.4	303	9.1	321	3.9	217
Self-Employed <sup>b</sup>	20.5	213	9.4	162	13.2	194	12.2	101
Work Small Firm <sup>c</sup>	36.8	175	25.7	137	36.9	170	46.9	136
Work Big Firm <sup>d</sup>	31.7	210	62.5	163	40.8	229	37.0	188
Total	100.0	208	100.0	159	100.0	211	100.0	154
(No.000s)	(5.9)		(2.8)		(8.7)		(4.1)	

SOURCE: Inegi/Enmau, 1986/1987.

NOTES: 1. The border cities are Tijuana, Ciudad Juárez, Nuevo Laredo, and Matamoros. 2. The Principal Cities are Mexico City, Guadalajara, and Monterrey. A. Own small firm are owners with 1-49 employees. B. Self-employed have no employees. C. Work small firm are employees of firms with 1-49 employees. D. Work big firm are employees of firms with 50+ employees. E. Av. Inco is the average monthly income in 000s of pesos of May, 1987 (exchange rate at 1098 to US\$) for the category of employment.

The income differentials within the small-scale sector are also important. On the border, the difference in income between owners, their workers, and the self-employment is less than it is in the metropolitan cities (Table Two). Among males, the ratios in Table Two between self-employed and owners and between small firm workers and owners are 1.43 and 1.75 respectively on the border, and 1.68 and 1.93 respectively in the metropolitan cities. Among women, more pronounced income differences are found between the self-employed and small-scale owners, with ratios of 1.87 for the border and 2.12 for the metropolitan cities. For women in small-scale employment, the relevant ratios are with the male small-scale employers, and these are 2.27 for the border and 2.43 for the metropolitan cities.

The data in Tables One and Two suggest differences in the operation of the labor markets on the border and in the metropolitan cities. On the border, the small-scale sector offers, overall,

better income opportunities relative to large-scale employment than is the case in the metropolitan cities. A major difference is the low wages earned in large-scale employment on the border. In the metropolitan cities, there is the suggestion that while small-scale sector employment benefits the owner of the small firm, it is at the expense of others in the sector -the workers in their firms and the self-employed. Owners of small firms on the border earn substantially higher incomes than others in the small-scale sector. But the self-employed and workers in small-scale firms are less income disadvantaged on the border than is the case in the metropolitan cities. This is particularly true when they are compared to border workers in large-scale organizations.

### **The Predictors of Income: Border and Metropolitan Cities**

The cross-tabulations in Tables One and Two indicate that the income opportunities on the border and in the principal cities are structured somewhat differently in terms of economic sectors and in terms of the contrast between small and large scale. These differences could, however, be explained by differences in the characteristics of the labor force so that, for instance, workers in manufacturing are more qualified than their counterparts on the border, and for that reason earn relatively higher incomes. To explore the importance of individual and household characteristics in contributing to the difference between the border and the principal cities, I shall use a regression analysis in which income (or rather the natural log of income) is modeled separately for both males and females on the border and in the three principal cities (Table Three). The independent variables in the model are explained in Appendix Table One. They include human capital variables, job position, occupation, the number of hours worked, the household variables whether head of household or not and whether currently married or not, migration status, and economic sector.<sup>8</sup>

<sup>8</sup> The sets of variables must be interpreted in terms of the omitted reference categories. Thus the income advantage or disadvantage of high and low education is in terms of those with between 6 and 8 years of education. The occupational category is not equivalent to job position. Thus the professional and technical category will include owners, the self-employed, employees of small-scale business and employees of large-scale ones. The other two categories (unskilled and the omitted one-craft workers and routine non-manual) are also likely to include a range of job positions, though most unskilled workers are likely to concentrate in the employee categories.

The two human capital variables, education and work experience, have a powerful effect both on the border and in the metropolitan cities, with those with 9 or more years of education earning approximately 20% more than those with between 6 and 8 years of education (the reference category). Less than 6 years of education has a significant negative effect when compared with having between 6 and 8 years. Years of work experience after completing education has also a positive effect, though at older ages there is a tendency for income to decline, as shown by the quadratic term (work experience  $^2$ ).

The relative income advantages of the different economic sectors have some similarities to those described in Table One, but also important differences. The reference category is manufacturing, and in the principal cities but not on the border, producer services and construction provide better incomes for any given set of qualifications than does manufacturing. But taking account of the human capital and other variables reduces or turns negative the income advantage that appeared in Table One for most border sectors. In comparison to manufacturing on the border, working in the repair services, personal services, and the social services brings significantly less income at the .05 level of significance for a given level of qualifications and taking into account other characteristics. In the principal cities, repair services, personal services, social services, and government bring significantly less income returns to qualifications than would manufacturing.

In contrast to these findings for economic sector, the regression model shows that job position has a highly significant and consistent impact on income, even when other variables are taken into account. And that impact differs in important ways between the border and the principal cities. For a given level of education, of work experience, and of occupation, bearing in mind the number of hours worked, the household and migrant status of the individual and the sector in which he or she works, being a small-scale owner brings substantial income advantages over employment in large-scale organizations, both on the border and in the metropolitan cities. Only for females in the principal cities is this finding reversed and non-significant. Male owners of small businesses earn over 20 percent more income than do those employed in large firms or organizations.

The regression coefficients for self-employment and being employed in small-scale businesses support the suggestion made in the previous section that these categories are less attractive income opportunities in the principal cities than on the border. On the border, being self-employed earns significantly more than being employed in a large organization; in the principal cities, self-employment earns significantly less.

The significant negative impact of working in small firms is lower on the border than in the principal cities.

The greater income polarization in the three cities as compared to the border between owners of small businesses, the self-employed and employees of small businesses appears also in terms of occupation. Both on the border and in the three metropolitan cities, men and women earn less, irrespective of their education and work experience if they are in unskilled jobs. They earn more when they are in professional, technical and managerial positions. The income premium for these high-level non-manual positions compared to routine non-manual and skilled and semi-skilled manual positions is considerable. For males it is greatest in the three metropolitan cities, just as the income disadvantage of unskilled work is greatest there. These findings suggest a less structured and more fluid labor market on the border than in the principal cities. Small-scale enterprise brings greater advantages, and the disadvantages of not possessing high occupational status are less.

The remaining variables -migrant status and household position-have predictive value, but they are not as strong as the human capital, job position or occupational predictors. Headship of a household brings significant income gains for both men and women when other variables are taken into account. Note that for any level of work experience and education, females who are single heads of household earn significantly more than women who are either spouses or occupy other household positions. The pressures of being the main breadwinner exercise, then, a powerful effect in raising income for women, independent of their human capital. Less powerful, particularly for women, is the effect of being married, though married women earn some 4% more than single women who are not heads of household. For men, being married raises income by 7 to 10% compared with remaining single.

These findings illustrate the issue of supplementary wage earners within a household. It is dependents -those who are not heads of household or their spouses- who earn the least when other variables are accounted for. Remember that this is a category which is often characterized by employers as not needing high wages because of youth or the fact of still living with their families.

In turn, probably because non-household heads have less living expenses, they are prepared to accept lower wages than their human capital would predict, no matter their job position or the sector of the economy in which they are working.

**TABLE 3**  
**OLS REGRESSIONS PREDICTING NATURAL LOG OF**  
**MONTHLY EARNINGS, MEXICAN CITIES, 1986/87**

Predictors <sup>a</sup>	Income Earners in Border Cities		Income Earners in Principal Cities	
	Males	Females	Males	Females
Low Education	-8.793(.00) <sup>b</sup>	-11.260 (.00)	-9.773 (.00)	-17.850 (.00)
High Education	20.475(.00)	16.259 (.00)	21.511 (.00)	20.121(.00)
Work Experience	1.209(.00)	1.633 (.00)	1.797 (.00)	1.559 (.00)
Work Experience <sup>2</sup>	-.024(.00)	-.033 (.00)	-.034 (.00)	-.030 (.00)
Hours Worked	15.073(.00)	12.831 (.00)	14.654 (.00)	29.301 (.00)
Unskilled	-11.012 (.00)	-8.673 (.02)	-13.838 (.00)	-29.065 (.00)
Prof & Tech	31.437 (.00)	21.335(.00)	37.333 (.00)	21.390 (.00)
Household Head	14.023 (.00)	8.450 (.00)	13.058 (.00)	16.824 (.00)
Married	6.750 (.00)	4.838 (.02)	9.942 (.00)	4.066 (.07)
Native	-1.712 (.24)	-1.897 (.32)	-5.352 (.00)	.960 (.65)
Afarmigrant	11.095 (.00)	8.318 (.00)	-2.389 (.17)	3.181(.29)
Construction <sup>c</sup>	-1.896 (.44)	*	4.262 (.05)	*
Trade	-2.148 (.32)	-3.601 (.25)	-2.585 (.14)	-1.154 (.70)
Repair Services	-8.497 (.00)	*	-6.372 (.01)	*
Personal Services	-5.994 (.01)	-13.763 (.00)	-5.791 (.01)	-.374 (.92)
Transport	19.243 (.00)	*	7.851 (.00)	*
Producer Services	1.621 (.67)	3.180 (.37)	12.470 (.00)	25.445 (.00)
Social Services	-8.337 (.03)	3.572(.36)	-18.705 (.00)	1.630 (.66)
Government	-.425 (.90)	14.404 (.01)	-12.567 (.00)	4.831 (.28)
Entrepreneur	25.265 (.00)	40.534 (.00)	18.423 (.00)	-2.883 (.60)
Self-employed	6.075 (.01)	-6.653 (.08)	-11.712 (.00)	-.42.069 (.00)

Employee. Small Firm	-7.552 (.00)	-11.586 (.00)	-15.798 (.00)	-17.903 (.00)
Intercept	1119.561	1120.341	1121.723	1057.318
R <sup>2</sup>	.245	.236	.285	.352
n	5631	2652	8690	3911

<sup>a</sup>See Appendix Table One. <sup>b</sup>Unstandardized regression coefficients taken to fifth significant digit and multiplied by 100. Alpha level in parenthesis.  
<sup>c</sup>Economic sectors as in Table One. \* Less than 100 cases in cell.

The migration variables have predictive value, but it is neither a strong nor a consistent one. On the border, those born in states at some distance from their present residence earn a significantly higher income than do natives and those born in the state in which the city is located or in the states contiguous to it (the reference category). This advantage is present after taking account of their human capital and other characteristics. In the principal cities, migration from a distance brings no income advantage, but for males, being a native significantly lowers income. These findings are difficult to interpret, and perhaps their most interesting aspect is the difference in the impact on income that migrant status has as between the border and the principal cities. On the border, we can suggest that migrant status acquires its significance because of the recent and rapid growth of the border cities, their thriving economies, and their function as way stations for labor migration to the United States. One possible and speculative interpretation for the border findings on migration is that whereas migrants from nearby states to the border cities are likely to be rural migrants from the impoverished agricultural regions of the North, distant migrants, coming from villages and towns of the interior of Mexico, may well be a selective category.

I used a similar set of predictors to model household income, including additional variables to measure stage in the household cycle, numbers in the household and numbers employed.<sup>9</sup> The strongest significant predictor of household income, as might be

<sup>9</sup> These regressions are not presented here. The R<sup>2</sup> of the equation for household Income was higher on both the border (.465) and the metropolitan cities (.47) than in the case of Individual incomes. The strongest predictor, as might be expected, was number employed in the household, with each unit increment accounting for 34.13% increase on the border and 35.47% increase in the principal cities.

expected, was number employed in the household, with each unit increment accounting for a 34.13% improvement in income on the border and 35.47% increase in the metropolises. Independent of number employed and the variables measuring stage in the household cycle, larger households had a significant negative association with income compared to smaller households. Every extra member of the household was associated with a 1.2% decrease in household income on the border, and a 0.6% decrease in the principal cities.<sup>10</sup> I would interpret this finding as further evidence for the pressures operating on poor families. Larger families have extra mouths to feed and greater need to seek additional income, leading to household strategies in which more members seek paid work (González de la Rocha, 1991; Oliveira and García, 1990). But the urgency of household needs results in these additions to the paid labor force accepting lower-paying jobs than they would otherwise do. The result of their efforts is to increase total household income because more members of the household are employed, but at marginally declining incomes. So that when the numbers of people employed in the household are taken into account as in the regression model, what stands out is the negative impact of declining marginal incomes on household income.

The variables measuring stage in household cycle have a significant impact on household income when size of household and the numbers employed in it are taken into account by the regression model. Both on the border and in the three principal cities, those belonging to households that are in the late nuclear stage or who are in extended households enjoy higher household incomes than those in households with young children, those who live alone or those who live alone with spouses. The two latter categories include high proportions of elderly income earners. The most likely explanation for this finding is that in mature households, all the earners are likely to be at or near the peak of their earning power, with children obtaining a full wage and the heads of households not yet entering the years of income decline. The interest of this finding is that it is independent of size of household and numbers employed in the household, though there is an association between these two latter variables and stage of the household cycle. Households tend to reach maximum size when heads are aged 40 to 50 and all their children are still living with them, but households add and lose members throughout the household cycle. Likewise, though, as noted above,

10 The alpha value for the border was .00 and .05 for the principal cities.

poverty may stimulate larger households to place more members on the labor market. This can be done at any stage with, for example, spouses working in earlier stages and children at later stages (Roberts, 1992). But the constraints on the types of jobs that can be sought are likely to be more severe at certain stages than at others. For instance, a young mother with small children may have little option other than domestic out-work at a very low piece-rate. These constraints underline the difficulties facing poor households who, because of their composition and stage of the household cycle, do not have additional potential wage earners unconstrained by domestic responsibilities, whether adult children or adult relatives.

### **The Determinants of Job Position**

In this section, we shift from an analysis of the predictors of income to one of predictors of the job positions that people hold. We have noted above that the various job positions affect income differently, and that these differences are sharper in the principal cities where the income advantage to being a small-scale owner or the employee of a large organization relative to the self-employed and employees in small-scale firms is greater than in the border cities. What kinds of people fill these job positions on the border and in the metropolitan cities?

The analysis will use logistic regressions that estimate the probability of occupying a given job position, modeled as a function of human capital predictors, migrant and household characteristics. Significant coefficients have been transformed into net probabilities following Alba (1988). The proportions reported in parentheses in Tables Four and Five represent net changes in the probability of occupying a given job position for every unit change in the predictor.<sup>11</sup>

In interpreting these regressions, I shall divide my discussion between those findings that identify common characteristics of the holders of the various job positions in the border cities and in the three principal cities, and those findings that suggest differences between the two groups of cities. In both locations, the job positions that have the most positive characteristics associated with them and

<sup>11</sup> The logistic regressions for the two other Jobs positions (self-employment and employment In small-scale enterprises) are given In Appendix Tables Three and Four.

less negative characteristics are ownership of a small firm and employment in a large organization (Tables Four and Five).

<b>TABLE 4</b>						
<b>REGRESSIONS DESCRIBING EFFECTS ON THE LOG ODDS AND PROPORTIONAL HAZARD RATES OF OWNERSHIP OF SMALL-SCALE ENTERPRISE, MEXICAN CITIES, 1987/88.</b>						
Variables <sup>1</sup>	Border Cities			Principal Cities		
	L*	Coefficient/ Stand.Error	Prob <sup>b</sup>	L	Coefficient/ Stand.Error	Prob
Lowed	-.176	(1.6)		.296	(2.93)*	.023
Highed	.137	(1.19)		-.007	(0.07)	
Wkexp	.107	(8.5)*	.008	.080	(7.4)*	.006
Wkexp <sup>2</sup>	-.001	(5.42)*	-.000	-.001	(5.3)*	-.000
Hours	.775	(5.38)	.078	.416	(4.42)	.034
Unskilled	-.751	(5.9)*	-.039	-.231	(2.21)	
Prof & Technical	1.077	(8.97)	.123	.886	(8.39)	.087
Female	-.7593	(4.13)*	-.041	-.423	(2.61)*	-.024
Head	1.000	(3.61)	.111	.455	(2.29)	
Married	.439	(2.71)*	.039	.466	(3.09)*	.038
Child	.300	(0.85)		-.705	(2.54)	
Otherkin	.537	(1.5)		-1.023	(3.4)*	-.045
Number	.015	(0.59)		-.095	(4.64)*	-.006
Num. empl.	.193	(4.2)*	.015	.506	(14.18)*	.042
Earlnuc	.133	(0.72)		.357	(2.03)	
Latenuc	.056	(0.29)		.098	(0.53)	
Extended	-.108	(0.53)		.018	(0.09)	
Native	.164	(1.65)		.017	(0.20)	Distmig
Afar- migrant	.048	(0.42)		.291	(2.91)*	.002
%Small- scale Owners	8.000			7.300		
Intercept	-8.690			-6.869		
N.	8802			12620		

1. See Appendix Table One a. Logistic regression coefficients b. Net change in probability of being an owner per unit change of independent variable. \* p<.01

Ownership of a small business is *most* likely among the professional and technical occupations, those with considerable work experience, and married males. When these predictors are taken into account, education has little additional predictive value. Thus on the border, where this effect is strongest, a married head of household in a professional or technical occupation with 20 years of work experience is 43% more likely to be an owner of a small business than someone who is unmarried, does not head a household, who is a craft or clerical worker, and who is just starting out on his or her work career. In contrast to ownership of small firms, employment in large organizations is positively associated with higher levels of education. Both on the border and in the principal cities, this is the only job position in which those with high levels of education are the ones who are significantly more likely to be found than those with less education. In the metropolitan areas where the effect is strongest, those with more than 8 years of education are 13% more likely to be employed in large-scale organizations than are those with between 6 and 8 years of education, and almost 25% more likely to be so employed than those with less than 6 years of education.

Many large manufacturing industries in Mexico require completion of primary school as a condition of employment. Employment in large organizations also includes most white collar employment, such as government, banking, and large commercial organizations. Being an unskilled worker also significantly increases the probability of not working in large-scale organizations. The differences between the border and the principal cities in the characteristics associated with the various job position lend some support to the argument that small-scale enterprise represents a more attractive set of opportunities on the border than it does in the principal cities. Note that in the metropolitan cities, owners of small business are less well-educated for their occupational status than is the case on the border. Consistent with this result is the finding that on the border, but not in the principal cities, those in unskilled occupations are less likely than skilled and semi-skilled workers to be owners of small firms.

Heads of households are significantly more likely to be owners of small businesses on the border than are their spouses, children or other household members, but this finding is not significant in the metropolitan cities.

These and other findings must also be related to household employment strategies discussed in the last section. An important indicator of these is the number of people employed in a household. Multiple earner households appear to have a different relationship to the labor market on the border when compared to the principal cities.

In the principal cities, the only job position in which multiple earner households are over-represented is ownership of small businesses.

<b>TABLE 5</b>						
<b>EMPLOYEES IN LARGE FIRMS</b>						
Variables <sup>1</sup>	<b>Border Cities</b>			<b>Metropolitan Cities</b>		
	L <sup>a</sup>	Coefficient/ Stand.Error	Prob <sup>b</sup>	L	Coefficient/ Stand.Error	Prob
Lowed	-.377	(5.11)*	=.086	-.530	(8.10)*	-.115
Highed	.186	(3.09)	.045	.542	(10.81)*	.133
Wkexp	-.017	(2.35)		.028	(5.20)*	.007
Wkexp 2	-.0002	(1.46)		-.0006	(6.22)*	-.000
Hours	-.050	(.68)		.367	(7.53)*	.089
Unskilled	-1.323	(18.55)*	-.250	-.784	(13.96)*	=.162
Prof & Tech	.063	(.79)		-.144	(2.60)*	=.033
Female	1.035	(15.56)*	.253	0.28	(.50)	
Head	-.116	(1.08)		0.49	(.56)	
Married	.004	(.05)		.226	(3.32)*	.055
Child	-.202	(1.46)		.162	(1.44)	
Otherkin	-.259	(1.09)		.058	(.50)	
Number	-.043	(3.08)*	=.010	.011	(1.12)	
Num. empl.	.155	(5.80)*	.038	-.136	(6.79)*	=.032
Earlnuc	.115	(1.03)		-.132	(1.42)	
Latenuc	-.095	(.77)		-.013	(.13)	
Extended	.182	(1.49)		.138	(1.37)	
Native	-.155	(2.83)*	=.037	.036	(.81)	
Afar- migrant	-.409	(5.50)*	-.093	.082	(1.33)	.027
% Large- Scale Employees	40.1%			38.3%		
Intercept	.1541			-2.0336		
N.	8802			12620		

1. See Appendix Table One a. Logistic regression coefficients b. Net change in probability of being an owner per unit change of independent variable. \* p<.01

In contrast, on the border, multiple earners in a household increases both the probability of owning small businesses and being employed in large-scale organizations. In the principal cities, multi-

ple employment is significantly less likely to be found among employees in large organizations.

The difference, in terms of household employment consists, then, in the contrasting roles of large-scale employment on the border as compared to the principal cities. It can be suggested that on the border, large-scale employment, mainly in *maquiladoras*, serves to provide supplementary household employment, as does ownership of a small business. Whereas in the principal cities, supplementary employment is most probable among small-scale entrepreneurs, it is also significantly more likely among employees of small-scale firms than among the self-employed or employees of large-scale organizations (Appendix Tables Two and Three). Note, too, that in the principal cities adjunct members of a household (kin or friends who are not members of the nuclear family) are more likely than members of the nuclear family to be in small-scale employment.

These two other categories of job position -the self-employed and employees in small firms (small-scale employment)-have characteristics associated with them that suggest a weaker labor market position than owners or employees of large-scale organizations. Both small-scale employees and the self-employed are most likely to have unskilled occupations, examples of which are street vendors, shop assistants, and those offering services such as shoe-shining or laundry. Those with unskilled occupations are 28% more likely to be employed in small businesses on the border than are those with skilled or semi-skilled occupations. Of the different types of occupations, professionals or technicians are least likely to be found among the self-employed and, on the border, among employees of small businesses. Self-employment is associated with shorter hours of work, though this is not the case for small-scale employees. Women and heads of households are significantly less likely to be found among the self-employed, but not among small-scale employees. Indeed, in the principal cities, women are more likely to be found than are men in small-scale employment when other predictors are held constant. Work experience does increase the likelihood of self-employment, while, in contrast, work experience is negatively related to small-scale employment, particularly in the metropolitan cities. The contrast with self-employment shows, then, employees of small firms to be the most marginal labor market category, as might be expected from their low incomes. Those with the lowest levels of education are significantly more likely than those with higher levels of education to be employees of small businesses.

Self-employment and employment in small firms attract somewhat different categories of people on the border than in the principal

cities. Note that in the principal cities, women are more likely than men to be employed in small firms when other variables are taken into account, but on the border the relationship is reversed. It is women who are significantly less likely than men to be found in such employment. Note the finding reported above that it is only in the principal cities that small-scale employment is associated with those with the least work experience, supporting the suggestion that the marginal character of small-scale employment is more pronounced in the principal cities than it is on the border.

### Conclusion

The above analysis is provisional in two senses. The statistical analysis cannot substitute for case studies of the workings of these labor markets aimed at discovering the social and economic relations which underpin small and large-scale enterprise. Secondly, the labor markets on the border and in the three principal cities are complex, and defy easy characterization. This complexity is particularly marked on the border, as illustrated by the lower explanatory power of the regression models predicting income for males and females as compared with those for the principal cities.

There are many findings that need more detailed analysis, particularly those referring to migrant status and the effect of stage in the household cycle. Neither the border nor the principal cities show any easily interpretable relationship between migrant status and position in the labor market. Thus, length of residence in the city made no difference to effect of place of birth when it was included in the regression analyses. Stage in the household cycle had little predictive value in the logistic regression analyses of job positions (Tables Three and Four, Appendix Tables Two and Three). This absence of significant predictive value occurs, I suggest, because both on the border and in the three principal cities the fit between job position and individual life course is not a close one. Though heads of households become more likely to own small businesses as they gain work experience, there are other alternative job positions open to members of their households, such as small-scale employment in the principal cities and large-scale employment on the border. At earlier stages of the life cycle, a similar diversity of job positions is available to household members, with similar differences between the border and in the principal cities.

Individuals and households use the local labor market differently, then, on the border compared to the three principal cities. The importance of *maquiladora* employment on the border, but at rela-

tively low salaries, means that large-scale employment has a particular significance for both the individual and for the household. It is the type of employment with which people often begin their working career, and thus is likely to be the most common form of job found in multiple earner households. It is also a form of employment that is short-term. On the border, the longer-term job prospects for individuals, and thus for household heads, have been provided by the small-scale sector. And the favorable conditions for small-scale enterprise existing on the border mean that, even for the workers and the self-employed of this sector, incomes are comparable to those offered in large-scale organizations.

The relation between household and labor market is different in the three principal cities. In these cities, households with multiple earners make heavy use of small-scale employment. Longer-term job prospects are found in large-scale organizations, and not just in self-employment or small-scale ownership as in the case of the border. These contrasts acquire greater salience if we remember that social security benefits are disproportionately concentrated in large-scale organizations. On the border, there is a contrast between parents who do not enjoy social security protection and children who do; whereas in the principal cities social security protection is more evenly distributed between young and old (Roberts, 1992: Table 8).

It is too early to say whether these contrasts have any significance for the direction of change in the nature of work careers in Mexico: an increasing female labor force participation, with early years for both males and females spent in protected but low-paid employment in large-scale organizations, while in later years males move to more remunerative, but unprotected, employment in the small-scale sector and females, when budgets are tight, earn supplementary incomes from the same sector. This is, after all, one possible scenario of a global division of labor based on the export of low-wage industries to developing countries. But the Mexican northern border is a special case. The border presents, after all, a very particular set of employment opportunities in various economic sectors, and these are not simply the consequence of economic restructuring and the new export-orientation in manufacturing. The border, because it marks an important interface, inevitably generates a range of income opportunities for entrepreneurship. Furthermore, as export-industry matures and includes an increasing number of complex production plants, so too the range of skilled, career jobs in this sector is likely to increase. Such developments could produce a dynamic and prosperous border labor market with good long-term job prospects in both the small and large-scale sectors.

In most cities of Mexico, and particularly in the major regional centers, modern services, particularly entrepreneurial ones in the producer or social services, are increasingly likely to offer the best income prospects for those with the appropriate qualifications. In contrast, employment in large-scale organizations, whether in government or manufacturing, may offer stable employment but not as good a return on individual human capital as does entrepreneurship. For those without skills and education, the old opportunities in the small-scale sector continue. These are less remunerative under the conditions of the principal cities, and it is in these cities that the informal economy is most likely to be synonymous with poverty.

## APPENDIX

<b>TABLE I NAMES AND MEASUREMENT OF VARIABLES IN REGRESSION ANALYSES</b>	
<b>LOWED and HIGHED</b>	Dummy variables representing those with less than 6 years of education, and more than 8 years respectively. Reference category is those with 6-8 years
<b>Workexp</b>	Work experience defined as age-years of education +6
<b>Workexp 2</b>	Quadratic term of WORKEXP
<b>HOURSWKD</b>	Log of average number of hours worked in last week
<b>PROF &amp; TECH and UNSKILLED</b>	Dummy variables representing those in professional, managerial or technical occupations, and those in unskilled occupations respectively. Reference group is those in skilled and semi-skilled blue and white collar occupations

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<p><b>OWNERS, SELF- EMPLOYED, EMPLOYEES IN SMALL&amp; LARGE SCALE ORGANIZATIONS</b></p>	<p>Dummy variables representing owners of business with between 1 and 50 workers, the self-employed, those employed in organizations of less than 50 workers (small-scale), and 50 or more workers (large-scale).</p>
<p><b>NUMBER</b></p>	<p>Number of members in the household</p>
<p><b>NUMEMPL</b></p>	<p>Number of members of household in employment</p>
<p><b>FEMALE</b></p>	<p>Dummy variable representing females. Reference group are males</p>
<p><b>MARRIED</b></p>	<p>Dummy variable representing those who are married. Excluded categories are the single, divorced or widowed</p>
<p><b>HEAD; OTHERKIN; and CHILD</b></p>	<p>Dummy variables representing those recorded as main breadwinners, as children of head of household, and as other kin or friends of head respectively. Reference category are spouses of head</p>
<p><b>NATIVE and AFARMIGRANT</b></p>	<p>Dummy variables for those born in city of residence and those born in states at some distance from city of residence. Reference category are those born either in state of city of residence or contiguous states</p>
<p><b>EARLNUC; LATENUC; and EXTENDED</b></p>	<p>Dummy variables for those living in nuclear families with children all of whom are under 18, those in nuclear families with at least some children over 17, and those living in extended households where there are kin of friends other than spouse or children. Reference category are those living alone or only with spouse.</p>

**TABLE II**  
**LOGISTIC REGRESSIONS FOR SELF-EMPLOYED**

Variables <sup>1</sup>	Border Cities			Metropolitan Cities		
	L <sup>a</sup>	Coefficient/ Stand.Error	Prob <sup>b</sup>	L	Coefficient/ Stand.Error	Prob
Lowed	.175	(2.2)		.133	(1.69)	
Higned	-.226	(2.61)*	-.028	-.026	(.32)	
Wkexp	.0473	(5.5)*	.006	.029	(3.9)*	.001
Wkexp2	-.895	(1.73)		.000	(.60)	
Hours	-.895	(11.27)*	-.088	-.692	(12.82)*	=.053
Unskilled	.209	(2.9)*	.030	.722	(10.84)*	.101
Prof & Tech	-.013	(3.88)*	-.057	-.436	(4.12)*	-.040
Female	-.978	(9.23)*	-.093	-.356	(3.69)*	-.034
Head	-.566	(3.88)*	-.057	-.436	(4.12)*	-.040
Married	-.085	(.81)		-.065	(.64)	
Child	-.325	(1.65)		-.991	(6.7)*	-.074
Otherkin	-.632	(3.0)*	-.068	-.987	(5.85)*	-.073
Number	-.013	(.72)		.004	(.29)	
Num. empl.	-.175	(4.78)*	-.022	-.111	(3.67)*	-.012
Earlnucl	.038	(.29)		-.060	(.47)	
Latenucl	-.056	9.41)		-.052	(.38)	
Extended	-.049	(.34)		.105	(.76)	
Native	-.086	(1.17)		.028	(.42)	Distnig
Afarmi- grant	.284	(3.36)*	.042	-.047	(.53)	
% Self- employed	16%			12.3		
Intercept	1.9136			.7479		
N.	8802			12620		

\* p&lt;.01

1. See Appendix Table One

a. Logistic regression coefficients

b. Net change in probability of being an owner per unit change of independent variable.

TABLE III EMPLOYEES IN SMALL FIRMS						
Variables <sup>1</sup>	Border Cities			Metropolitan Cities		
	L <sup>a</sup>	Coefficient/ Stand.Error	Prob <sup>b</sup>	L	Coefficient/ Stand.Error	Prob
Lowed	.312	(4.61)*	.073	.266	(4.36)*	.065
Highed	-.101	(1.64)		-.573	(11.12)*	=.125
Wkexp	-.014	(2.06)		-.044	(8.65)*	-.010
Wkexp 2	-.0001	(.80)		.0003	(3.62)*	.000
Hours	.549	(7.10)*	.132	-.036	(.83)	
Unskilled	1.144	(19.94)*	.278	.424	(8.56)*	.1042
Prof & Technical	-.293	(3.26)*	-.062	.101	(1.73)	
Female	-.453	(6.85)*	-.093	(3.55)*	.046	
Head	.031	(.28)		-.018	(.21)	
Married	-.168	(2.14)		-.380	(5.74)*	-.086
Child	.067	(.47)		.158	(1.44)	
Otherkin	.160	(1.09)		.458	(4.16)*	.113
Number	.031	(2.36)		.008	(.79)	
Num. empl.	-.104	(3.98)*	-.023	.032	(1.62)	
Earlnuc	-.1255	(1.19)		.040	(.43)	
Latenuc	.031	(.26)		-.134	(1.36)	
Extended	-.050	(.43)		-.240	(2.37)	
Native	.125	(2.32)		-.052	(1.18)	Distmig
Afarmi- grant	.109	(1.55)		-.169	(2.69)*	-.039
% Employees Small Firm	34.00%			39.00%		
Intercept	-2.4366			.5614		
N.	8802			12620		

See Appendix Table One

a. Logistic regression coefficients

b. Net change in probability of being an owner per unit change of independent variable.

\* p<.01

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