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**THE FUNCTION OF THE URBAN INFORMAL SECTOR IN EMPLOYMENT**  
**Evidence from Colombia 1984-2000\***

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**Abstract**

The aim of this paper is to analyze the function of the informal sector in employment, its relationship to urban employment, with illustrative evidence from Colombia. The analysis is done for the period 1984 – 2000, which includes phases of boom and economic crisis as well as the implementation of neo-liberal reforms to national development. The paper summarizes four competing approaches to the conceptualization of the informal sector, and describes their measurement strategies. It argues that elements of state regulation are fundamental whereas firm size should not be considered as a defining element. Subsequently, it analyzes how the internal composition of the informal sector evolved, considering elements of state regulation, firm size, and dynamism of the economic activities. It examines the function of the informal sub-sectors in the urban labor market, using indicators such as relative earnings and size, and a crude indicator of labor mobility. At least three sub-sectors conforming the informal sector are identified: salaried workers of large and small firms, entrepreneurs and subsistence workers. It is argued that each sub-sector of the informal sector responds in different ways to prevailing economic conditions. The subsistence sub-sector supports the dualistic view, whereas the other two are integrated to the formal sector. No dominant sub-sector permits broad-range generalizations about “the” informal sector.

Clasificación JEL: 121, 124

Palabras claves: Informalidad, empleo.

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## 1. Introduction

During 1990's, "informal economy" seems have lost the interest and urgency characteristic among social scientist during the 1970's and 1980's. However, the persistent economic and social downturn that characterized several Latin American countries, including Colombia, during the last decade resurrected interest in the informal economy. The term informal economy<sup>1</sup> covers a set of heterogeneous activities, from unpaid labor to any number of unregulated salaried jobs. This broad range of activities has made it difficult for analysts of the informal sector to agree on its definition. However, there is consensus on two broad points: first, the informal economy is part of the economy at large, which determines its main characteristics and on which it depends; and second, the informal economy is largely defined by activities outside state regulation (Portes, 1994; Broad, 2000). In spite of these two broad agreements, the reasons for the existence of unregulated activities and their function in employment differ and then the implications in terms of labor policies also differ.

Some analysts consider the informal sector as the disadvantaged segment of a dualistic labor market and see today's expansion of the informal economy as part of a more general deterioration of labor market conditions (Tokman, 1992; Klein and Tokman, 2000). Others view informal economy as unregulated income-earning activities closely related to the formal sector (Portes, 1997). Yet others see in the informal sector signs of incipient entrepreneurship and an escape from state regulation (Maloney, 2000). For others analysts, informalization is not a recent phenomenon but it is a long term, large scale, and systemic phenomenon of the capitalist world-economy (Tabak, 2000). The issue of understanding the function of the informal sector in employment is essential for the design and evaluation of labor policies. It becomes particular relevant to the Latin American region since most of the countries applied "neo-liberal" reforms during the last decade that affected the labor market environment. The globalization of the economy, the privatization process and the flexibilization of labor markets has opened debates on establishing common

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<sup>1</sup> Informal economy and informal sector are interchangeable used here.

labor standards in regional free trade agreements and on the need to regulate labor markets to ensure neat international competition (Maloney, 1997; Klein and Tokman, 2000). For the design of those and other labor policies it is necessary to understand if the informal sector functions as a buffer for employment or it is closely integrated to formal employment.

The aim of this paper is to analyze the function of the informal sector in employment, its relationship to urban employment, with illustrative evidence from Colombia. The evolution of the Colombian urban informal sector and its function in employment is analyzed from 1984 to 2000. This period includes phases of boom and economic crisis as well as the implementation of neo-liberal reforms to national development, which provides the general context in which informality occurs. The paper summarizes four competing approaches to the conceptualization of the informal sector, and describes their measurement strategies. By doing a sensitivity analysis of the empirical definition of urban informal activities, I evaluate and adopt a specific definition. I argue that elements of state regulation are fundamental whereas firm size should not be considered as a defining element. Subsequently, I analyze how the internal composition of the informal sector evolved, considering elements of state regulation, firm size, and dynamism of the economic activities. I also examine the function of the informal sub-sectors in the urban labor market, using indicators such as relative earnings and size, and a crude indicator of labor mobility. At least three sub-sectors conforming the informal sector are identified: salaried workers of large and small firms, entrepreneurs and subsistence workers. I argue that each sub-sector of the informal sector responds in different ways to prevailing economic conditions. No dominant sub-sector permits broad-range generalizations about “the” informal sector. However, a general trend is observed in the labor market: an increasing deterioration of labor conditions for workers in both formal as well as informal sub-sectors.

Colombian urban informal sector is an interesting case to further study for several reasons. First, roughly 50% of the urban labor force works in small firms with low levels of productivity and without labor protection (López, 1996; Caro, 1995; Fedesarrollo, 2000; Henao et al., 1999). Second, during the last decade,

the Colombian economy experienced several structural “neo-liberal” reforms that significantly modified the labor market environment (Ocampo et al., 2000). Third, since late 1990’s, Colombia is facing one of the most severe economic crises since the Great Depression of the 30’s.

## **2. Economic Conditions during the 1984-2000 Period: An Overview**

Colombia, located in the northwest of South America, is considered a lower-middle income country by international standards. With a current total population of nearly 43 million and an annual population growth rate of 1.8%, Colombia is the third largest country in Latin America after Brazil and Mexico. Nearly 71% of its population lives in the urban areas, 15% in Bogotá, the capital of the country, and nearly 40% of urban population lives in the major four cities (Bogotá, Cali, Medellín and Barranquilla).

Colombia, as other Latin American countries, has been experiencing major socio-demographic changes since the second half of the XX century: reductions in fertility and mortality, a process of urbanization, improvements in educational attainment and increases in female labor force participation (Flórez, 2000). During the last decade, several structural neo-liberal reforms were implemented to national development. Among the most important social reforms are the Labor Reform of 1990 and the Pensions and Health Insurance Reform of 1993. In 1990, the Labor Reform combined higher labor market flexibility with higher protection to labor union rights. It increased labor flexibility by facilitating temporary contracts, facilitating firing of workers with more than 10 years of experience in the firm but introducing a higher “indemizacion” instead, adopting an integral salary for high income workers (more than 10 minimum wages), and eliminating the higher labor costs implicit in the old regimen of “cesantias”<sup>2</sup> (Ocampo, et al., 2000). However, the greater flexibility and the reduction of labor costs associated with the old regimen of “cesantias” have been

<sup>2</sup> According to the regimen of “cesantias”, his/her average salary of the last two years worked and the number of years worked determined the payment to the worker at the moment of his/her retirement. This implied an increasing labor cost as a function of the number of years worked. The labor reform introduced a mandatory saving system in a “cesantia” fund for new workers.

counterbalanced by the higher costs of hiring new workers introduced by the reform to the health insurance system.

In 1993, Law 100 completely reformed the organization, financing and delivery of health services in Colombia, creating the “General System of Social Security in Health” (Sistema General de Seguridad Social en Salud – SGSSS). Before 1993, the Colombian National Health System had three parallel and independent sub-systems. 1) The Social Security System, an individual mandatory system for all public and private salaried employees. Employees and employers had to pay 6% of salaries to finance this system (1/3 came from the employee and 2/3 from the employer). 2) The National Public Health System, an assistance system for poor population, based on supply subsidies. 3) The private health insurance system, available for high-income population (Tono T., 2000).

The 1993 health reform sought universal coverage, improving equity and quality of health services. It used three strategies: 1) a mandatory health insurance to increase coverage, 2) managed competition to improve efficiency, decrease costs, improve access, and increase quality of the health services, 3) a unified financing system with multiple subsidies and redistribute elements to decrease inequality. The first strategy looked for a universal coverage by creating two regimes: contributions and subsidies. The Contributing Regime (Régimen Contributivo) is an employment-based mandatory insurance system. All employees and the self-employed must pay 12% of their income to the “Solidarity Fund” (Fondo de Solidaridad y Garantía) at the Ministry of Health. The employer pays 8% of the tax and the remaining 4% comes from of the employee’s earnings. Self-employed individuals must pay the entire 12% from their earnings<sup>3</sup>. Their payments to the system increased from 6% in the old to 12% in the new system. Poor individuals and the unemployed are enrolled in the “Subsidized Regimen” (Régimen Subsidiado). All enrollees in the system

<sup>3</sup> According to Law 100, for an independent worker to enroll in the health system must pay 12% of at least 2 minimum wages. Those workers earning between 1 and 2 minimum wages do not earn enough income to pay the high cost of enrollment, but they can not enroll either in the subsidized regime because they are working. Therefore they are excluded from the health system.

obtain coverage for themselves and their families (non-working spouse or non-working parent, children younger than 18 or younger than 25 years of age if they are full-time students). Therefore, the system went from individual to family coverage. The other two strategies included competition in the health sector market, substitution of supply subsidies by demand subsidies, and decentralization of public health expenditures (Plaza and Barona, 1999).

Law 100 also reformed the pension system. It doubled the contribution (“cotizacion”) rate - from 6.5% to 13.5%, doubled the required minimum number of weeks worked- from 500 to 1000, increased by two years the minimum age for pension – from 55 to 57 for women and from 60 to 62 for men, and increased the base reference period for calculating the amount of pension - from the last two to the last ten years worked (ANIF, 2000). In the case of salaried employees, both employer and employees pay jointly the 13.5%. However, self-employed workers must pay this amount themselves. Overall, the 1993 Pensions and Health Insurance reform increased labor costs of hiring a new worker from 12.5% to 25.5% (13.5% to pensions and 12% to health insurance).

Additional social reforms occurred at the same time. The main element was the liberalization of the external transactions. A gradual process of trade liberalization began in the second half of the 1980’s with the reduction in overall import tariffs. In 1990, stronger measures were introduced that virtual eliminated the licensing regime and cut average import tariffs by roughly half (Fajnzylber and Maloney, 2001). At the same time, free trade agreements were signed with Chile, Mexico and Venezuela, as part of an intensification of regional trade integration. On the other hand, the capital account was opened in 1993 through two elements: the exchange reform (“reforma cambiaria”) and the opening of direct external investment (Vélez et al, 2001; Ocampo et al, 2000). Political changes affecting the structure of the State also occurred at the beginning of the 1990’s. Among those, the new Political Constitution of 1991 and the Law 60 of 1993 on fiscal decentralization are the most important ones.

At the macro level, Colombian economy was characterized, during the 1970's and 1980's, by a positive and sustained – although moderate – growth. Sound management of the economy allowed the country to go through the Latin American debt crisis of the early 1980's without a significant drop in its growth rate. The end first half of the 1990's was a period of economic boom – as a consequence of accelerated expansion of internal aggregate demand – but it was accompanied by an increasing deterioration in the external balance of payments. The social and structural reforms and the redefinition of the State function that occurred at the beginning of the 1990's were accompanied by increasing public spending and fiscal imbalances. Public spending share went from 24% to 36% of GNP between 1990 and 1998 (Vélez et al, 2001). Fiscal imbalances began to rise after 1993, going from 0.3% to 5.9% of GNP in 1999 (Ocampo et al, 2000). The increasing public spending and fiscal imbalances slowed down economic growth after 1996, and took the economy into recession in 1998-99. By 1999, after two decades of positive growth, Colombia had reached negative figures in its economic growth rate (Figure 1). This severe economic crisis has translated into a lower employment rate, an increasing labor force participation rate, and an increasing unemployment rate (20.2% in 2000) (Figure 1).

Given the objective of this paper and using macroeconomic and labor market indicators (Figure 1), we can divide the 1984-2000 period broadly into three phases:

*Phase 1:* 1984-1990, period of moderate growth before the implementation of structural reforms. GNP growth rate was positive, reaching 5.7% in 1987. Industrial production showed a positive and sustained growth, whereas real industrial wages and the minimum wage were almost constant. Labor force participation, an indicator of labor supply, and employment rate, an indicator of labor demand, were both increasing, with a declining open unemployment rate.

*Phase 2:* 1991-1995, period of moderate growth along with the implementation of “neo-liberal” reforms. GNP growth rate was positive, increasing at the end of this period to a 5.8% in 1995. Industrial production had a steady positive growth

rate, whereas real industrial wages significantly increased since 1991, especially among white-collar workers. In contrast, minimum real wages remain almost constant. Labor force participation and employment rates behaved similarly: they increased slowly at the beginning of the period but declined slowly afterwards. Open unemployment was declining, reaching the lowest rates observed in the last two decades. These conditions may characterize this phase as an upturn economic cycle.

*Phase 3:* 1996-2000 is period of economic crisis. GNP growth rate steadily declined and reached negative figures in 1999 (-1.9%). Industrial production also slowed down, and significantly declined by the end of the period. Real industrial wages continued to increase, especially among white-collar workers, increasing the wage gap differentials among white-collar and blue-collar workers. Labor force participation rates increased, especially at the end of the period, whereas employment rates were declining. Open unemployment significantly increased reaching the highest figure ever observed in Colombia: 20.4% in June 2000.

### **3. Data**

I use data from the National Household Survey Program (ENH), carried out by the National Department of Statistics (DANE) since 1976, which is designed to gather quarterly information on the labor market in urban and rural areas. Every two years since 1984, the June survey has included a special module devoted to the informal sector<sup>4</sup>. The survey is statistically representative of the main 10 cities and its metropolitan areas<sup>5</sup>. Each survey interviews around 20,000 households. This sample size permits estimates of relative size and earnings for each sub-sector of the labor market at two-year intervals for urban areas.

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<sup>4</sup> The 1990 June-survey is excluded from the analysis because of lack of comparability. The wording of the questions included in the informal sector module is different in that specific year. However, estimates for 1990 are sometimes calculated as mean values between 1988 and 1992.

<sup>5</sup> According to the 1993 Population census, about 66% of the urban population -- living in cities with 50,000 or more inhabitants-- was located in the ten main cities and their metropolitan areas (Bogotá, Medellín, Cali, Barranquilla, Cartagena, Cúcuta, Bucaramanga, Ibagué, Pereira and Manizales).

## **4. Competing approaches to the Urban Informal Sector**

### **4.1. Conceptual and methodological issues**

Keith Hart developed the concept of informal economy in the early 1970s as a result of a research project for the International Labor Office (ILO) on urban labor markets in Africa (Portes, 1994; Tokman, 1992). However, after almost thirty years of research on informal activities, there is still no consensus on its definition. Four approaches can actually be identified.

Writing for ILO / PREALC<sup>6</sup>, Hart postulated a dualistic model of the urban labor force, applying the concept mainly to self-employed and characterizing informal activities as dynamic, diverse and operating in unregulated markets (Portes, 1994). However, the dynamism and regulation features did not receive much attention by researchers and the focus of most analysis after Hart's research was to study the working poor (Tokman, 1992). In fact, ILO / PREALC defines informality as synonymous with poverty, and their earliest estimates of the informal sector referred only to self-employed – minus professional and technicians, unremunerated family workers, and domestic servants. After the 1980s, and as a response to critiques about the large underestimate created by the omission of small enterprises workers, especially after decentralization and reorganization of the production and work processes at the global level, ILO / PREALC reviewed and modified its conceptualization of the informal sector, which includes regulation as a conceptual element and acknowledge a more heterogeneous informal sector (Portes, 1994; Tokman, 1992). However, informality is still seen under this view as a survival mechanism in response to insufficient modern job creation. However, the informal sector is still considered as the disadvantaged sector of a dualistic or segmented labor market not linked to formal activities. Rather during cyclical downturns, the informal sector grows as it absorbs displaced formal sector workers; informal earnings fall relative to those in the formal sector; the obverse occurs during economic recovery. The existence of labor surplus lowers incomes and generates subsistence activities that are not dynamically linked to expanding modern sectors but provide a supply to low-income markets (Tokman, 1992). In fact, the revised ILO /

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<sup>6</sup> PREALC, an ILO affiliate stands for Latin American Regional Program on Employment.

PREALC views the informal economy as the collection of marginal enterprises characterized by: low entry barriers in terms of skills, capital, and organization; family ownership enterprises; small scale of operation; labor intensive production with outdated technology; unregulated and competitive markets; low levels of productivity; and low levels of capacity for accumulation (Portes, 1994; Tokman, 1992). To measure the informal sector, this view uses entire class of worker: self-employed – minus professional and technicians, unremunerated family workers, domestic servants, owners and salaried workers in small enterprises (“small enterprise” varies across countries, ranging from less than 20 workers to less than 5).

Second, the excessive regulated economy approach sees informality as the response to the rigidities and limitations of the mercantilist state (De Soto, 1989 cited in Portes and Schauffler, 1993). Although the origin of the informal sector may have been a response to insufficient job creation, it expands in response to excess regulation of the economy, inadequate labor and economic legislation, and inefficient bureaucracy. Thus, law, procedures and government are responsible for the existence of a large and increasing proportion of employment in low productivity and badly remunerated jobs (Tokman, 1992). This view derives from the experience of Peru and is based on the illegal pursuit of legal economic ends, focusing on three sectors: housing, transport, and petty commerce (Portes and Schauffler, 1993).

Third, the structural articulation approach (Castells and Portes, 1989) characterizes the informal economy as income-earning activities unregulated by the state but closely interlinked with activities in the formal sector. The basic distinction between formal and informal activities relies entirely on the character of production and distribution processes, namely degree of compliance with the terms of the laws<sup>7</sup>. Although this approach emphasizes the function of the state in the emergence and growth of the informal economy, it does not see this sector as isolated from the formal economy or as composed exclusively of

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<sup>7</sup> This view clearly differentiates criminal activities from informal activities. The first ones specialize in the production of goods and services socially defined as illicit (like drugs), whereas informal activities refer to unregulated (illicit) production and distribution of otherwise licit goods and services (Castells and Portes, 1989).

microentrepreneurs. Informal activities are not necessarily traditional or marginal, but can be part of the modern capitalist economy and have some capacity for capital accumulation. Thus, informal activities are closely articulated to activities in the formal sector through the supply of low-cost goods and services for workers in formal enterprises. Another interface between the formal and informal sectors derives from the practice of large firms to reach down into the informal labor pool to allocate a variety of production and marketing tasks. The mechanisms at play are twofold: direct hiring of workers off-the books; and subcontracting of production, input supplies, or final sales to informal entrepreneurs. The incentive for these linkages is lower labor costs and increasing managerial flexibility (Portes and Schauffler, 1993). In this situation, the informal sector may expand rather than contract in response to increased labor demand during period of economic growth. Recognizing the internal heterogeneity of the informal sector, the structuralist perspective classifies informal activities as: 1) direct subsistence activities; 2) informal activities subordinate to production and marketing in the formal sector; and 3) autonomous informal enterprises with modern technology and some capacity for capital accumulation. Estimates are based on coverage of social security (Castells and Portes, 1989; Portes and Schauffler, 1993; Portes, 1994; Portes, Dore-Cabral and Landolt, 1997). Studies using the structural articulation approach are generally based on city case studies and in-depth interviews (Lanzetta and Murillo, 1989).

Fourth, the entrepreneurial approach sees the informal sector as an unregulated, yet dynamic, sector of small-scale entrepreneurs, which may be broadly integrated with the formal sector. According to this view, informality may arise as a way to avoid the inefficiencies of labor market regulation as well as the regulations themselves: inefficiencies in the provision of social security (medical benefits or pensions), promotion systems are not based on merit, or other distortions that make being paid in cash more desirable (Maloney, 2001; Maloney and Nuñez, 2001). Many informal workers enter the sector voluntarily and are able to remain largely outside the formal regulatory structures. Presumably, aspiring entrepreneurs wait for an auspicious business climate before leaving a protected job to launch their enterprise because they are more

likely to fail during a downturn, which explains pro-cyclical patterns of entry and exit predicted by the dualistic view (Maloney, 1997). This approach also considers a heterogeneous informal sector, composed of: 1) self-employed including owners of informal firms; 2) informal salaried; and 3) contract workers. Self-employed and contract workers may represent successful types of entrepreneurship, but serve different clientele: contract workers with large formal sector firms, and the self-employed with a market more oriented toward services or small customers. The informal salaried group may behave as predicted by the traditional dualistic view of the function of informality. This approach measures the informal sector as owners and workers in firms under 16 employees who do not have social security or medical benefits and are therefore not protected (Maloney, 1997; Maloney, 1999; Maloney, 2001). The entrepreneurial approach largely relies on the study of the Mexican informal sector, although there are some estimates for other Latin American countries (Maloney, 1999).

The differences in conceptualization of the informal sector rely largely on four key elements: state regulation, size of the firm, dynamism, and integration. The first two elements affect the size of the urban informal sector, whereas the last two are related to its function. State regulation is a common feature in all four approaches, suggesting an implicit consensus that the informal sector refers to activities taking place outside established institutional rules. However, the reasons for the existence of unregulated activities differ – because of survival strategies, functional requirements, inadequate regulatory system, or inefficiencies of the labor market regulations -, and then their function in the labor market and the implications in terms of labor policies also differ. Table 1 summarizes the view of each approach in relation to each of the key elements.

The next sections of the paper evaluate the outlined competing approaches to the urban informal sector. The excessive regulated approach is not included given the limitations of the available data to operationalize the concept behind this approach. Therefore, only the dualistic (old and new PREALC view), structural articulation and entrepreneurial approaches are evaluated. I operationalize first the concept for each approach and examine the implications

in terms of size and their limitations. Second, after adopting a specific definition, I analyze the dynamism and integration characteristics. The dynamism of economic activity is expected to capture subsistence vs. entrepreneurship activities -heterogeneous internal composition -, and therefore it is analyzed through class of worker. The integration attribute is intended to capture the degree of integration between formal and informal sectors - the function of the informal sector - and therefore it is analyzed through indicators of relative size and earnings and a crude indicator of labor mobility to/out sectors.

#### **4.2. Implications on its size**

At the national level, the majority of national estimates of Colombian urban informal sector, including the official statistics produced by the National Department of Statistics (DANE), consider the informal sector as marginal, low productivity, and small-scale enterprises, and mainly use size of the firm and work class as measurement variables (Lopez, 1996; 1996; Caro, 1995). Few additional efforts have been conducted to include institutional regulation elements (health care benefits) in the empirical definition of the informal sector at a national level (McEwan, 1993; Nunez, 2000; Caro, 1995).

In this section I analyze the implications on the size of the Urban Informal Sector (UIS) of the competing empirical definitions underlined in section 2. Given the available data, the state regulation element in the informal sector definition is measured through coverage of the health care system<sup>8</sup>. This indicator is a good proxy for regulated labor relations for two reasons: first, although the quality of these data may be poor for some Third World countries, it is good in the case of Colombia; second, the enrollment cost in the health system is high, especially for self-employed workers.

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<sup>8</sup> I use only health insurance coverage since it is the common variable in the 8 surveys. Only the last three surveys, 1996, 1998 and 2000, inquire about pension benefits.

Firm size is measured as a dichotomy: small vs. large firm size. Small firms refer to firms with 10 or less employees<sup>9</sup>. Table 2 summarizes the specific definitions used here to measure the size of the UIS according to the conceptualization of each approach.

Although state regulation is a common to all three conceptualizations, PREALC does not considered this feature in its estimates. They use entire class of worker and firm size as the key variables defining the informal sector. Class of worker alone is used in the old conceptualization. In the new conceptualization, they add firm size and characterize the informal sector by small scale of operation, labor intensive production with outdated technology, low levels of productivity, and low levels of capacity for accumulation. Thus, PREALC's empirical focus excludes its core conceptual element: regulation.

In contrast, the structural articulation approach relies entirely on the state regulation element, and therefore it includes all owners / workers in all class of worker and all firms that do not offer health care benefits. The entrepreneurial approach considers both state regulation and firm size elements and therefore it is a special case of the structural articulation approach: unprotected workers working in small firms. However, given the particular characteristics of unremunerated family workers and domestic servants, those categories are considered as part of the informal sector in all four operational definitions<sup>10</sup>. Government employees are considered formal workers. Figure 2 shows the evolution of the estimated size of the informal sector, that is the proportion of employed population working in the informal sector.

PREALC figures give the extreme estimates of the UIS size. On one hand, old-PREALC concept gives by far the lowest estimate, confirming that it largely underestimated the UIS by omitting workers in small enterprises. On the other hand, new-PREALC definition yields estimates above the other two competing

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<sup>9</sup> I used 10 or fewer employees as the cutting point given the categories used in the survey questionnaire: 1, 2 to 5, 6 to 10, 11 and more. A cutting point of 5 employees could be too low for manufactured goods although it would be acceptable for other sector industries such as personal services. I preferred to work with the same cutting point for all industry sectors.

<sup>10</sup> As we will see later in this paper, these two class of worker are mainly direct subsistence unregulated activities, representing 4% to 8% of the total employed population.

approaches. Excluding old-PREALC estimates, the size of the UIS ranges from 47% to 55% in 1984, and from 38% to 54% in 1996, and from 47% to 61% in 2000. The differences in size of informal sector based on the three definitions are significant: they vary from 8 to 16 percent points.

The dualistic new-PREALC approach estimates the highest sector size, being the differences respect to the other two approaches higher at the end than at the beginning of the analyzed period. Health insurance coverage is not a defining element in the dualistic new-PREALC approach, but it is the core element in the other two approaches. Therefore, the increasing differences on estimates based on the three definitions from 1992 to 1996 could be associated with a combined result of both the effects of the 1993 health insurance reform – creating a mandatory health system - and the effects of the 1990-95 healthy economic conditions – increasing real earnings facilitated health insurance coverage. However, the fact that the proportion of the labor force with health care benefits was affected mainly among workers of small firms and that it decreases during the economic crisis as fast as it increases during the economic recoveries (see Table 3), suggests that health insurance coverage response can be associated more to the economic cycle than to the health reform<sup>11</sup>. Given the trivial variation in health insurance coverage among workers of large firms, the differences in the UIS size among the structural articulation and the entrepreneurial approaches are basically constant over the period.

The dramatic increase in the size of the UIS after 1996 is common to all three approaches and the differences across them are almost constant. This clearly occurred during a period of deep economic crisis, with a declining employment rate, a declining proportion of salaried workers, an increasing proportion of self-employed, and a declining labor income – especially among less educated population (Ocampo et al., 2000). The declining labor income during the crisis and the high cost of health insurance for those in the contributive system,

<sup>11</sup> Changes in the wording of the question cannot be associated to these changes. Although the wording of the question effectively changed, it did from 1996 on. Between 1984-1994, the question was a multiple choice referring to the existing parallel health systems. From 1996 on, the question is a binary choice (yes/no) referring to health coverage through any health care institution.

especially for self-employed workers led, after 1996, to declining health insurance coverage among workers in small firms (including self-employed<sup>12</sup>) (Table 3).

The above results suggests that the effect of state regulation (through health insurance coverage) on the estimated size of the UIS is important, especially after 1992, or after the implementation of the health system reform. It would seem that the health reform has had the unintended consequence of increasing the sensitivity response of health insurance coverage to economic cycles among workers of small firms. This could be explained by the higher enrollment cost brought by the reform, especially among self-employed workers. Not-considering health insurance coverage, as the new-PREALC definition does, overestimates the size of informal sector by almost 10 percent points in relation to the structural articulation measure and 15 points in relation to the entrepreneurial approach. There is no reason why the empirical estimations of the dualistic new-PREALC approach have excluded the state regulation element when it is the core elements of its conceptualization. Of course, state regulation refers to more than just health care benefits. It refers to laws and administrative rules established by the state covering social security legislation, commercial licensing, labor contracts, financial credit, and the like (Portes, 1994). However, considering at least one of these dimensions is better than excluding the element at all.

At the opposite extreme, the entrepreneurial approach yields the lowest estimate of the UIS size. Limiting the UIS to those unprotected workers in small firms underestimates the size by at least 5 percent points in relation to the structural articulation estimate. Non-protected workers of large firms, which accounts for 15% to 17% of workers in large firms (Table 3), may reflect those activities oriented toward decreasing labor costs of formal sector firms through off-the books casual hiring and subcontracting (Castells and Portes, 1989).

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<sup>12</sup> Although the Law 100 establishes that the subsidized regime is only for non-working poor population, it is possible that some poor self-employed workers are covered by the subsidized regime if they applied for it when they were unemployed and then did not change their working status, or if they classify themselves as unemployed even though they are effectively self-employed workers (and declare as such in the survey). This situation would over-estimate the size of the UIS, especially for poor self-employed workers.

Those are activities performed beyond government regulations and, since the state regulation is one core element in the conceptualization of the informal sector, they should be included. They may not represent a very important group of informal activities (excluding them underestimates the UIS size by 5 to 7 percent points), but they may play a very different function than other sub-sectors of the informal sector.

According to the structural articulation approach, the IUS size is estimated in 52.6% in 1984, 44.4% in 1996 and 51.7% in 2000. It may be that it underestimates the size of the IUS since its empirical definition is based only on one dimension of the state regulation element – health insurance coverage. However, as mentioned above, the only common feature among approaches is precisely that the UIS refers to unregulated activities. Therefore, it is mandatory to include at least one dimension of the institutional regulation element. I have therefore opted here for the concept of informal economic activities as developed by the structural articulation approach: *“it is a process of income generation characterized by one central feature: it is unregulated by the institutions of society, in a legal and social environment in which similar activities are regulated”* (Castells and Portes, 1989). Although a useful definition, one observation has to be made: it is wholly contingent on the regulatory context and this may differ from time to time and from place to place. In the particular case of Colombia, the Pensions and Health Insurance reform of 1993 changed the context of the health care system: although it has important elements towards a universal coverage, higher equity, and better quality of health services, it increased the labor costs of hiring new workers as well as the costs of enrollment in the contributive health regime, especially for self-employed workers. The reform may have had the unintended consequence of increasing the response of health insurance coverage, and then of unregulated activities, to economic cycles among employees in small firms. This does not mean that health insurance is not a good proxy for unregulated activities. On the contrary, this indicator may accentuate the function of the informal sector and its sub-sectors in the labor market.

## **5. Internal Composition of the Urban Informal Sector**

### **5.1. An Empirical Functional Classification**

The different approaches for the analysis of the UIS agree not only with the type of activities that the informal sector encompasses (unregulated), but also with the heterogeneity of the sector. I aim for a classification of informal activities that reflects the dynamic feature of the informal sector that distinguishes subsistence from entrepreneurship activities.

Some studies have proposed classifications of informal activities according to particular criteria. For example, Maloney (1997) suggests a classification of three subgroups according to the expected relation with the formal sector: 1) Self-employed including owners of small firms; 2) Informal salaried, those working in informal firms; and 3) Contract workers, those who do not receive a regular wage or salary, but who are paid on a piece rate, on commission, or by fixed contract. In the Colombian case, the self-employed and owners of small firms are generally very different types of workers (Fedesarrollo, 2000). Self-employment mostly includes street vendors whereas small firms refer mainly to small entrepreneurs. The inclusion of those two groups in the same category may generate confusing results.

However, Portes (1994) and other studies propose a functional classification of informal activities according to their goals (Portes, 1994). These include: 1) The survival of the individual or household through direct subsistence production or through a simple sale of goods and services in the market; 2) Decreasing labor costs of formal sectors firms through subcontracting of entrepreneurs and off-the-books hiring; 3) Capital accumulation by small firms through greater flexibility and lower cost. I consider that this classification, according to the goals of the activity, is more appropriate to capture the internal composition of the Colombian urban informal sector, and then I embrace this classification.

To represent the motivation of the activity, the empirical definition of the internal sub-sectors of the informal sector uses firm size and dynamism (vitality) of economic activity as the classifying elements. Firm size was already defined:

small vs. large. Since the dynamism of economic activity is expected to distinguish subsistence from entrepreneurship activities, it uses class of worker: owner, salaried, self-employed, unpaid family worker and domestic servant. Since only owners and salaried workers should be classified by firm size, six sub-sectors of the informal sector are identified: owners of small firms<sup>13</sup>, salaried workers of small firms, salaried workers of large firms, self-employed, unpaid family workers and domestic servants. The last three categories could be identified as informal activities with direct subsistence goals; salaried workers of large and small firms are activities with decreasing labor costs goals; owners of small firms are activities with capital accumulation through lower cost goals. Next sections evaluate this classification by characterizing the sub-sectors in terms of institutional regulation, demographic, and economic characteristics.

## **5.2. Complying with the institutional rules**

Based on the conceptualization of the structural articulation approach, the informal sector refers to owners and workers in any firm size who do not have health care benefits and are therefore not protected, plus unremunerated family workers and domestic servants. These last two class of worker are included, whether they have health insurance or not, since they are mainly performed outside the social security and labor legislation and regulation terms. On average, almost 80% of domestic servants and 91% of unpaid family workers do not have health insurance coverage, 55% and 61% of domestic servants are paid below the minimum wage/hour, and work above the maximum number of legal hours worked/week, respectively (Table 4).

Health insurance coverage as the defining feature of informal activities well captures differences between the formal and informal sectors in terms of the fulfillment of labor legislation rules (Table 4). Pension insurance is the most evident example: almost everyone in the informal sector has no pension insurance, whereas 73% of formal workers do have it. Less than 9% of formal

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<sup>13</sup> Although owners of large firms could conceptually be defined as part of the informal sector if they do not have health insurance coverage, it is in fact an empty group.

workers but as high as 20% of informal salaried in large firms and 32% of informal salaried in small firms escape the minimum wage regulation<sup>14</sup>. Labor legislation on minimum wage and maximum number of hours worked<sup>15</sup> applies only to salaried workers, excluding owners, self-employed and domestic servants, although the latter are also paid by a wage. However, their earned incomes and numbers of hours worked are beyond legal guidelines, especially among domestic servants: 55% receive less than the legal minimum wage/hour and 61% work more than the maximum number of hours/week established by law (Table 4).

Complying with the state regulations is affected by economic cycles and by the regulatory context. Although domestic servants and unpaid family workers are included as sub-sectors of the informal sector, they increasingly comply with the established labor obligations, especially domestic servants. The proportion of domestic servants with health insurance consistently increased between 1988-1996, during the periods of positive economic growth and the implementation of the health reform, but remained almost constant during the period of economic crisis – after 1996 (Table 5).

In particular, the increase in health insurance among domestic servants after 1988 seems to be an effect of Law 11 of 1988<sup>16</sup>, reinforced later by the health reform of 1993. For unpaid family workers, the small increases in the proportion insured observed during the first periods of positive economic growth were lost during the crisis period, suggesting the disadvantaged conditions of this group of workers (Table 5).

The declining employment rate, the increasing unemployment rate, and the diminishing real incomes observed during the period of deep economic crisis, led to an increase – after 1998 – in the proportion of workers below the

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<sup>14</sup> Escaping the minimum wage regulation among formal workers can be done through the number of hours worked and/or using contract workers.

<sup>15</sup> According to Labor Legislation, youth 12-13 years old can work 4 hours/day, youth 14-15 years old can work 6 hours/day, and those 16 years of age or older can work 8 hours/day.

<sup>16</sup> Law 11, 1988, established exceptions for domestic service enrollment to the Social Security System: for those with a monetary salary below the minimum wage, payments to the system could be based on the monetary remuneration whenever this is above half a minimum wage.

minimum wage, in all sub-sectors, including the formal sector, except domestic servants (Figure 3).

The higher fulfillment of domestic servants in relation to minimum wage rules, seems to be related to a higher compliance with the legal maximum number of hours worked/week (Figure 4). On the contrary, other sub-sectors of the labor market, especially the formal sector, have increased the proportion exceeding the hours/week legislation terms. It would seem that domestic servants is a group of the informal sector that has been affected most by the changing regulatory context occurring in the country during the last 15 years, including the labor and the health system reforms. However, they are still a group in great disadvantage with particular characteristics that justify including it as a separate sub-sector of the informal sector. By contrast, workers in all other sub-sectors, including the formal sector, have experience a worsening of their labor conditions.

### **5.3. An empirical characterization**

The aim of this section is to characterize the sub-sector workers according to demographic and socio-economic conditions, in order to confirm the classification opted in this paper- that proposed by the structural articulation approach.

#### *Feminization of all sub-sectors of the labor market*

The increasing participation of women in the labor force observed in the country during the last decades is reflected in an increasing proportion of women among employed population: from 37.8% in 1984 to 44.4% in 2000. The feminization of the labor market is observed across all sub-sectors, maintaining the gender differences: women are over-represented among domestic servants and unpaid family workers, whereas there is a female deficit among workers in the other informal sub-sectors, especially among owners of small firms (Figure 5). The higher female deficit among owners of small firms can be explained by women's common disadvantage in respect of materials assets and credit

access. Formal workers, on the contrary, reflect the female feminization of the whole labor market.

*An employment life cycle: informal - formal - informal*

Colombian labor force has been aging as a consequence of the fertility transition experienced since the late 1960's. The mean age of the working age population increased from 31.9 in 1984 to 35.6 in 2000, and the mean age of the employed population increased from 33.9 to 36.4 during the same period of time. Figure 6 shows the age distribution of the employed population by sub-sector in 1984 and 2000. Two facts emerge from the figure. First, the aging of the population has affected all sub-sectors but two – informal owners of small firms and self-employed (the mean age<sup>17</sup> and the age distribution of these two groups have not significantly changed). Second, there is an employment life cycle associated to long run movements between formal and informal sub-sectors, although it has been diminishing through time.

Informal salaried workers of both large and small firms are consistently younger than formal workers and these in turn are consistently younger than informal owners of small firms and self-employed. Informal salaried workers of small and large firms are then initial sub-sectors for young employees. Domestic servants and unpaid family workers also absorb a high proportion of young workers: more than 65% in 1984 and more than 50% in 2000 in those categories are younger than 30 years of age. As workers grow adults and get experience in the informal salaried sub-sectors, move towards the formal sector (mostly large firms) but yet as salaried workers. As they get older and have accumulated experience and - may some of them - have also accumulated capital, they return to the informal sector as owners of small firms or as self-employed. This employment life cycle suggest long run informal – formal – informal movements. It is not just a life cycle from small to large to small enterprises, as pointed out by Lopez (1996), but it is a life cycle that starts in the informal sector (in both small and large enterprises) and ends up in the informal sector (in small enterprises). Roberts (1989) observed a similar household life

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<sup>17</sup> Mean age is presented as the number in parenthesis next to each legend in the graph.

cycle, among Mexican males. In spite of the clear and persistent life pattern, it has been diminishing through time - declining mean age differences across sub-sectors. This tendency can be associated to the socio-demographic changes observed in the country (fertility, education), but not so to the economic cycle nor to the structural reforms observed in the country during the last decades: it has been smoothly occurring through time.

*Informal sector receiving most of recent migrants but it affects only domestic servants sub-sector*

More than half of the working age population living in the ten main cities is migrant: 57% in 1984 and 51% in 2000. Recent migrants, those with less than one year of residence in the city, represent only between 3% and 2.4% of total working age population in the city. Around 60% of these recent migrants participate in the labor market and almost half of them get a job. The informal sector absorbs most of the employed recent migrants: from 70% to 60% (Figure 7).

However, the internal distribution of employed recent migrants by sub-sector has significantly changed during the period according to the economic cycle. Informal salaried workers in small firms are the only sub-sector that employs a similar proportion of recent migrants during the period: one sixth goes to this sub-sector independently of the economic cycle. Domestic servants sub-sector consistently decreases its importance as the main destination of recent migrants, which can be related to the declining importance of rural-urban migration during the last decades (Flórez, 2000). Still, the proportion of employed recent migrants in the formal sector consistently increased from 27.6% in 1984 to 42.2% in 1998, especially during the economic upturn phase 1992-1994, but it declined again to 33% in 2000, a year of deep economic recession. Informal salaried workers in large firms behave similarly to the formal sector: it shrinks its absorption of recent migrants during the economic crisis. The informal self-employed sub-sector does the opposite: it absorbs a higher proportion of recent migrants during the period of negative economic growth, that is from 1996 on. This different, but related to the economic cycle, absorption of employed recent migrants by sub-sector suggests a different

function of each sub-sector in the labor market, hypothesis that will be tested latter in this paper.

Given the relative small recent migration flows arriving to the main cities (3% of total working age population), the other impact on each sub-sector is very small, with the exception of domestic servants, which is a relative small sub-sector that receives high proportions of recent migrants. Figure 8 indicates that recent migrants represent 2% to 4% of the employed population in each sub-sector, with the exception of domestic servants where they represent a higher but declining proportion: from 17.4% in 1984 to 11% in 2000.

#### *A more educated labor force with stable educational differentials*

The educational level of the Colombian population as well as its labor force has been increasing during the last decades as part of the socio-economic transformations experienced by the country. Consistently, educational improvements are observed in all labor market sub-sectors, and the educational gaps remain almost the same (Figure 9).

Formal workers are more educated than informal workers in any sub-sector: they have 11 years of education in 2000. Among the sub-sectors of the informal sector, informal owners of small firms and informal salaried of large firms are the ones with higher educational level: 9.3 years in 2000. Domestic servants constitute the group with the lowest level of education: 5.6 in 2000. Although informal self-employed individuals have two more years of education than domestic servants, they are behind the other sub-sectors of the informal sector in completed years of education: 7.5 in 2000.

#### *Very low stability for salaried informal workers in both large and small firms*

Although temporary job and number of years working in the current firm as indicators of stability make sense only for salaried workers, they give us an idea of how workers of the other sub-sectors consider the stability of the activity they are doing. Informal salaried workers in both small and large firms have similarly high unstable labor conditions. At least 32% of them have a temporary job, and this proportion increases as much as 50% during the economic crisis of the end

of the 1990's (Figure 10). In contrast, formal workers and owners of small firms hold the most stable jobs: on average, 9% of them have a temporary job. Informal self-employed, unpaid family workers and domestic servants are between salaried informal and formal workers: 15% to 22% of them consider their jobs as temporary. The increased labor flexibility introduced by the labor reform of 1990 led to an increasing proportion of temporary jobs in all sub-sectors of the labor market, including the formal sector. This tendency was reinforced by the deep economic crisis of the end of the 1990's. It seems that formal workers were most affected by the labor reform, as proportion of formal workers with temporary jobs consistently increased from 6% in 1984 to almost 19% in 2000. However, informal workers were most affected by the economic crisis, especially informal self-employed, where the proportion of temporary jobs increased from 20% in 1994 to 36% in 2000 (Figure 10).

Job turnover is reflected in the distribution of workers by number of years in the firm. Informal salaried of both small and large firms have the highest proportion of workers with less than one year in the firm (at least 50%) and the lowest proportion of workers with five or more years in the firm (at most 20%), suggesting a very high turnover rate among these workers. Formal workers face low turnover rates: 15% and 45% of them have been in the firm less than one year and five or more years, respectively (Figure 11).

However, job turnover in all sub-sectors, but especially those in the informal sector, mainly salaried of both large and small firms, have increased during the period of economic crisis of the late 1990's. Thus, trends in both job turnover and temporary jobs indicators suggest a deterioration of labor stability conditions for workers in all sub-sectors, including the formal sector, but especially for informal salaried of both large and small enterprises, which has been reinforced by the economic crisis.

*Informal salaried workers are over-represented in construction and manufactured goods industries*

More than three fourths of total employment in Colombia is generated by three industries: personal services, commerce and manufactured goods. However,

during the last decade, manufactured goods have lost relative employment shares (from 23.6% in 1984 to 18.8% in 2000), whereas personal services industry (government services) has shown a weak but positive growth rate, absorbing an increasing proportion of employed population (from 28.5% in 1984 to 31.8% in 2000) (Ocampo et al, 2000). This productive structure of the economy is reflected in both the formal and informal sectors of the labor market: in all sub-sectors, at least 75% of employment is generated by these three industries (Table 6). However, there are important differences in the industry composition by sub-sector. For example, in 2000, as high as 61% of unpaid family workers but only 20% of informal salaried workers of large firms were employed in commerce industry (Table 6). Informal salaried workers of large firms and formal workers have similar distributions by industry (higher proportion in personal services) whereas informal owners and informal salaried workers of small firms are more alike (higher proportion in commerce). This suggests integration in the production process. On the contrary, informal self-employed and unpaid family workers have particular distributions by industry: the first ones have equal proportions of workers in commerce and personal services, whereas the last ones are highly concentrated in commerce industry.

Figure 12 presents, for the 1984-2000 period, the distribution of workers by industry for each sub-sector, in terms of deviations from the mean (total labor market). The three main industries plus construction are selected for the analysis. Some facts must be pointed out. First, unpaid family workers are over-represented in commerce industry, being employed mostly (around 50%) in petty commerce ("tiendas" – Table 6). Informal self-employed, informal owners of small firms, and informal salaried workers of small firms are also over-represented in commerce industry but to a much lower degree. More than 30% of self-employed are in petty commerce, referring mainly to street vendors (Table 6). At least one fourth and one fifth of owners of small firms and informal salaried workers of small firms, respectively, are also in petty commerce. Informal salaried workers of both small and large firms are over-represented in construction and manufactured goods industries (mainly in textile and leather production activities- Table 6). Informal salaried workers in large firms are mainly contract workers - the type of employment used to decrease labor costs

in the production process. This explains the significant changes in the proportion of this type of workers in construction industry<sup>18</sup> (decrease) as well as in manufactured goods industry (increase) during the period of economic crisis (late 1990's).

*Informal workers don't always earn less: formal workers earn more than informal salaried but owners of small firms may earn even more*

Earnings or wage comparisons among informal sub-sectors and the formal sector may not be straightforward since they do not reflect all other characteristics and benefits associated to each possible job. Some examples can be mentioned. Formal sector pays benefits (health insurance, pensions, housing subsidies, etc), may have cleaner and safer places, but at the same time its payments must take out different taxes (income and labor taxes) and the job conditions (schedule) may be less flexible. These differences, which are valued by the workers and affect in different direction the total earnings, are not included in the simple comparisons of monetary earnings. However, available data do not allow adjusting for non-monetary earnings besides those payments in kind (food and housing).

Table 7 indicates that informal self-employed and domestic servants are sub-sectors with the lowest earnings/hour, in both economic boom and crisis periods. Informal salaried of large firms earn more than informal salaried of small firms but less than formal workers. On the contrary, informal owners of small firms may earn more than formal workers but are highly affected by the economic cycle: that is, during economic upturns earn more but during economic crisis may earn less. Besides these earnings differentials across sub-sectors, a general trend emerges from Table 7: deterioration in wages of workers in all sub-sectors, including those in the informal sector. There are an increasing proportion of workers in the lower tail of the earning distribution (below half minimum wage or below one minimum wage).

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<sup>18</sup> Construction industry was one of the activities with the most negative indicators during the late 1990's economic crisis (Ocampo, 2000).

The previous demographic and socioeconomic differences among workers suggest that it is not possible to characterize the informal sector as just one homogeneous group. The informal sector is very heterogeneous, composed of sub-sectors with different goals, different characteristics and maybe different functions. Table 8 summarizes the characteristics of workers in the different informal sub-sectors and the formal sector. As a first approximation, the six informal sub-sectors are grouped in three according to their goals and similar characteristics. First, there is a disadvantaged group whose main goal is *direct subsistence* composed of self-employed, unpaid family workers and domestic servants. This group shares similar characteristics such as: high proportion of women, high proportion of recent immigrants, low educational levels, initial and final phases of life cycle, low earnings, and working in commerce (as street vendors or in petty commerce-“tiendas”) and personal services industries (in household services). Second, there is a group of informal salaried workers in large and small firms, *informal subordinated group*, whose activities have the goal of decreasing labor costs – for formal large firms or for informal small firms. This group is composed mainly by young men (initial phase of life cycle), established migrants, middle high educational level, highly unstable labor conditions, middle high earnings and working in manufactured goods (textile, leather and wood) and construction industries. Third, there is a group of owners of small firms, *informal entrepreneurs*, whose goal is accumulation of capital through lower costs. It is composed mainly by men in a late phase of life cycle, non-recent immigrants, middle high educational level, working in small commerce and manufactured goods (textile, leather), with high earnings. Finally, outside the informal sector, there is the group of *formal workers*, whose activities have the goal of capital accumulation. It is composed mainly by adult (middle phase of life cycle), highly educated workers, in manufactured goods and personal social services industries, with high labor stability and high earnings.

This proposed classification differs from structural articulation classification. Informal salaried of small firms are grouped here with the informal salaried of large firms given their similar characteristics although their products serve different clientele: informal salaried of large firms with large formal sector firms,

informal salaried of small firms with small entrepreneurs (formal or informal), perhaps with products (final goods) more oriented towards small customers.

#### **5.4. Evolution of the internal composition of the UIS**

According to figure 2 (Section 4), informal sector represents about half of the employed population. As a whole it shows a counter-cyclical behavior: it shrinks with the economic up-turns and expand with the economic crisis (its size was estimated in 52.6% in 1984, 44.4% in 1996 and 51.7% in 2000) (Figure 2). On the other hand, previous section clearly indicated that the informal sector is not a homogeneous sector but it is composed of sub-sectors that are heterogeneous in relation to their goals and characteristics. The point now is the relative size of each sub-sector. Is there an over-represented sub-sector such that we can still talk about just “one” informal sector?

Figure 13 presents the internal composition of the informal sector through the period. Three facts must be pointed out from the graph. First, informal self-employed represents 44% to 54% of the informal sector, and direct subsistence group adds up to 52% to 63%. This group, of course, leads the behavior of the whole informal sector. However, the informal salaried or subordinated group – with very different characteristics and goals – is not a marginal group: it represents 30% to 40% of the urban informal sector, a size large enough to influence informal activities. The informal entrepreneurial group, although not very large, represents 5% to 9% of the informal sector.

Second, the internal composition of the UIS changes with the economic cycle: the direct subsistence group shrinks during the economic upturns and expands during the crisis – as the whole UIS does-, whereas the opposite is true for informal salaried and for small entrepreneurs groups. Third, self-employed sub-sector has a higher size-elasticity to the economic cycle, indicating higher flexibility of these types of activities. The last two facts mean that not only sub-sectors have different characteristics but also that they are playing different functions in the labor market.

The changing composition of the urban informal sector and the size of its sub-sectors suggest that we cannot talk about “the” urban informal sector – as “one” sector - but we must differentiate at least three groups: direct subsistence, informal salaried or subordinated, and entrepreneurs.

## **6. The function of the urban informal sector in employment**

Under the dualistic view, in cyclical downturns, the informal sector is thought to absorb displaced formal sector workers, informal earnings fall relative to those in the formal sector, and then the sector contracts during economic up-turns as the availability for good jobs increases again. Informal and formal sectors are integrated, the counter-cyclical pattern of the dualistic view can be inverted, and the informal sector can expand during periods of economic up-turns and shrinks with economic crisis. The previous section suggested that urban informal sub-sectors do not seem to respond in the same way to economic cycles. Are any of them, or none, linked to the formal sector? Are all sub-sectors survival mechanisms to limited formal jobs? These types of questions are addressed in this section where I look at the function of each informal sub-sector in the labor market (marginality element and absorption of the unemployed / new labor force) through comparisons of their relative sector sizes and earnings, and a crude indicator of labor mobility.

In order to avoid selectivity bias and to consider the effects on the labor market size of the socio-demographic and structural changes as well as of the economic cycles, the analysis of the function of the informal sector must include the working age population and not only the employed population. Therefore, the population under analysis is the working age population and two more groups were added to the six identified sub-sectors of employed population: those unemployed and those out of the labor force.

### **6.1. Relative sector size and earnings**

Figure 14 shows the evolution of the sectoral composition of the working age population. Table 9 presents the correlation coefficient between the GNP grow

rate – lagged one year – and the relative size of each sub-sector. The formal sector, as expected, behaves pro-cyclically. Informal self-employed shows a counter-cyclical behavior: it remains almost constant during the economic up-turns but significantly increases its share during the deep economic crisis of the late 1990's, reaching its maximum in 2000. A high negative coefficient correlation confirms this behavior. Unpaid family workers and domestic servants also show a counter-cyclical behavior, their share decreases during the economic up-turns and increases again during the crisis, but the relative size-elasticity to the economic cycle is much higher among self-employed. This behavior of the direct survival group seems to support the bulk of the literature on informality that claims the informal sector expands while formal sector employment falls during economic crisis. However, survival activities of the informal sector expanded less than expected whereas open unemployment expanded more rapidly. Thus, in spite of the significant increase of the direct survival sub-sector, it has a limited capacity to absorb all dismissed workers from the other sub-sectors (formal and informal) as well as new incoming workers to the labor force, and the effect is an increasing open unemployment. Although there are available workers to go into the labor market, and in particular to the direct subsistence sub-sector, they would push earnings further down (even to zero) as labor supply largely exceeds demand (Portes, et al., 1997). Thus, in the presence of large labor surplus and an already large size of the direct subsistence sub-sector, the response of the labor market to increasing dismissed workers has been through open unemployment.

Contrary to survival informal activities, informal salaried workers of large and small firms as well as small entrepreneurs overall behave pro-cyclically as the formal sector does (positive coefficient correlations). However, the size-elasticity to economic cycles is higher in the formal sector. Thus, informal salaried and entrepreneurial sub-sectors, as well as the formal sector, shrink as unemployment expands. The similarity of the behavior of informal salaried of large and small firms confirms that both represent activities with goals of capital accumulation through lower costs but maybe serving different clientele: informal salaried of large firms with formal firms and informal salaried of small firms with small entrepreneurs (formal or informal). The pro-cyclical behavior of informal

subordinate group and informal entrepreneurs suggests that there is an articulation of formal and informal salaried sub-sectors, both directly, through subcontracting and off-the books hiring, and indirectly, through the demand side of final goods. A contraction of formal employment would negatively affect the demand for informal (final and intermediate) goods and services. Several authors suggest this hypothesis. As Portes et al (1997) argument: "Informal producers and vendors do not live in a world apart from the firms that are so regulated. Instead, the two types of enterprises are closely intertwined through a variety of arrangements, providing goods and markets for each other" (pp. 21). And for the new-PREALC informal sector, Lopez (1996) points out: "The demand source of the informal sector, in the Colombian conditions, is conformed by the wages paid in the formal sector of the economy" (pp. 12).

The unemployed group shows a strong cyclical behavior (very high negative coefficient correlation). Unemployment reaches its minimum in 1994 at the height of the economic boom and reaches its maximum in 2000 at the height of the economic crisis. Being out of the labor force does not seem to behave as the repository of discouraged workers, rather it appears to be a luxury: it increases during the economic boom – early 1990's - and it falls as the economy gets into the worse economic crisis – late 1990's (positive coefficient correlation). The persistent decline during the second half of the 1980's, when the economy was "well-behaved", is consistent with the structural changes observed in the country, especially the rapid increase in educational level among women.

Figure 15 shows absolute and relative median hourly real earnings<sup>19</sup>. Although the interpretation of earnings differentials cannot be straightforward – earnings do not include characteristics of the job (Maloney, 1997) -, one can assume that the unobserved arguments remain constant, and look for trends over time. Some points emerge from the graph. First, domestic servants are the worst paid

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<sup>19</sup> Earnings include monetary and in-kind payments. Unpaid family workers are excluded since they do not receive monetary neither in-kind payments. Relative earnings refer to the earnings of the sub-sector relative to the formal wage.

in the labor market, although their relative earnings improved during the late economic crisis.

Second, informal salaried workers in small firms appears to earn consistently less than informal salaried in large firms and these, in turn, earn less than formal workers. However, their earnings relative to formal sector wage have roughly remained the same during economic upturns and downturns. It seems then that displaced formal workers (Figure 14) are not pushing down earnings in these sub-sectors, opposing to what the dualistic view would predict. On the contrary, they behave much as the formal sector does, suggesting again a close integration between these sub-sectors with the formal sector (through subcontracting and off-the-books hiring), and/or a binding wage affecting both formal and informal salaried workers. As Maloney and Nuñez (2001) affirm, “although not enforced by law, the minimum wage appears to be an important benchmark for “fair” remuneration” (pp. 9).

Third, informal owners of small firms receive generally more than formal workers. Their relative earnings behave pro-cyclically: slightly increase with economic upturns and significantly decrease with economic crisis. Given both relative size and earnings behave pro-cyclically (Figure 14), it may indicate that informal entrepreneurs are integrated to the formal sector through the demand side of final goods. Only the deep economic crisis of the late 1990's – when real earnings declined - has produced earnings among informal entrepreneurs lower than earnings among formal workers: relative differences declined from 1.2 in 1994 to 0.75 in 2000.

Fourth, informal self-employed workers receive hourly real earnings similar to informal salaried workers. However, informal self-employed earnings behave pro-cyclically, significantly declining during the late economic crisis. Given their relative size behaves counter-cyclically (Figure 14), this would imply that this sub-sector is absorbing displaced formal/informal sector workers such that they push down earnings, decreasing relative earnings of this informal sub-sector in relation to the formal sector: earnings among self-employed fall from 73% in 1994 to 50% in 2000 of formal salaried wages. Finally, there is a decline in real

earnings among workers of all sub-sectors – except domestic servants - during the period of economic crisis, producing a deterioration of economic conditions from the beginning to the end of the period.

In sum, relative sub-sector size and earnings suggests that the informal direct subsistence sub-sector supports the dualistic view, whereas the informal salaried in both large and small firms (subordinated sub-sector) and informal entrepreneurs are integrated to the formal sector, both directly, through subcontracting and off-the-books hiring, and indirectly, through the demand side of goods and services. Informal salaried and informal entrepreneurship may be a desirable destination for many workers whereas informal direct subsistence sub-sector comprises involuntary, disadvantaged, or unpaid workers. However, direct subsistence sub-sector has a limited capacity to absorb workers so that during severe recessions open unemployment will rise.

## **6.2. A crude indicator of labor mobility**

Labor mobility usually refers to movements from one type of employment to another. One can classify employment by occupation, work class, industry, firm size, economic sector (formal/informal), or even by economic activity (employed/unemployed/ out of the labor force). Since my aim here is to have additional signals of the function of the informal sector - the degree of integration between formal and informal activities through absorption of labor- the ideal would be to refer to labor mobility as that occurring between the already defined sub-sectors of the labor market. However, I face limitations imposed by the data. Currently workers are asked by some general characteristics of their previous employment - if they have had one -, but health insurance coverage is not included<sup>20</sup>. Therefore, we would lose the core of the informal sector definition in the measurement of labor mobility. I preferred then to look at a crude indicator of labor mobility that is the movement from the previous economic activity to current labor market sub-sector for workers with

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<sup>20</sup> Occupation, work class, industry, firm size, unemployment/inactivity duration are included for workers with a previous employment

less than one year in the firm<sup>21</sup> and its relationship to economic cycles. I defined three categories of crude labor mobility based on previous employment<sup>22</sup> and current formal/informal sub-sector: 1) direct mobility or direct movements from previous employment to the current one (employment-employment); 2) indirect mobility or the movement from previous employment to current one through an unemployment / out of the labor force spell (employment – unemployment/out of the labor force – employment); and 3) new workers that is those entering into the labor force from an unemployment/out of the labor force episode without any previous work experience. Mean unemployment/out of the labor force spell duration between previous and current employment is estimated for those workers with previous labor experience as an indirect evidence of the function played by each sub-sector in employment. One would expect larger mean spell durations for those workers currently in the informal sub-sector(s) acting as a safety net that is playing a function as predicted by the dualistic approach.

*Workers without previous labor experience are over-represented among direct subsistence sub-sector, especially among unpaid family workers and domestic servants*

Independent of the economic cycle, roughly one third of annually employed population in the whole labor market does not have any previous employment experience (Figure 16). Although the other two-thirds has some experience, the proportion with direct mobility (employment-employment) has significantly decreased over the period but especially during the deep economic crisis of the late 1990's: from 26% in 1986 to 7% in 2000. However, there are some differences in the type of mobility by sub-sector. Although decreasing, new incoming workers without experience are especially important (above the mean) among unpaid family workers (80% to 60%) and among domestic servants (45%), categories of the direct subsistence sub-sector (Figure 17). It seems this sub-sector is the open door to the labor market for young less-educated new

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<sup>21</sup> The analysis is limited to workers with less than one year in the current firm/job as a proxy of annual labor mobility.

<sup>22</sup> As pointed out by López (1996), previous employment has a different meaning for subordinated workers and independent workers. For subordinated workers, as salaried workers, domestic servants and unpaid family workers, changes of employment refer to changes of employer/firm but not to changes of occupation. On the other hand, for independent workers (self-employed and owners) changes of employment refer to changes of work class or changes of industry.

incoming workers. On the contrary, although consistently declining during economic crises, direct mobility (employment-employment) is over-represented (above the mean) among informal owners of small firms. This would suggest that informal small owners quit their previous jobs only after being established as entrepreneurs (there is no unemployment / out of the labor force spell), and their labor mobility would be a voluntary one. Even more, informal owners of small firms seems to behave like small firm sectors everywhere: in general, they face high failure rates and the proportion quitting their jobs to open informal small businesses decreases during economic downturns (Figure 17).

Although informal salaried workers of both large and small firms are consistently younger than formal workers (section 5.3 above), inexperienced workers are not over-represented among the incoming salaried workers to the informal sector. Salaried workers, whether formal or informal, have similar type of labor mobility (Figure 17): about 30% come without any labor experience, half of them have indirect labor mobility (with unemployment/out of the labor force spell), and about 20% have direct labor mobility (coming directly from a previous employment). This means that, although younger, most of incoming salaried informal workers have a previous labor experience as most of formal workers do.

*Very high duration of unemployment spells among informal direct subsistence workers*

The mean duration of unemployment / out of the labor force spells between the current and previous jobs<sup>23</sup> significantly increases during the deep economic crisis of the late 1990's: from 11 to 36 weeks (Table 10). Clearly, economic downturns not only increase the unemployment rate (section 3 above) but also push upward the duration of unemployment spells for workers in all sub-sectors. However, currently informal self-employed and unpaid family workers show unemployment spells well above the mean, indicating that this group of workers – compounding the informal direct subsistence sub-sector – does not take the current job as a voluntary option but it may represent the only and last

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<sup>23</sup> Estimated only for those workers with indirect labor mobility.

employment alternative (Figure 18). It would mean then that this sub-sector is acting as a safety net absorbing dismissed labor from other sub-sectors. On the contrary, the informal salaried sub-sector (both large and small firms) behaves similarly to the formal sector: there is no significant difference between their unemployment spells. This would suggest that informal salaried sub-sector is not a safety net but it is maybe a voluntary choice for workers as the formal sector is.

Although informal owners of small firms with indirect labor mobility have an unemployment / out of the labor force spell duration larger than the mean and their spell duration also increases with the economic downturn, their spell duration-elasticity to economic cycles is lower than the observed in the other sub-sectors. This does not imply that informal small entrepreneurship is absorbing dismissed labor but it could just imply that opening a new business takes longer time in economic downturns than it regularly does.

In sum, the constructed crude indicator of labor mobility and the mean duration of unemployment spells confirm the hypothesis raised in previous section, namely that informal direct subsistence sub-sector behaves as the dualistic view would predict whereas small entrepreneurs and informal salaried sub-sectors are integrated to the formal sector and behave similar to it, based on employment status.

## **7. Final remarks**

The evaluation of the dualistic, structural articulation and entrepreneurial competing approaches to the informal sector suggests that it is necessary to consider the institutional regulation element in its conceptualization. It is not only the core of the concept but it has implications on its measurement size. The benefits and shortfalls of each approach led me to opt for the concept of informal economic activities as developed by the structural articulation approach: *“it is a process of income generation characterized by one central feature: it is unregulated by the institutions of society, in a legal and social environment in which similar activities are regulated”* (Castells and Portes,

1989). However, it must be noted that a definition based on the regulatory dimension is wholly contingent on the regulatory context and this may differ from time to time and from place to place.

Using health care benefits as a proxy for institutional regulation<sup>24</sup>, the Colombian urban informal sector reached a size in 2000 similar to the one observed in 1984, 52% of employed population, after being as low as 44% in 1996. It seems that the higher costs of hiring new workers and the higher costs of enrollment in the contributive health regime brought by the Pensions and Health Insurance Reform of 1993, may have had the unintended consequence of increasing the response of health insurance coverage, and then of unregulated activities, to economic cycles.

The internal composition of the urban informal sector shows that it is wrong to talk about “the” informal sector. It is a heterogeneous sector, composed at least of three sub-sectors – direct subsistence, informal salaried or subordinated, and small entrepreneurs - whose goals, characteristics, and function differ. Consequently, then the implications of labor policies also differ for them. Although the direct subsistence sub-sector comprises most of informal workers (50% to 60%), the informal salaried sub-sector is by no means a marginal group, representing 30% to 40% of the informal sector. Relative sub-sector size and earnings and a crude labor mobility indicator suggest that the informal direct subsistence sub-sector behaves counter-cyclically whereas the subordinated sub-sector (informal salaried in both large and small firms) and the informal entrepreneurs behaves pro-cyclically. That is, the first group supports the dualistic view, whereas the other two are integrated to the formal sector, as the structural articulation and the entrepreneurial approaches suggest, both directly, through subcontracting and off-the-books hiring, and indirectly, through the demand side of goods and services. Besides this short-run articulation, there also exists a long-run life-cycle articulation between informal salaried, formal sector and informal entrepreneurs. Informal salaried and informal

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<sup>24</sup> Although health insurance is a good proxy for institutional regulation, it is necessary to include more indicators in the household surveys to be able to capture more precisely those activities taking place outside established institutional rules.

entrepreneurship may be then a desirable destination for many workers whereas informal direct subsistence sub-sector comprises involuntary, disadvantaged, or unpaid workers. However, direct subsistence sub-sector has a limited capacity to absorb workers so that open unemployment rose during the severe economic crisis of the late 1990's, reaching its highest value, 20.4%, in 2000.

It seems that the structural "neo-liberal" reforms of the 1990's that significantly modified the labor market environment, not only have had the unintended consequence of increasing the response of unregulated activities to economic cycles but they have also have the unintended consequence of increasing the level of precariousness of the labor force. On one side, the economic conditions of workers in all sub-sectors, including the formal sector, have worsened during the period: longer working day and lower earnings, lower stability and higher turnover. On the other side, the higher size-elasticity of the informal direct subsistence sub-sector to economic cycles lead to a significant increase of this sub-sector during the severe recession of the late 1990's, representing, in 2000, almost two thirds of the informal sector, one third of the employed population and around one fourth of the labor force (economically active population). The limited absorption capacity of this sub-sector and the excess of labor supply led to very high levels of open unemployment during the economic crisis. Thus, in 2000, almost half of the labor force, 47%, and almost 30% of the working age population was unemployed or was employed in the informal direct subsistence sub-sector!.

It is true that in 1984 the figures were not very different: 42% of the labor force was unemployed or employed in the informal direct subsistence sub-sector. However, the structural neo-liberal reforms of the 1990's and the globalization of the economy make the environment of the labor market and that of the economy very different now. The gains obtained from 1984 to 1994 towards a formalization of the economy were lost in only five years, reaching levels of informalization in 2000 even higher that the ones observed in 1984.

This current picture of the Colombian labor market could support the hypothesis suggested by Mercedes Gonzalez de la Rocha for the case of Mexico on the “erosion of the resources-of –poverty model of survival in light of the ongoing economic crisis faced by the poor households” (2001). The current high open unemployment rates and the increasing proportion of workers in the informal direct-subsistence sub-sector will produce even higher deterioration of real income and survival sources. This in turn will produce an increasing gap between the employed (formal or informal salaried / entrepreneurs) and those unemployed or employed in the informal direct subsistence sub-sector. It seems then that we are observing a trend toward a divergence between small groups of workers in medium and high productivity jobs and a much larger group of workers in low jobs or unemployed. Is this evidence that new segmentation features are emerging as Gonzalez de la Rocha, Portes and others (“Out of the Shadows” Conference, 2001) have suggested it? It is possible that workers in the formal and informal salaried and entrepreneur sub-sectors become more homogeneous and form a group of “privileged” workers versus a group of “excluded or disadvantaged” workers. This is a hypothesis that deserves research efforts beyond the objectives of this paper.

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**Table 1: Conceptualization of the Urban Informal Sector by Approach**

| Element          | Approach         |                            |                                |                        |
|------------------|------------------|----------------------------|--------------------------------|------------------------|
|                  | <i>Dualistic</i> | <i>Excessive Regulated</i> | <i>Structural Articulation</i> | <i>Entrepreneurial</i> |
| State regulation | Unregulated      | Unregulated                | Unregulated                    | Unregulated            |
| Size of the firm | Small            | Any                        | Any                            | Small                  |
| Integration      | None             | None                       | High                           | High                   |
| Dynamism         | Low              |                            | High                           | High                   |

**Table 2: Urban Informal Sector definition by approach**

| Approach                  | Empirical definition of the Urban Informal Sector   |
|---------------------------|---|
| Dualistic – Old<br>PREALC | Self-employed – minus professionals and technicians, unremunerated family workers, and domestic servants.   |
| Dualistic – New<br>PREALC | Self-employed – minus professionals and technicians, unremunerated family workers, domestic servants, owners and salaried workers in small firms.                     |
| Structural articulation   | Owners and workers who do not have health insurance and are therefore not protected (includes all unremunerated family workers and domestic servants).                |
| Entrepreneurial           | Owners and workers in small firms who do not have health insurance and are therefore not protected (includes all unremunerated family workers and domestic servants). |

**Table 3: Proportion of Workers covered by health insurance by firm size (%)**

| Year | Firm Size |       | Total |
|------|-----------|-------|-------|
|      | Small     | Large |       |
| 1984 | 17.9      | 85.7  | 47.0  |
| 1986 | 17.8      | 84.2  | 46.0  |
| 1988 | 20.7      | 85.3  | 47.3  |
| 1992 | 22.3      | 83.9  | 48.6  |
| 1994 | 25.8      | 83.1  | 51.3  |
| 1996 | 31.7      | 84.3  | 54.9  |
| 1998 | 28.5      | 84.8  | 51.7  |
| 2000 | 26.0      | 85.4  | 47.7  |

**Table 4: Mean proportion of employed population outside state regulation terms by sub sectors 1984-2000**

| Regulation term        | Formal worker | Inf. Owner small firm | Inf. Salaried small firm | Inf. Salaried large firm | Inf self-employed | Unpaid-fam worker | Domestic servant |
|------------------------|---------------|-----------------------|--------------------------|--------------------------|-------------------|-------------------|------------------|
| Health coverage        |               |                       |                          |                          |                   | 91.3              | 79.1             |
| Pension coverage*      | 27.2          | 99.0                  | 99.4                     | 97.6                     | 99.0              | 99.4              | 99.6             |
| Legal min wage/hour    | 8.6           | 20.0                  | 31.7                     | 20.0                     | 40.7              |                   | 55.4             |
| Legal max # hours/week | 26.6          | 50.4                  | 37.0                     | 32.6                     | 36.2              | 36.9              | 61.0             |

\* Refers to 1996-2000

**Table 5: Proportion of Domestic Servants and Unpaid family workers without health insurance coverage (%)**

| Year | Domestic Servants | Unpaid fam workers |
|------|-------------------|--------------------|
| 1984 | 89.6              | 94.7               |
| 1986 | 90.6              | 92.6               |
| 1988 | 87.4              | 92.5               |
| 1992 | 80.3              | 93.0               |
| 1994 | 77.3              | 89.9               |
| 1996 | 67.1              | 89.8               |
| 1998 | 71.4              | 85.4               |
| 2000 | 68.8              | 92.8               |

**Table 6: Distribution of workers by industry by sub-sector. 1984-2000 (%)**

| Industry                   | Formal worker |              | Inf. Owner of small firm |              | Inf. Salaried of small firm |              | Inf. Salaried of large firm |              | Inf. Self-employed |              | Unpaid fam worker |              | Domestic Servant |              | Total        |              |
|----------------------------|---------------|--------------|--------------------------|--------------|-----------------------------|--------------|-----------------------------|--------------|--------------------|--------------|-------------------|--------------|------------------|--------------|--------------|--------------|
|                            | 1994          | 2000         | 1994                     | 2000         | 1994                        | 2000         | 1994                        | 2000         | 1994               | 2000         | 1994              | 2000         | 1994             | 2000         | 1994         | 2000         |
| Agriculture                | 1.7           | 1.7          | 2.2                      | 4.1          | 1.4                         | 2.2          | 1.7                         | 2.3          | 1.2                | 0.9          | 1.6               | 1.0          |                  |              | 1.5          | 1.5          |
| Manufactured goods         | 26.4          | 21.4         | 26.2                     | 25.0         | 25.7                        | 23.2         | 24.8                        | 26.1         | 14.5               | 13.1         | 21.4              | 22.5         |                  |              | 22.8         | 18.8         |
| <i>Food, beverage</i>      | 4.1           | 4.5          | 4.4                      | 4.9          | 4.0                         | 4.1          | 4.0                         | 3.6          | 1.1                | 1.8          | 7.4               | 8.9          |                  |              | 3.4          | 3.6          |
| <i>Textile, leather</i>    | 8.6           | 6.9          | 10.3                     | 8.7          | 8.8                         | 9.3          | 8.9                         | 9.1          | 8.8                | 6.8          | 8.2               | 9.6          |                  |              | 8.5          | 7.1          |
| <i>Wood</i>                | 1.4           | 0.8          | 4.6                      | 4.0          | 5.0                         | 3.8          | 3.4                         | 2.0          | 1.5                | 1.4          | 1.3               | 0.8          |                  |              | 2.1          | 1.4          |
| Electricity-gas-water      | 1.0           | 1.2          |                          |              | 0.3                         | 0.1          | 0.3                         | 0.2          |                    | 0.4          |                   |              |                  |              | 0.6          | 0.7          |
| Construction               | 4.5           | 2.5          | 13.7                     | 10.3         | 10.6                        | 8.1          | 19.5                        | 8.1          | 8.2                | 7.2          | 1.5               | 2.0          |                  |              | 7.2          | 4.8          |
| Commerce                   | 20.1          | 20.2         | 35.9                     | 39.9         | 28.8                        | 33.2         | 20.9                        | 20.2         | 41.4               | 36.7         | 66.0              | 61.0         |                  |              | 26.1         | 26.8         |
| <i>Petty commerce</i>      | 15.5          | 15.7         | 27.4                     | 25.2         | 20.3                        | 21.7         | 14.9                        | 12.8         | 36.7               | 32.4         | 56.0              | 49.1         |                  |              | 20.9         | 21.2         |
| <i>Restaurants, hotels</i> | 2.6           | 2.7          | 7.3                      | 13.3         | 7.9                         | 10.4         | 4.1                         | 6.0          | 3.5                | 3.6          | 9.5               | 10.5         |                  |              | 3.7          | 4.3          |
| Transport/Communic         | 6.4           | 8.5          | 3.3                      | 2.5          | 9.6                         | 8.1          | 9.9                         | 7.9          | 6.9                | 7.2          | 0.8               | 0.8          |                  |              | 6.7          | 7.5          |
| Financing Services         | 11.2          | 12.0         | 3.0                      | 5.8          | 3.1                         | 5.7          | 6.2                         | 7.7          | 4.1                | 3.9          | 1.8               | 1.4          |                  |              | 7.6          | 8.0          |
| Personal Services          | 28.7          | 32.7         | 15.7                     | 12.5         | 20.5                        | 19.4         | 16.7                        | 27.6         | 23.7               | 30.5         | 6.9               | 11.3         | 100.0            | 100.0        | 27.5         | 31.9         |
| <i>Social services</i>     | 14.0          | 16.2         | 2.8                      | 1.3          | 3.6                         | 4.1          | 7.5                         | 14.3         | 1.9                | 2.1          | 0.4               | 1.4          |                  |              | 8.8          | 9.6          |
| <i>Household services</i>  | 6.0           | 7.9          | 11.6                     | 8.7          | 14.8                        | 11.9         | 4.5                         | 5.9          | 20.3               | 25.9         | 5.4               | 9.7          | 100.0            | 100.0        | 13.3         | 16.6         |
| <b>Total</b>               | <b>100.0</b>  | <b>100.0</b> | <b>100.0</b>             | <b>100.0</b> | <b>100.0</b>                | <b>100.0</b> | <b>100.0</b>                | <b>100.0</b> | <b>100.0</b>       | <b>100.0</b> | <b>100.0</b>      | <b>100.0</b> | <b>100.0</b>     | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> |

**Table 7: Distribution of workers by earnings\*/hour by sub-sector. 1994 and 2000 (%)**

| Earnings/hour in<br>Minimum wages | Formal worker |              | Inf. Owner of small firm |              | Inf. Salaried of small firm |              | Inf. Salaried of large firm |              | Inf. Self-employed |              | Domestic servant |              |
|-----------------------------------|---------------|--------------|--------------------------|--------------|-----------------------------|--------------|-----------------------------|--------------|--------------------|--------------|------------------|--------------|
|                                   | 1994          | 2000         | 1994                     | 2000         | 1994                        | 2000         | 1994                        | 2000         | 1994               | 2000         | 1994             | 2000         |
| < 0.5                             | 0.9           | 3.0          | 3.9                      | 20.2         | 4.4                         | 8.1          | 1.8                         | 2.9          | 10.9               | 16.6         | 9.3              | 9.7          |
| 0.5 to < 1                        | 6.1           | 10.2         | 9.4                      | 18.7         | 21.9                        | 31.4         | 15.9                        | 23.4         | 21.4               | 25.0         | 45.1             | 37.8         |
| 1 to < 2                          | 44.3          | 43.3         | 29.3                     | 28.2         | 53.6                        | 43.8         | 54.4                        | 43.9         | 35.0               | 32.4         | 38.1             | 39.0         |
| 2 to < 3                          | 20.0          | 15.7         | 21.3                     | 9.5          | 12.1                        | 7.8          | 14.2                        | 10.6         | 15.7               | 11.9         | 4.4              | 6.2          |
| 3+                                | 28.7          | 27.7         | 36.0                     | 23.4         | 8.0                         | 9.0          | 13.6                        | 19.2         | 17.0               | 14.1         | 3.1              | 7.4          |
| <b>Total</b>                      | <b>100.0</b>  | <b>100.0</b> | <b>100.0</b>             | <b>100.0</b> | <b>100.0</b>                | <b>100.0</b> | <b>100.0</b>                | <b>100.0</b> | <b>100.0</b>       | <b>100.0</b> | <b>100.0</b>     | <b>100.0</b> |

\* Monetary and in-kind payments

Table 8: Characterization of the urban formal and informal sub-sectors

| Sector   | Goal of the activity                              | Sub-sector           | Characteristics |   |  |               |                    |   |                     |
|----------|---|----------------------|-----------------|---|--|---------------|--------------------|---|---------------------|
|          |   |                      | Female          | Life cycle                                    | Migration  | Education     | Labor stability    | Industry (Over-representation)                        | Earnings            |
| Formal   | Capital accumulation                              | Formal               |                 | Adult   | High pro-cyclical absorption / Low incidence     | Highest       | Low unstable       | Manufactured goods                                    | High                |
| Informal | Capital accumulation through lower costs          | Owner small firm     | Deficit         | Old   | Low non-cyclical absorption / Low incidence      | Middle - high |                    | Petty commerce Manufactured goods (textile – leather) | High / Pro-cyclical |
|          | Decreasing labor costs of formal / informal firms | Salaried small firm  | Deficit         | Young   | Medium non-cyclical absorption / Low incidence   | Middle        | High unstable      | Petty commerce Manufacture goods (textile – leather)  | Middle low          |
|          |   | Salaried large firm  | Deficit         | Young   | Low pro-cyclical absorption / Low incidence      | Middle - high | High unstable      | Manufacture goods (textile – leather) Construction    | Middle high         |
|          | Direct subsistence                                | Self-employed        |                 | Old   | High counter-cyclical absorption / Low incidence | Middle - low  |                    | Petty commerce (street vendors)                       | Low                 |
|          |   | Unpaid family worker | Excess          | Young   |  | Middle - low  |                    | Petty commerce (“tiendas”)                            | None                |
|          | Domestic servant                                  | Excess               | Young           | High non-cyclical absorption / High incidence | Lowest   |               | Household services | Lowest  |                     |

**Table 9**  
**A. Correlation coefficient between lagged GDP growth rate and sub-sector relative size**

| Relative size within           | Formal worker | Inf. Owner small firm | Inf. Salaried small firm | Inf. Salaried large firm | Inf. Self-employed | Inf. Unpaid fam worker | Inf. Domestic servant | Unemploy | Out labor force not-st | Out labor force |
|--------------------------------|---------------|-----------------------|--------------------------|--------------------------|--------------------|------------------------|-----------------------|----------|------------------------|-----------------|
| Working age population         | 0.38          | 0.51                  | 0.28                     | 0.66                     | -0.75              | -0.12                  | 0.00                  | -0.84    | 0.49                   | 0.39            |
| Economically active population | 0.72          | 0.67                  | 0.44                     | 0.73                     | -0.74              | -0.03                  | 0.12                  | -0.82    |                        |                 |
| Employed population            | 0.39          | 0.53                  | 0.17                     | 0.68                     | -0.84              | -0.10                  | -0.03                 |          |                        |                 |
| Informal sector                |               | 0.67                  | 0.55                     | 0.75                     | -0.60              | -0.08                  | 0.05                  |          |                        |                 |

**B. Correlation coefficient between lagged GDP growth rate and sub-sector relative size**

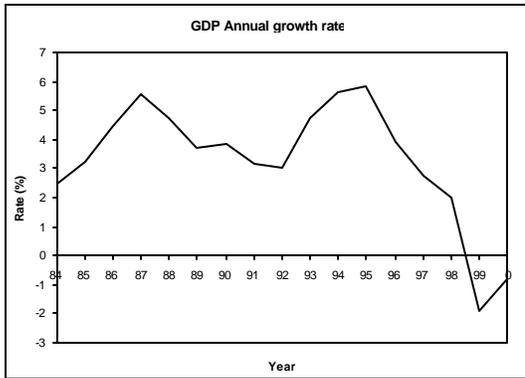
| Relative size within           | Formal worker | Informal Entrepr. | Informal Salaried | Inf. Direct Subsist | Inf. Direct Subsist 2 | Unemploy |
|--------------------------------|---------------|-------------------|-------------------|---------------------|-----------------------|----------|
| Working age population         | 0.38          | 0.51              | 0.48              | -0.81               | -0.82                 | -0.84    |
| Economically active population | 0.72          | 0.67              | 0.62              | -0.56               | -0.76                 | -0.82    |
| Employed population            | 0.39          | 0.53              | 0.42              | -0.75               | -0.85                 |          |
| Informal sector                |               | 0.67              | 0.71              | -0.77               | -0.70                 |          |

**Table 10: Mean number of weeks unemployed/out of labor force by current sub-sector\***

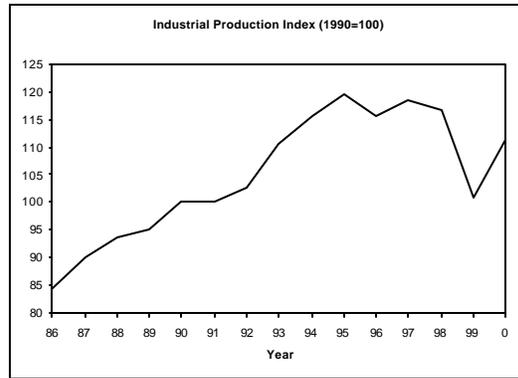
| Current sub-sector       | 86   | 88   | 90   | 92   | 94   | 96   | 98   | 0    |
|--------------------------|------|------|------|------|------|------|------|------|
| Formal worker            | 10.6 | 10.8 | 10.3 | 9.8  | 9.4  | 9.9  | 10.7 | 34.6 |
| Inf. Owner small firm    | 12.5 | 11.8 | 12.5 | 13.3 | 12.5 | 12.0 | 16.5 | 28.9 |
| Inf. Salaried small firm | 8.4  | 10.0 | 9.7  | 9.5  | 8.8  | 8.2  | 10.8 | 33.1 |
| Inf. Salaried large firm | 8.1  | 9.8  | 9.1  | 8.3  | 7.7  | 8.6  | 9.6  | 32.2 |
| Inf self-employed        | 13.9 | 18.0 | 17.4 | 16.9 | 15.6 | 13.5 | 16.2 | 42.8 |
| Domestic servant         | 7.1  | 8.3  | 8.8  | 9.3  | 8.3  | 7.1  | 10.5 | 36.0 |
| Total                    | 9.9  | 11.3 | 11.0 | 10.7 | 9.9  | 9.7  | 11.8 | 36.2 |

\*Includes only workers with indirect labor mobility

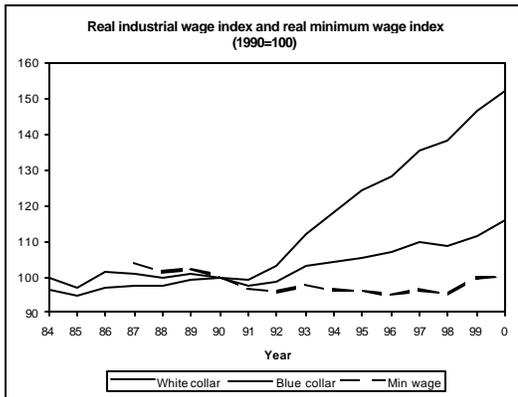
Figure 1: Macro Indicators and Labor Market Indicators. 1984-2000



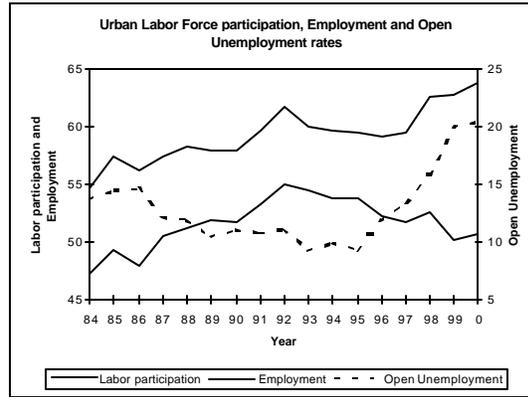
Source: Dane, DNP, Banco de la República, 2000.



Source: Dane, 2000.

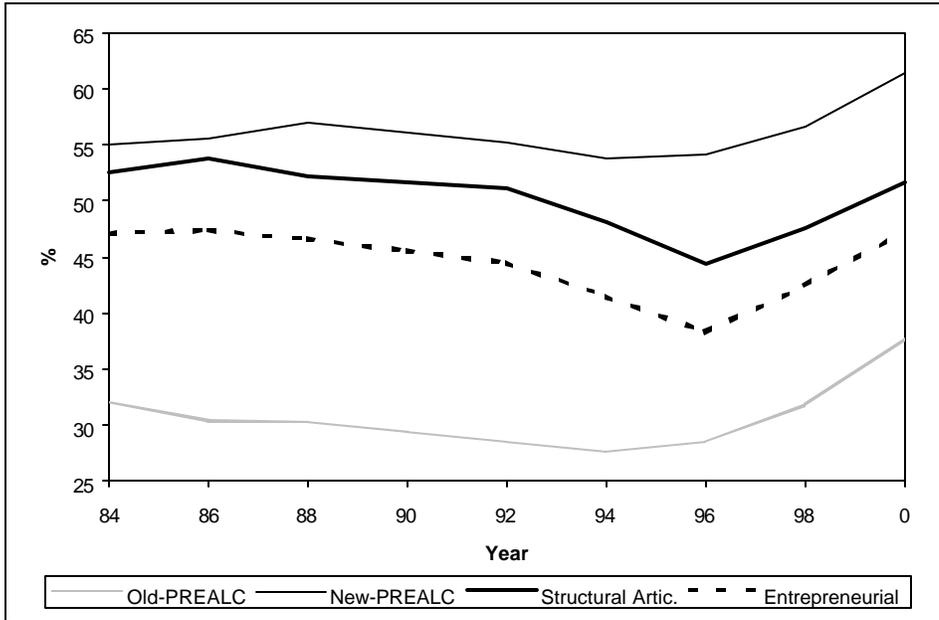


Source: Fedesarrollo, 2001.

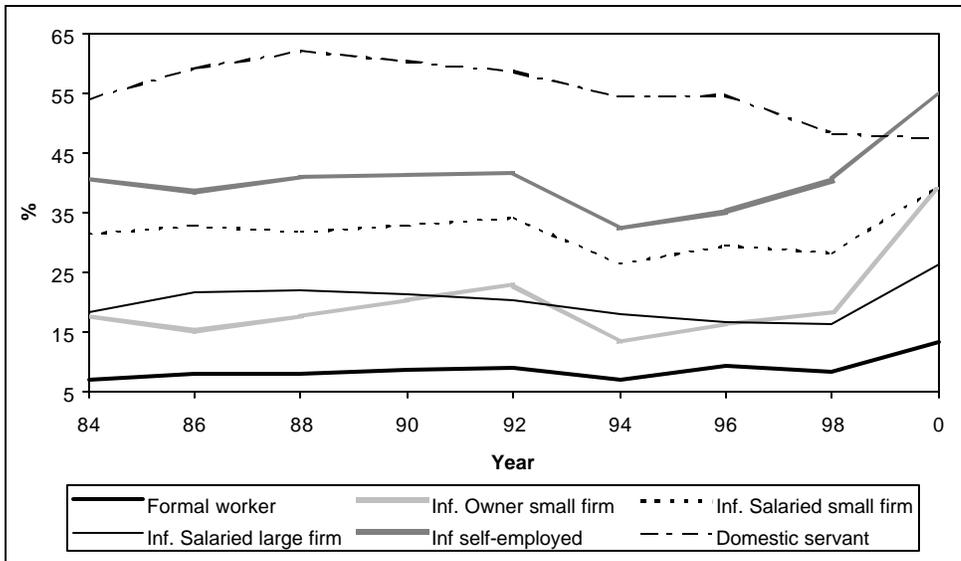


Source: Fedesarrollo, 2001.

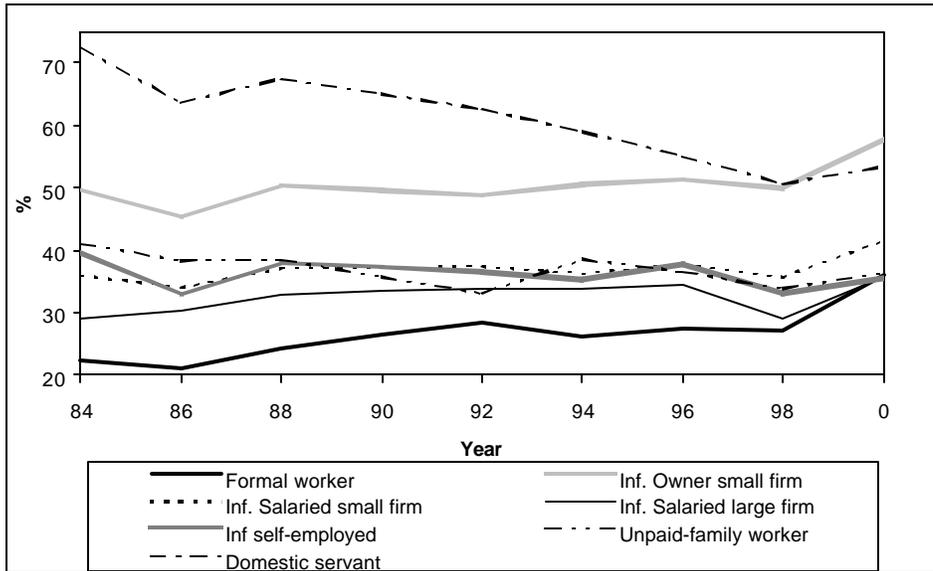
**Figure 2: Size of the informal sector: Competing approaches  
Ten main cities and metropolitan areas**



**Figure 3: Proportion of workers below legal Minimum wage/hour by sub-sector**



**Figure 4: Proportion of workers above legal maximum number of worked hours/ week by sub sector**



**Figure 5: Proportion of female workers by sub sector. Deviations from the mean**

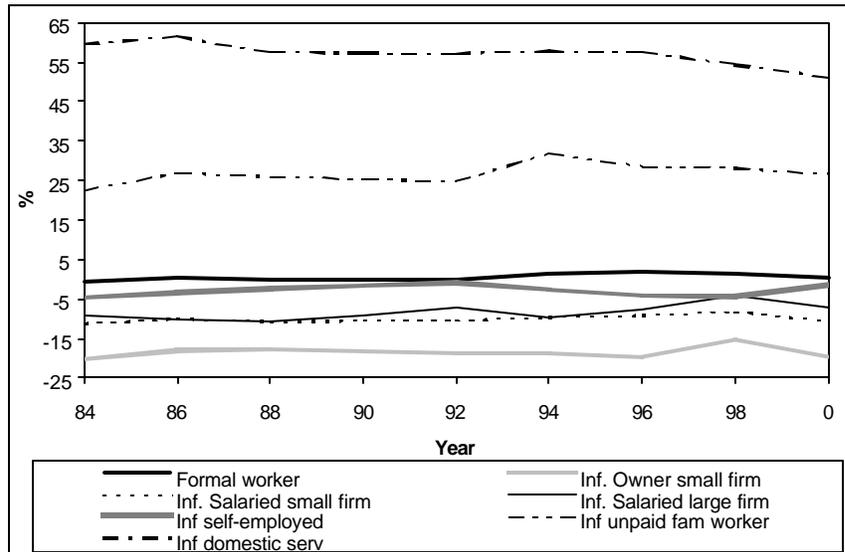


Figure 6: Age distribution of employed population by sub-sector. 1984 and 2000

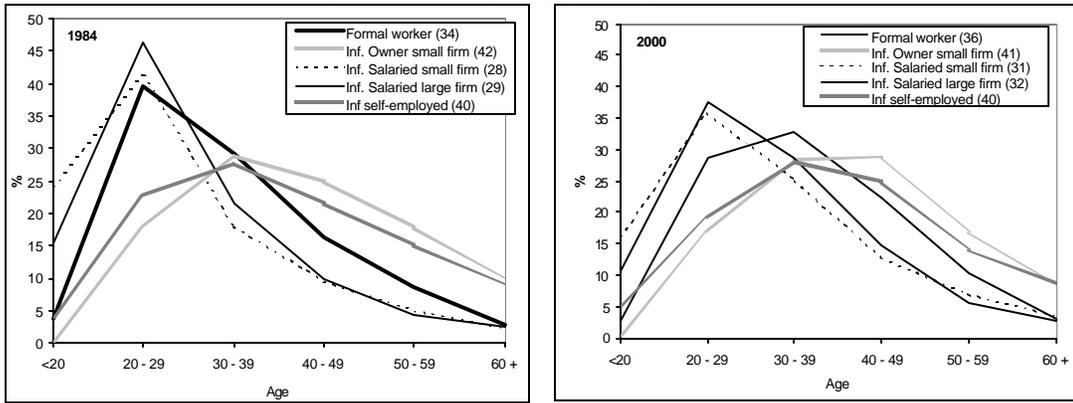
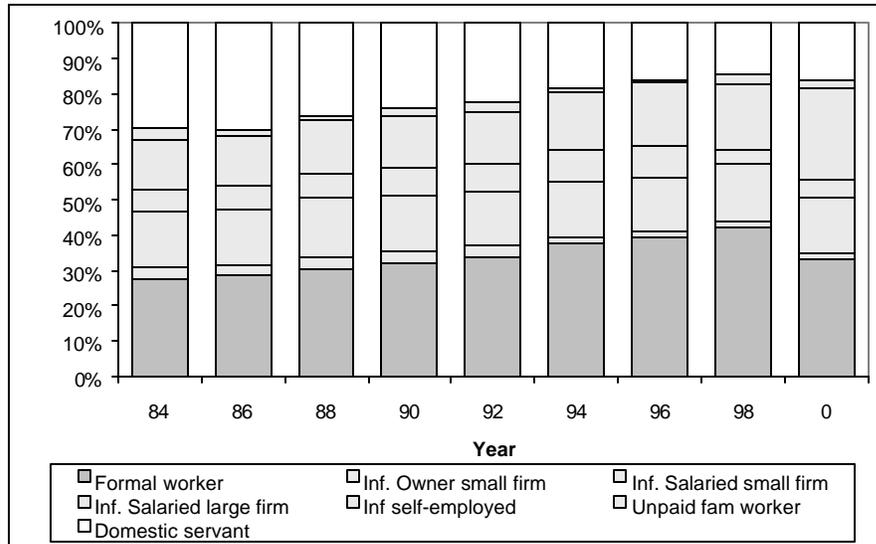
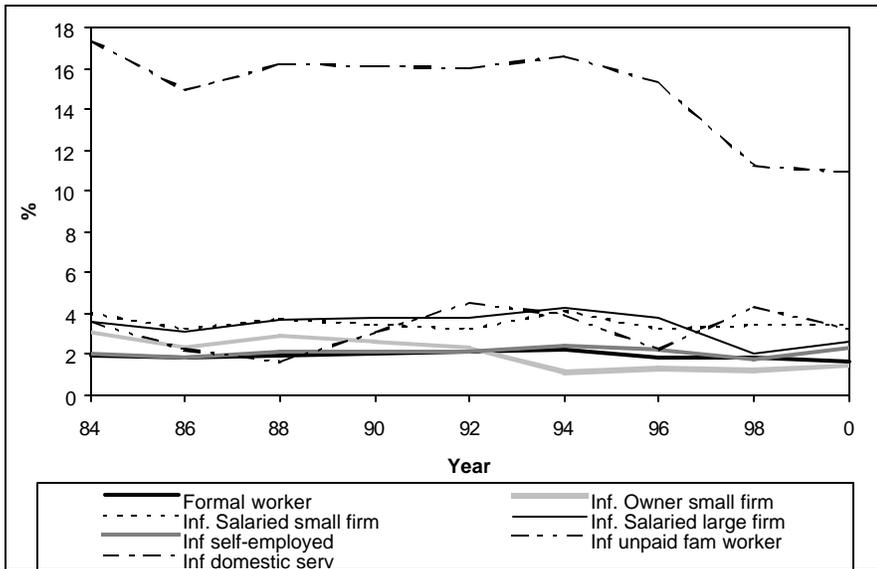


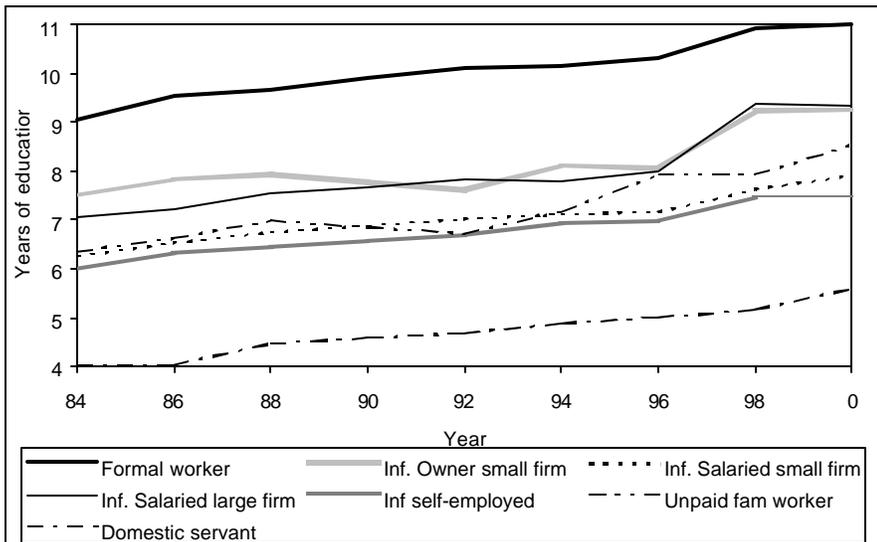
Figure 7: Distribution of employed recent migrants by sub-sector



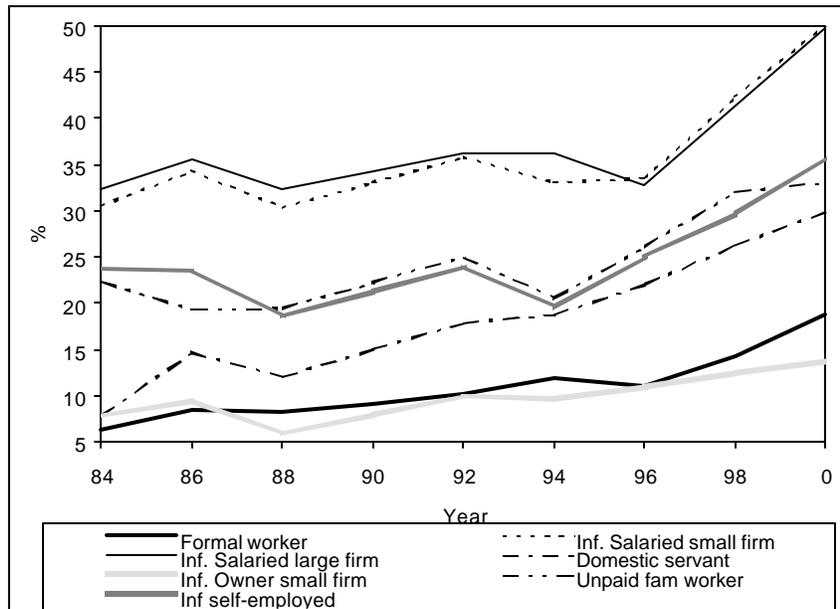
**Figure 8: Proportion of employed recent migrants by sub-sector**



**Figure 9: Mean number of years of education by sub-sector**



**Figure 10: Proportion of workers with temporal job by sub sector**



**Figure 11: Proportion of workers with <1 year and with 5+ years in the firm by sub-sector**

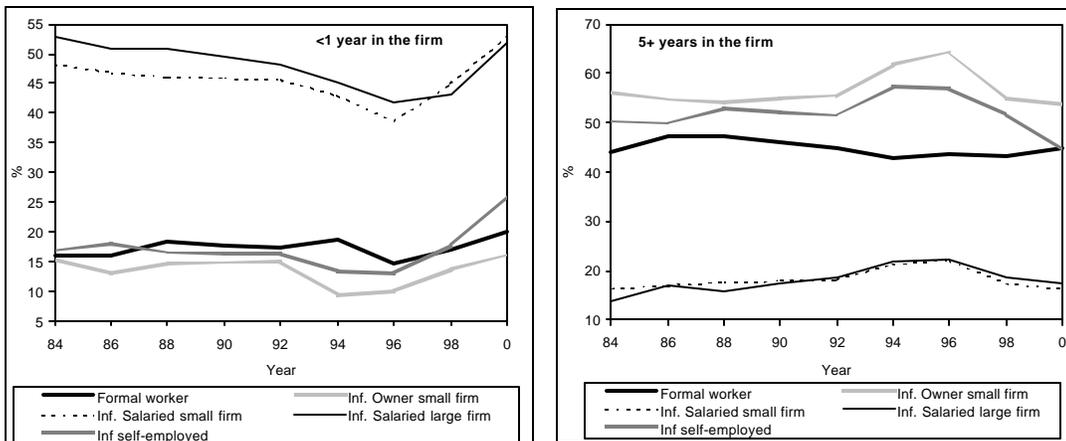


Figure 12: Distribution of workers by industry by sub-sector. Deviations from the mean

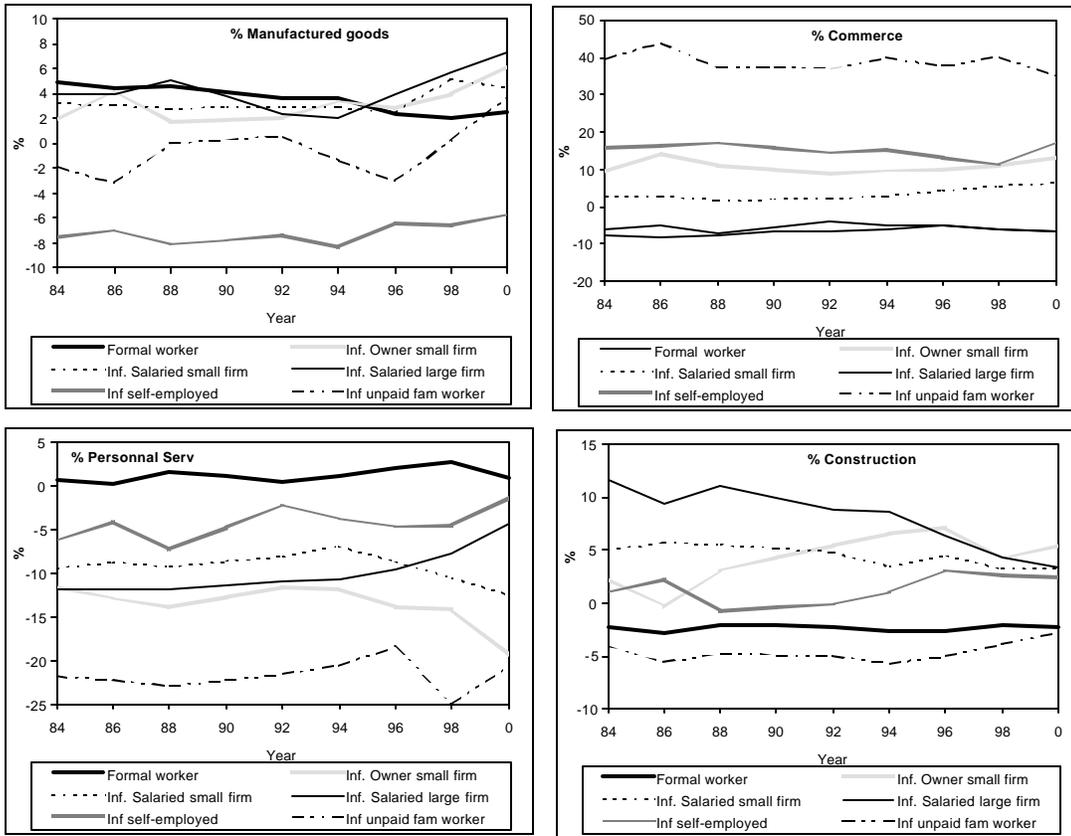


Figure 13: Internal composition of the urban informal sector

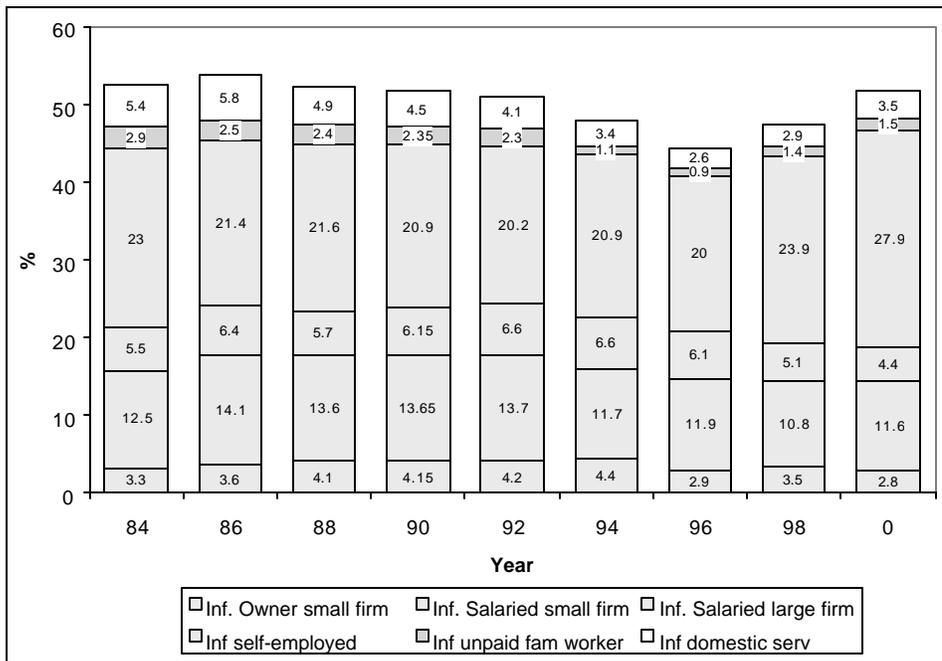
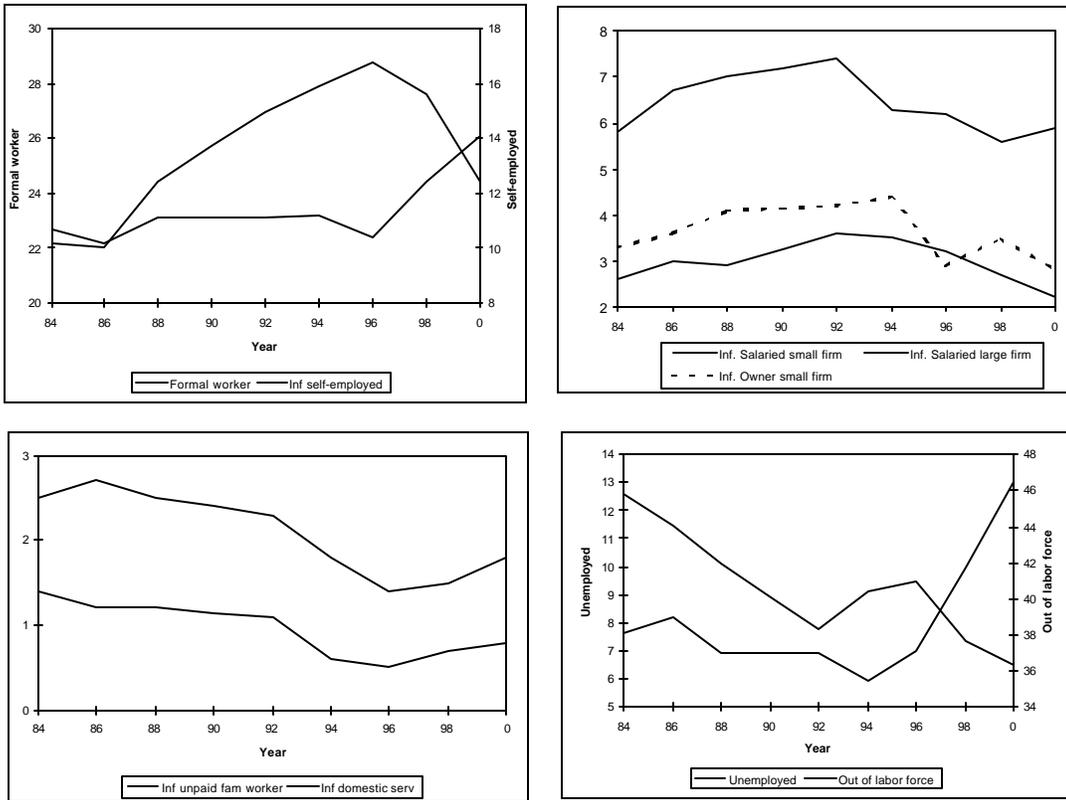
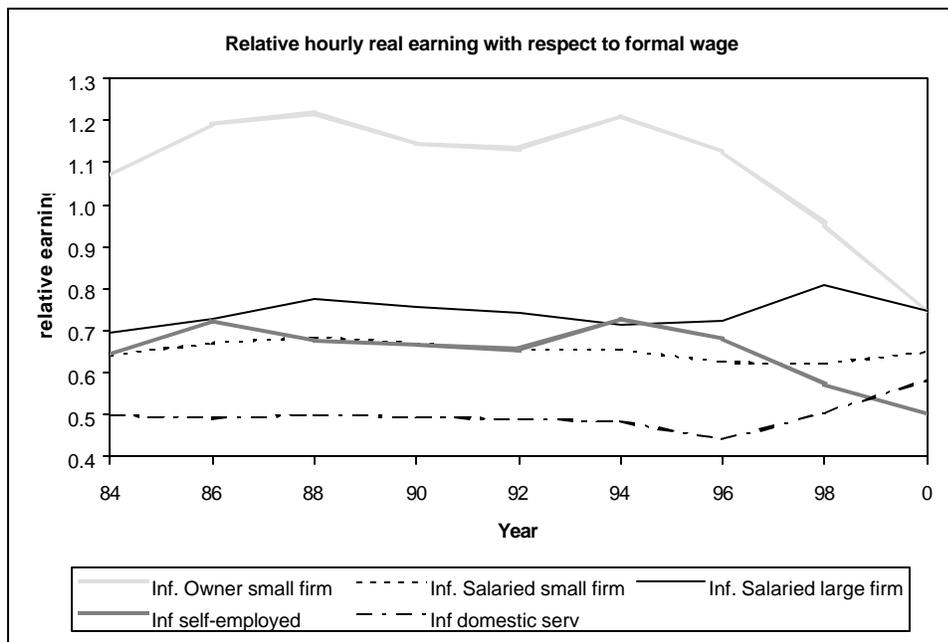
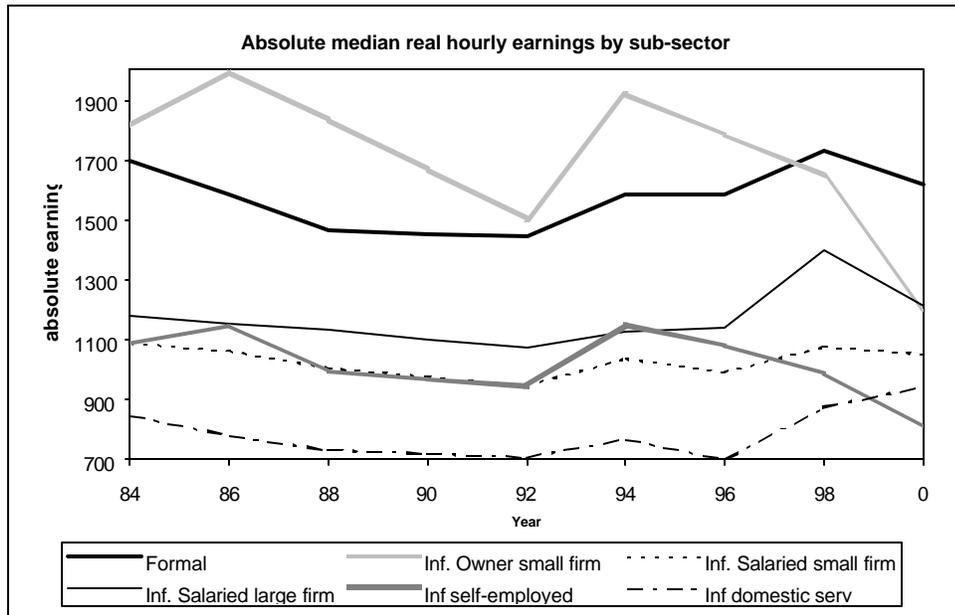


Figure 14: Sectoral composition of working age population. Ten main cities and metropolitan areas



**Figure 15: Hourly real earnings by sub-sector**



**Figure 16: Type of mobility for workers with less than 1 year in the firm**

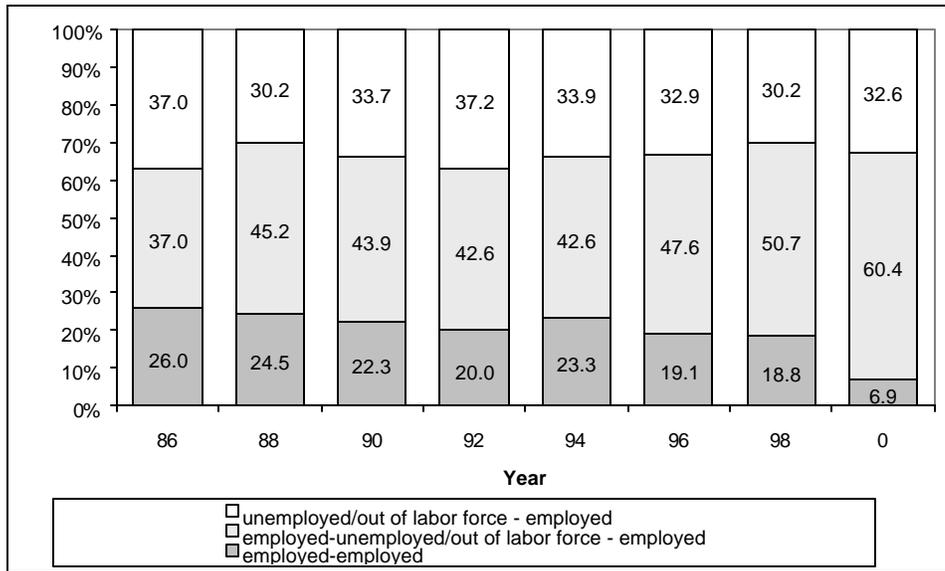


Figure 17: Type of Labor Mobility for workers with less 1 year in the firm by sub-sector

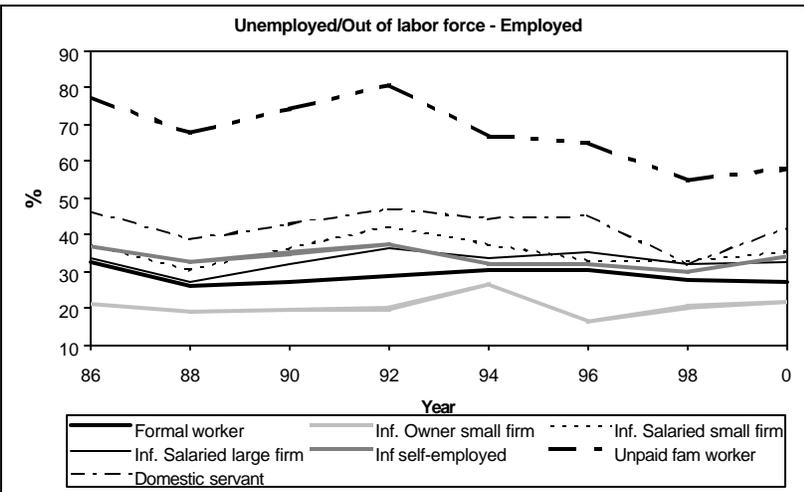
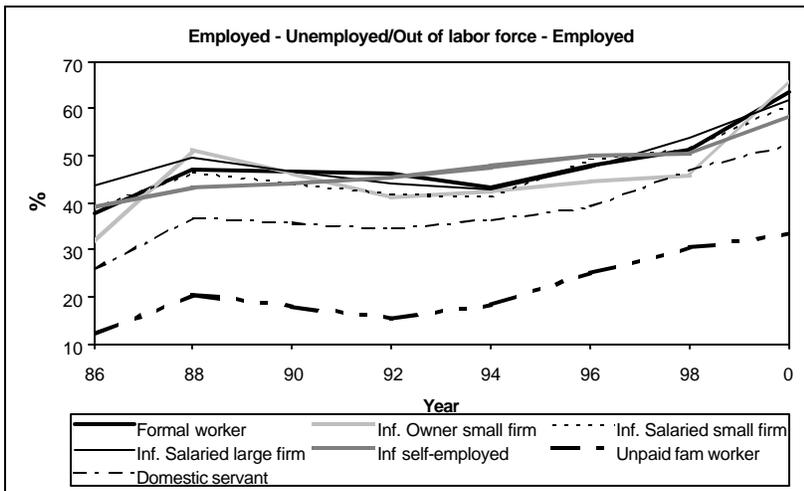
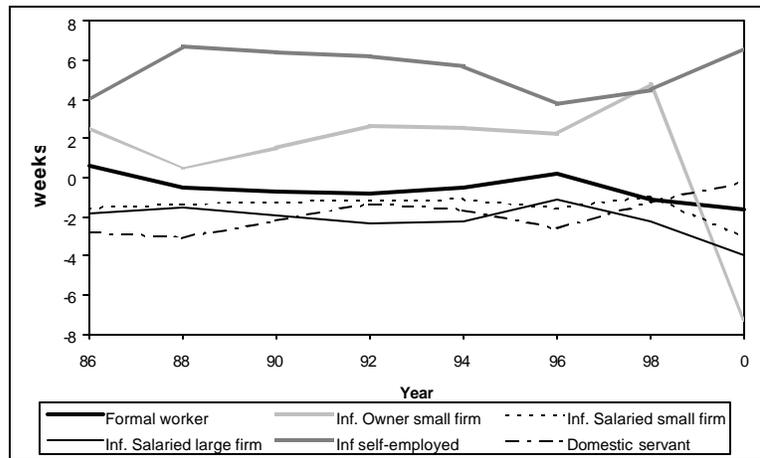


Figure 18: Deviations from the mean number of weeks unemployed/out of the labor force by sub-sector\*



\*Includes only workers with indirect labor mobility