

URBAN-RURAL LINKAGE OF THE LABOR MARKET IN THE COFFEE GROWING ZONE IN COLOMBIA

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I. INTRODUCTION: HYPOTHETICAL FRAMEWORK AND ITS BACKGROUND

THIS paper is a case study of the linkage in the labor market between the urban and rural sectors in a coffee growing zone in Colombia. The study focuses on the city of Manizales and its area of influence in the Departamento de Caldas (Department¹ of Caldas).

The principal objective of this study is to show the linkage between economic sectors in rural-urban areas and territorial linkage which can be illustrated in a certain economic structure at the regional level by means of an empirical analysis of the "inter-sectoral" and "spatial" mobility of the labor force. At the same time, I have tried to think about this sectoral linkage in the labor market as related to the function of the so-called urban informal sector (UIS). In other words, I have intended to find out the relationship between the coffee harvesters and the workers in the UIS in the zone being studied.

In spite of the existence of abundant literature about the coffee economy (see, for example, [4] [5] [6] [10]), there is relatively less on the labor market, and even fewer studies that focus on the linkage between the urban and rural sectors. Among these very few are the studies by Soledad Ruiz [7], Fernando Urrea [9], and María C. Errázuriz [2].

Urrea was the first to analyze the structural transformation in Colombian coffee agriculture and its impact on the labor market at the national level (eight principal coffee producing departments). Throughout his analysis, Urrea considers technological change without mechanization as the key factor to explain the context. This technological change occurred associated with the introduction of the new improved seed of arabican coffee, called Caturra. With its high productivity per area of land, the process of specialization in coffee cultivation in terms of the

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¹ A department, a translation of *departamento* in Spanish, is the Colombian provincial political and administrative division.

density of production (number of trees per hectare) advanced, and the volume of production itself increased.² However, this technological innovation did not mean the mechanization of manual labor in the production system (including the manual labor for harvesting), but it did require the introduction of a package of new advanced chemical inputs and the application of new cultural practices (mainly manual) required by the new inputs. Therefore the technological change in the production methods has not reduced the demand of agricultural labor; on the contrary, it has increased total employment in three ways. One has been the increase in labor needed to handle the increased volume of the harvest itself; the second has been the creation of new requirements for manual labor throughout the year to apply the chemical inputs such as fertilizer and insecticides; and the third has been the labor needed to convert traditional coffee cultivation to the technologically advanced method—land preparation and seeding.³

Since the study by Urrea, the only contribution which analyzes the structural change of the labor market in Colombian coffee agriculture is the study by Errázuriz. Her analysis focused on the effects of technological change on the labor market introduced during the period of 1970–85. She identifies the regional heterogeneity of the evolution of demand for labor according to the level of technological progress in coffee production in each region. Errázuriz's findings [3] which I have utilized to develop my hypothesis are:

(a) The existence of a strong process of proletarianization and an increase in temporary work in the coffee growing zone. Regardless of the size of cultivation, most of the coffee producers employ temporary workers, not only as harvesters but also as contracted workers for other regular tasks.

(b) A growing specialization in the different kinds of jobs in coffee production; for example, the application of fertilizer, arrangement of the nursery bags, preparation of land, and transplanting of young trees are done by specifically contracted workers. This tendency coincides with the increase of the number of agricultural workers with a stable residence.⁴

(c) In contrast to (b), the existence in some coffee producing regions of laborers who combine working in coffee production with urban occupations, such as workers in the construction industry or in the informal commercial sector.

² According to the data presented by Urrea, the density of coffee cultivation increased from 1,600 trees per hectare in 1955/56 to 4,500–5,000 trees per hectare in 1975/76, and the production level (in green coffee) grew from 387 kilograms per hectare to 2,500 kilograms per hectare per annual average during the same period.

³ Based on the same data from Urrea (footnote 2), the average of annual demand for total labor (including harvesters) was calculated as 85 men per year with 1,600 trees per hectare for the traditional production system, and 190 men per year with 5,000 trees per hectare for the technologically advanced method used for producing the Caturra variety.

⁴ Errázuriz has called this phenomenon *proceso de asentamiento de la fuerza de trabajo* (setting process of the labor force), which she explains in the following way: "This process of settlement has contributed greatly to the formation of marginal barrios of workers located on the outskirts of urban centers and in certain hamlets in rural areas. This presents new infrastructural problems and substantially transforms the perception of a separation between the city and countryside" (my translation) [3, p. 116].

(d) The significant increase in demand for labor in coffee production which has come about in the central coffee growing zone of the country, particularly, in the Department of Caldas.

Errázuriz also considered the possible relation between coffee harvesters and UIS workers, pointing out the necessity to study this sectoral linkage in the labor force. However, she limited her analytical dimension to the rural sector.

I will approach the same regional context of Caldas but from the urban viewpoint, following the research topic proposed by Errázuriz. I argue that the phenomenon of the expansion of the UIS and its occupational behavior can be understood clearer in the regional context. This effort to analyze labor migration from the urban view, precisely through the occupational behavior of the UIS would be a new focus vis-à-vis the theoretical framework traditionally used in the studies on the coffee economy and labor migration in general.

The two main premises of my study are: (1) In the coffee growing zone in Viejo Caldas, there is a temporarily large demand for labor in the rural sector, especially during the harvest period from the middle of October to the beginning of December. Also the piece-rate payment system⁵ is quite attractive for the workers. For these reasons migration from the urban sector to the rural sector is likely to occur. (2) This phenomenon might have some direct relation to the UIS in terms of occupational strategies. More precisely, the coffee harvesters who migrate from the urban sector might be composed of UIS workers.

If this linkage in the labor market between the two sectors could be proved, we could identify a new niche for the UIS in the regional context: this would be that the UIS would function in the labor market of the coffee economy in this region as a reserve of manpower not simply for the urban, but also for the rural labor market. Or, from the viewpoint of the workers in the urban marginal sector, the temporary migration to work as coffee harvesters could be considered one of the socioeconomic strategies of individual or of household subsistence.

II. GENERAL DESCRIPTION OF LOCATION STUDIED

A. *Regional Economy and the Characteristics of Manizales and Chinchiná*

I selected the city of Manizales and its surrounding area in the coffee growing zone of Colombia as the focus of my study. Manizales city is the capital of the Department of Caldas. Caldas, with the other two departments of Risaralda and Quindío, make up the Viejo Caldas which is categorized as the central-western region of the Colombian coffee producing zone (see Figure 1). This region has been one of the most important coffee production areas in the country, and its economy has been dependent predominantly on coffee production. The production level of green coffee in the Viejo Caldas is very high in terms of national production (29.0 per cent in 1980), as well as in productivity per hectare. This region also was the first to take up the process of technological innovation in the production

⁵ In this system, payment is determined by the quantity of coffee beans picked by each harvester.

THE DEVELOPING ECONOMIES

Fig. 1. Departments in Colombia



system, the conversion to hybrid coffee seeds and the application of chemical inputs. As a consequence, the demand for labor is quite high, especially during the harvest period.

One of the main reasons for this high specialization in coffee production has been due to the institutional support of the Departmental Coffee Committee (Comité Departamental de Cafeteros de Caldas) and of the National Federation of Coffee Growers (Federación Nacional de Cafeteros: FEDERACAFE).⁶

The coffee sector is the most developed sector in the regional economy. Growth of the secondary sector and its diversification has been slow especially in manufacturing, even though its share in the total gross regional product has increased. The main manufacturing activities are food processing, beverages, clothing, and agricultural machinery, which are basically destined for the agricultural sector and the local market. In contrast, the tertiary sector supports the largest proportion of the total regional product. In 1985, up to 45.7 per cent of the total product of the Department of Caldas was produced by the commerce and service sectors. However, as in the manufacturing sector, activities in the tertiary sector are mostly connected with local consumption.

The core part of my field work was done in the marginal barrios in the city of Manizales and the town of Chinchiná. Manizales has about 300,000 residents and is the eighth largest city in Colombia. Besides its political-administrative function as capital of the department, Manizales is the center of other socioeconomic activities for the region. Most of the economic activities in the secondary and tertiary sectors are concentrated in the city,⁷ and the social infrastructure, like education, culture, communication, and medical care, are available only in Manizales. Compared with the "multi-functions" of the capital, the services that other urban centers in Caldas can offer are limited to the local market and the needs of the rural areas. The urban centers close to Manizales also become dormitory towns for the capital city. Chinchiná is an example of such a town having a mixture of these two functions.

Chinchiná is the main town of the Municipality of Chinchiná (Cabecera Municipal de Chinchiná)⁸ whose economy is dependent exclusively on coffee production. It is also one of the most important urban centers for the central-western coffee growing zone, providing all kinds of services related to the coffee industry, such as CENICAFE (National Research Center of Coffee), a freeze-dry instant coffee

⁶ FEDERACAFE is a private society of coffee producers in charge of administering coffee exports, through a contract with the Colombian government to control the National Coffee Fund, built up using the coffee export tax.

⁷ For example, in the manufacturing sector in 1983, Manizales has 79.3 per cent of the total value added in the department, and 90.7 per cent of the people employed.

⁸ According to present Colombian political divisions, each department is segmented into municipalities (*municipios*). Each municipality in turn is divided into districts (*distrito municipal*), one of which is called *cabecera municipal* where the local political authority is located. The departmental political authority is located in one of these *cabeceras municipales* which is also the capital city. In the case of Manizales, it is the capital city of the Department of Caldas, as well as *cabecera municipal* of the Municipality of Manizales. There is no exact criterion for defining a city in terms of political division or population size.

factory, and a co-operative's marketing center. As a dormitory town for Manizales, it was expected that Chinchiná would show a clearer relation between the urban and rural sectors,⁹ when compared with Manizales.

B. *Process of Urbanization and Characteristics of the Labor Market in the Region*

The process of urbanization is defined here as the change in the proportion of urban population in the total population.¹⁰

Comparing the evolution of the population between the urban sector and the rural sector in Caldas, the following points can be observed [1, 1964, 1973, 1985 eds.]:

(i) While the urban population has continued increasing slowly (0.8 per cent annually for 1964–73 and 2.5 per cent for 1973–85), the growth rate of the rural population has been much lower or negative (–1.4 per cent for 1964–73 and 0.2 per cent for 1973–85).

(ii) The growth rate of the total population (rural + urban) differs greatly from one municipality to another.

(iii) The concentration of the population in the urban sector has intensified markedly in certain municipalities (see Figure 2).

(iv) At the departmental level, the urban population is concentrated in the capital city, Manizales.

The foregoing points indicate that urbanization in Caldas has changed most significantly in the spatial distribution of population between rural and urban zones rather than in the growth of urban population itself.

Despite the fact that the process of urbanization has advanced in terms of an increase in the proportion of urban population, this phenomenon has not been accompanied by a structural change in the regional economy or in employment. As analyzed above, the regional economy is sustained basically by coffee production and the tertiary sector. The same tendency can be seen in the local structure of employment which showed the following characteristics for the period of 1964–81.

(i) There was a high concentration and significant presence of the labor force in the agricultural sector during the whole period (from 52.6 per cent to 41.5 per cent).

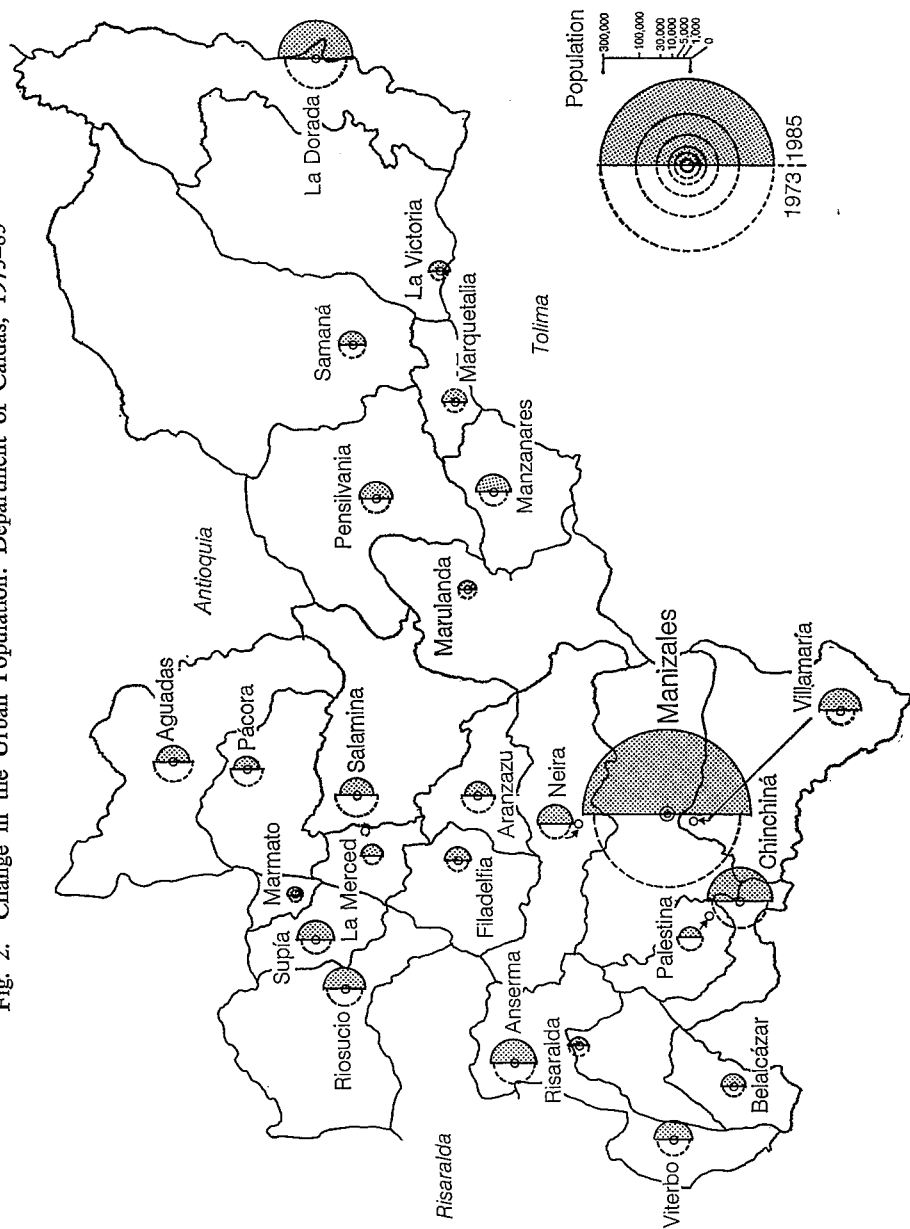
(ii) Employment in manufacturing did not grow in terms of its proportional distribution in total employment (from 10.3 per cent to 8.2 per cent).

(iii) The sectors in which the labor force grew significantly were in commerce (from 10.0 per cent to 14.6 per cent) and the personal service sector (from 16.6 per cent to 22.6 per cent). [1, 1964] [1, 1973] [8].

⁹ The main part of this study is based on statistical analysis of data gathered through household surveys conducted in marginal barrios of Manizales and Chinchiná during the period from the end of October to the middle of November 1988, with some additional information obtained from five field trips between December 1987 to June 1988. Based on the findings from this statistical analysis, I selected a number of households and carried out structured interviews, to complement the quantitative analysis of the household surveys.

¹⁰ According to the official definition of the national statistical department (Departamento Administrativo Nacional de Estadística: DANE), the municipal-urban center (*cabecera municipal*) is defined as the urban sector, and the rest (*el resto*) is considered as the rural sector.

Fig. 2. Change in the Urban Population: Department of Caldas, 1973-85



Source: Gobernación de Caldas, Ministerio de Agricultura, *Atlas de Caldas* (1987).

Note: Border lines demarcate municipalities in Department of Caldas.

TABLE I
EMPLOYED POPULATION IN THE ECONOMIC SECTORS: 1988

Economic Sectors	Total Manizales		Sample of Marginal Barrios	
	Persons	%	Persons	%
Agriculture*	5,624	5.6	132	23.9
Mining	611	0.6	8	1.5
Manufacturing	16,392	16.5	85	15.5
Electricity, gas, water	2,443	2.5	6	1.1
Construction	7,041	7.1	54	9.8
Commerce	21,549	21.6	120	21.9
Transport and communications	4,627	4.6	21	3.8
Financial sector	6,888	6.9	20	3.6
Services	34,444	34.6	101	18.4
Activity not specified	—	—	3	0.5
Total	99,619	100.0	550	100.0

Sources: Figures for total Manizales are from DANE, *Encuesta nacional de hogares*, Etapa 61 (Bogotá, 1988); figures for marginal barrios are from my household surveys in the marginal barrios in Manizales and Chinchiná, October–November 1988.

* Including cattle ranching, forestry, and fishery.

Based on data from the household survey (*Encuesta nacional de hogares*) elaborated by DANE, we can analyze more precisely the characteristics of the labor force in Manizales.

In 1988 the workers in the commercial and services sectors combined made up 56.2 per cent of the total labor force in the city. In contrast, the proportion of workers in the manufacturing sector was only 16.5 per cent (Table I). The household survey also indicates that Manizales maintains a significant UIS. In 1986, this sector accounted for 53.7 per cent¹¹ of the workers in the city which is virtually the same as the average of the four biggest cities in Colombia (53.9 per cent) and above that of Bogotá (50.7 per cent) and Medellín (52.0 per cent).

III. HOUSEHOLDS IN THE MARGINAL BARRIOS OF MANIZALES AND CHINCHINA

—An Example of Urban-Rural Linkage in the Labor Force—

The central part of my field work in Caldas was a household survey of 302 households in the marginal residential areas (*barrios marginales*) in Manizales and Chinchiná¹². This household survey had two objectives. One was to analyze the

¹¹ This figure was calculated using the number of employed persons in the urban informal sector as defined by DANE (self-employed or independent workers, family workers without fixed remuneration, domestic service workers, employed persons of the enterprise with less than ten workers) per total employed persons.

¹² The method used was the administration of a formal questionnaire to the households in a random sample of approximately 5 per cent of the total households in the selected barrios. The questionnaire was filled in during direct interviews by each member of a team composed

socioeconomic characteristics of the urban workers living in these marginal barrios, most of whom work in occupations categorized as in the UIS; the other was to find those urban workers who tend to take up work in the countryside during the coffee harvest period as harvest workers hired temporarily by the coffee growing farms. This second objective was to examine the linkage in the labor market between the urban and rural sectors in the region. The principal findings will be discussed in the following section.

A. *Characteristics of the Labor Force at the Individual Level*

The survey provided the following characteristics of the labor force.

(i) The labor force is tending to grow younger, shifting especially toward the twelve to nineteen age bracket (18.5 per cent of the total population in the sample).

(ii) The educational level of the labor force is very low: 44.6 per cent of the total economically active population had not finished primary school.

(iii) The distribution of the labor force by economic activities is concentrated in three sectors: agriculture (23.9 per cent), commerce (21.9 per cent), and personal services (18.4 per cent). Participation in the agricultural sector is much higher than the average for the city of Manizales (see Table I). This tendency is also observed in the pattern of the major occupational groups: agricultural workers (24.0 per cent), workers in the service sectors (18.2 per cent), blue collar workers in nonagricultural sectors (35.1 per cent).

The above observations indicate two general characteristics of the labor force I studied. First, in these barrios there is a high dependence of the labor market in the rural sector to work as agricultural workers. Second, workers who have occupations in nonagricultural sectors are concentrated strongly in commerce and personal services. The majority of the remaining workers, especially those who have jobs in manufacturing or construction, are unskilled and nonprofessional workers.

1. *Characteristics of the workers in urban economic activities (nonagricultural workers)*

A list of the twenty nonagricultural occupations reported most frequently in the survey are shown in Table II. Certain occupations like street vendor, owner of a small shop at one's own household, salesman/shop assistant/sales supervisor are carried on by women as well as by men. On the other hand, there exist some sex-specific jobs. For instance, construction worker and guardian are the most common jobs done by men while housemaid and coffee selector¹³ are jobs typically done by women.

Comparing the type and position of occupation by sex, the survey shows:

(i) In the personal services sector, both men and women tend to engage in physical labor, but the women tend to work exclusively in jobs categorized as domestic service.

of four interviewers, one assistant, and the author, who also interviewed a part of the sample and supervised all the cases.

¹³ The selector and checker of coffee beans (*pergamino*) after threshing at the factory. Usually these workers are local women.

TABLE II
LIST OF TWENTY NONAGRICULTURAL OCCUPATIONS THAT ARE REPORTED
MOST FREQUENTLY IN THE SURVEY

1.	Housemaid (45) (F)
2.	Construction worker (41) (M)
3.	Street vendor (38) (M and F)
4.	Guardian/watchman (18) (M)
5.	Independent merchant, retail seller, grocery store proprietor (16) (M and F)
6.	Salesman, shop assistant, sales supervisor (16) (M and F)
7.	Bar/cafeteria/restaurant waiter, waitress (15) (M and F)
8.	Vehicle (taxi, bus) driver, bus driver assistant (15) (M)
9.	Dressmaker, tailor, knitting machines operator or assistant (13) (M and F)
10.	Butcher and similar worker (12) (M)
11.	Food processor of <i>arepa</i> (traditional Colombian food from maize), baker, ice cream preparer, etc. (12) (M and F)
12.	Courier, porter assisting in transportation and packing (11) (M)
13.	Car mechanic, machinery fitter (10) (M)
14.	School teacher in rural primary school (8) (M and F)
15.	Carpenter, construction joiner (8) (M)
16.	Household electric appliances repairman (8) (M)
17.	Office building or restaurant cleaner (7) (F)
18.	Messenger boy (6) (M)
19.	Cashier (5) (F)
20.	Coffee selector and checker at a threshing factory (5) (F)

Source: Author's household survey in the marginal barrios in Manizales and Chin-chiná, October–November 1988.

Note: Figures in parentheses are total number of the cases; M denotes male and F female.

(ii) In the commercial sector, occupations like street vendors are carried on by both sexes. However, the men in these occupations are categorized as the owners of commercial businesses or as independent merchants, while the women usually work as assistants to the men and are categorized as a family worker without stable remuneration.

(iii) The rest of the occupations in other sectors are carried out by both sexes. The most representative ones are factory worker, school teacher; as mentioned above, the level of profession and technical qualification is quite low.

If we review the characteristics shown above, it is easy to recognize the significant presence of UIS in this subgroup of nonagricultural workers. In fact, among all workers in these urban activities, those who are categorized in the UIS are the majority: 76.1 per cent. These workers in the UIS have the following characteristics:

- (i) They are young and concentrated in the twelve to nineteen year age group.
- (ii) The percentage of informal employment is higher for women than men.

(iii) Their level of education is low, especially in case of the independent workers and housemaids. More than half of these workers have not received any kind of formal education or dropped out after the first couple of years of primary school.

(iv) The time spent in one job is quite short. This occupational instability is due to the characteristic of the occupations themselves. Construction worker is a typical example of an occupation where a worker is generally hired temporarily under subcontract. Another example is housemaid, an occupation which lacks a formally documented labor contract. These workers are poorly covered in the social security system, and often forced to change jobs.

(v) More than half of the workers in the UIS earn less than the legally defined minimum wage.

2. *Characteristics of agricultural workers*

The workers in the rural sector (23.9 per cent of the total in the sample in the survey) tend to have the following characteristics:

(i) The majority are young males (57.6 per cent are between twelve to twenty-nine years old and 96.2 per cent are men).

(ii) Their level of education is lower than that of the nonagricultural workers.

(iii) The majority have jobs as day workers with the coffee growing farms (*jornalero*).

(iv) Most of these workers work on farms located in the same municipality where they live; the remainder of the workers work on farms in other parts of Caldas. Generally these workers remain for a very short time on the farm and tend to keep moving from farm to farm working as harvesters or *jornaleros*. They usually stay on the farms during the week and come back home on the weekend. Or, in some cases in Chinchiná, the workers commute to the farm daily if it is located near home.

(v) Since in most cases these workers are under temporary or undocumented contract, their social security and welfare conditions are inadequate. The majority of these workers do not receive any kind of social security.

(vi) However, as pointed out earlier, coffee harvesters have the advantage of being paid under a piece-rate system and not by a day wage as applied to the ordinary contracted workers. In fact, the weekly income for harvesters at the busiest period can be double the amount of the average day-wage worker.¹⁴

(vii) As a consequence, the monthly income level for the majority of agricultural workers is at least equal to the legal minimum wage for the urban sector.¹⁵

¹⁴ According to the results of my interviews with coffee harvesters (forty-five cases) and farmers (fifty-one cases), a harvester could normally pick around 100–110 kilograms of coffee berries per day. The piece-rate average at that time was 20 pesos per kilogram, giving a daily piece-rate payment of around 2,000–2,200 pesos. At the same time, the day wage paid to the other agricultural workers on coffee farms was 1,000 pesos on average.

¹⁵ From data gathered in the interviews, the weekly wage on average at that time was 7,000 pesos without meals and 5,500 pesos with meals. This monthly income was almost the same amount or slightly above the legal minimum wage of 256,000 Colombian pesos, equaling approximately 82 U.S. dollars.

(viii) The data did not show any clear relationship between the presence of relatives in the rural sector and the location where agricultural workers worked.

3. *Characteristics of coffee harvesters: their heterogeneity and linkage with other urban activities*

In the survey, forty-five workers reported working in urban jobs and on coffee growing farms during different parts of the year. This corresponds to 8.2 per cent of the total working population in the sample. Even though statistically this percentage is not big enough to prove sectoral linkage in the labor market between the urban and rural sectors, these forty-five cases clearly represent the pattern of work which combines jobs in the UIS and coffee harvesting at the individual level. Some combinations are:

- construction worker + coffee harvester;
- street vendor + coffee harvester;
- small shop keeper + coffee harvester;
- lottery ticket vendor + coffee harvester;
- sand collector (*arenero*) + coffee harvester.

Another finding from the above sample is the heterogeneous occupational behavior of agricultural workers/coffee harvesters. In fact, even though people report their principal jobs during the period of my survey to be agricultural workers or harvesters on coffee growing farms, their commitment to such work was quite variable and fell into the following categories.

(a) General agricultural workers who work regularly and permanently on coffee growing farms during the year. They do not necessarily have one specific job and might do different kinds of jobs depending on the management of each farm (eighty-six cases).

(b) Specialized coffee harvesters: these are workers whose job is exclusively picking coffee beans during harvest time and the rest of the year (at least two or three months) are not working at any kind of job (seventeen cases).

(c) Coffee harvesters who hold other urban occupations in the UIS during the non-harvest season (thirty-three cases).

(d) Occasional coffee harvesters: these are workers who occasionally work at harvesting but who do not consider this activity even to be a secondary occupation. They pick coffee beans as just an alternative income source for subsistence purposes (twelve cases).

The first two subgroups do not show sectoral linkage between the urban and rural sectors at the individual level, but the other two subgroups of coffee harvesters do show a clear linkage through the combination of more than two kinds of jobs in their occupational cycle.

B. *Analysis of the Occupational Structure at the Household Level*

The results at the level of the individual worker are not meaningful, unless we consider the different aspects of occupational behavior that show other patterns of sectoral linkage in the labor market at the household level. When I analyzed the occupational structure of my survey data at the household level, I found a

clearer pattern of linkage in the labor market between the urban sector and the coffee producing areas.

1. *Socio-demographic factors characterizing the occupational structure of the household*

A number of general characteristics of the household are determined by socio-demographic factors.

One is the composition of each household, related with the type of family forming the household. According to data analysis, 65.2 per cent of the total households surveyed were nuclear families, and the rest of households are formed in extended family (34.8 per cent). If this category is cross-sectioned with another variable, the age of household head, the whole sample can be classified into two types. One is an extended family type household with an older household head, the other is the typically nuclear family composed of a young couple and children. This difference in the composition of the household is one of the fundamental elements determining the potential labor force at the household level. The relation between the type of household and the potential labor force defines the social and economic pressure on each income earner, which produces the different patterns of occupational behavior in the household.

The indicator of economic dependence, defined as the number of household members dependent on one income, was utilized to calculate the socioeconomic pressure in the household. The more members working in a household, the lower the level of economic dependence. However, an extended family type household does not necessarily mean that economic pressure on one income earner is low unless there is a combination of different occupations among the household members. Likewise a nuclear family, if it is composed of a female household head with several young male children who are working, can exhibit very low economic pressure.

The second factor is the distribution of household members according to age groups. There is a notable concentration of household members in the younger age brackets. Household members younger than the legal working age (twelve years old at present in Colombia) made up 29.0 per cent of the total population of the survey sample; and household members younger than twenty years of age made up 48.6 per cent.

The third factor can be found in the cross-section analysis between the educational level and the relation with the household head of the population aged five or above. There is a clear difference between generations. The children more often attend junior and senior high school compared with the household head and the older generation. As can be seen from Table III, the category of fathers shows the lowest level of education in the household: 40.0 per cent of this group have not attended any kind of formal education.

The fourth aspect is the migration of a household permanently to an urban area and the length of permanent residency in the same urban area. The household heads and their spouses who emigrated from the municipality in which they were born (61.8 per cent of the total sample) tend to be originally from the different

TABLE III
DISTRIBUTION OF FAMILY MEMBERS IN THE HOUSEHOLD SURVEY ACCORDING TO
RELATIONSHIP WITH THE HOUSEHOLD HEAD AND THE LEVEL OF EDUCATION

	Level of Education						Total
	Nothing	Primary Not Finished	Primary Finished	Secondary Not Finished	Secondary Finished	University and Others	
Household head							
No.	54	129	72	36	7	3	301
(%)	(17.9)	(42.9)	(23.9)	(12.0)	(2.3)	(1.0)	(100.0)
Spouse							
No.	24	96	53	33	7	2	215
(%)	(11.2)	(44.7)	(24.7)	(15.3)	(3.3)	(0.9)	(100.0)
Child							
No.	113	254	121	189	24	5	706
(%)	(16.0)	(36.0)	(17.1)	(26.8)	(3.4)	(0.7)	(100.0)
Father & mother							
No.	8	8	4	0	0	0	20
(%)	(40.0)	(40.0)	(20.0)	(0.0)	(0.0)	(0.0)	(100.0)
Brother & sister							
No.	4	13	5	4	0	1	27
(%)	(14.8)	(48.1)	(18.5)	(14.8)	(0.0)	(3.7)	(100.0)
Grandchild							
No.	37	27	5	7	2	0	78
(%)	(47.4)	(34.6)	(6.4)	(9.0)	(2.6)	(0.0)	(100.0)
Other							
No.	8	10	7	7	0	0	32
(%)	(25.0)	(31.3)	(21.9)	(21.9)	(0.0)	(0.0)	(100.0)
Total							
No.	248	537	267	276	40	10	1,379
(%)	(18.0)	(40.0)	(19.4)	(20.0)	(2.9)	(0.7)	(100.0)

Source: Author's household survey in the marginal barrios in Manizales and Chinchiná, October–November 1988.

Note: Three cases on which information was not available were omitted from the total.

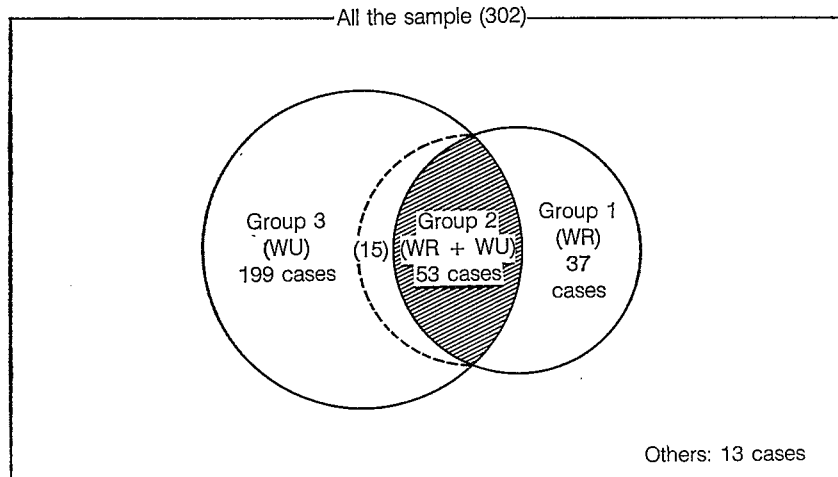
municipalities of the Department of Caldas, and at the farthest, from the neighboring departments in the central-western coffee zone.

2. Sectoral linkage in the household and its implication in a household's strategy for subsistence

The households in my survey can be divided into three subgroups according to the sectoral linkage in the occupational structure between the rural/agricultural sector and the urban/nonagricultural sector.

Group 1: Households in which all the workers are in the agricultural sector (37 cases, 56 workers).

Fig. 3. Typology of Households according to Sectoral Linkage in the Occupational Structure



Note: Group 1 (WR): household in which all the workers are in the agricultural sector (37 cases, 56 workers).
 Group 2 (WR+WU): household in which there are workers in the agricultural sector and nonagricultural sector having sectoral linkage in the occupational structure (53 cases, 162 workers).
 Group 3 (WU): household in which all the workers are in the nonagricultural sector (199 cases, 332 workers).
 Others: household in which there is no worker (employed person) (13 cases).

Group 2: Households in which there are workers in the agricultural sector and nonagricultural sector. This group shows sectoral linkage in the occupational structure (53 cases, 162 workers).

Group 3: Households in which all the workers are in the nonagricultural sector (199 cases, 332 workers).

As illustrated in Figure 3, 90 cases which correspond to 29.8 per cent of the total sample,¹⁶ have some kind of relationship with agricultural jobs on coffee growing farms. The households of Group 2, equivalent to 17.5 per cent of the total sample, show a combination of occupations in the UIS and on coffee farms carried on by different members of the same household and/or at the individual level. This means that the sectoral linkage proposed in my hypothesis about these marginal barrios is better illustrated in the occupational structure at the household level than at the individual level.

What is the implication of this sectoral linkage in the occupational structure at the household level? Why in some households do people engage exclusively in

¹⁶ Expanding the range to include the 15 cases in Group 3 where workers on occasion have gone to work as coffee harvesters (shown by the dotted line in Figure 3), this category becomes 105 in all, corresponding to 34.8 per cent of the sample.

rural activities or urban activities while in other households people combine various occupations between the two different economic sectors?

To understand the meaning of this occupational behavior at the household level, the socio-demographic factors pointed out above along with some economic factors were analyzed as dependent variables of the households classified in the above three subgroups. The principal findings are summarized in Table IV.

The first distinguishing feature of these three subgroups is the difference in the size and the number of workers in the household. The households in Group 2 are the biggest household with more members working in different sectors (urban and rural), thus having sectoral linkage in the labor market. These data explain why the indicator of economic dependence in this group is the lowest (= 2.1).

One of the economic implications of this sectoral linkage could be interpreted as a strategy for maintaining the subsistence of the household by alleviating the economic pressure of the cost of living. If we compare the monthly income of a worker by job and monthly household income per capita, this effect on the household economy can be seen even more clearer. First, the difference in these two variables between Group 3 and the other two subgroups may be understood as related to the difference between the formal urban sector and the rest of the economic sectors (whether UIS or rural sector). On the other hand, even though there is not a big difference between the monthly income by job between Group 1 and Group 2 (neither between the monthly income by nonagricultural occupation and that by agricultural occupation in Group 2), the average household income per capita in Group 2 is much higher than that of Group 1. This indicates two things. First, people in Group 2 working in the nonagricultural sector (basically in the UIS) are earning just as much income as temporary and/or permanent workers in the agricultural sector. Therefore if they become unemployed or have difficulty finding a job, working in the agricultural sector (especially in coffee cultivation) provides an easy and convenient alternative job. Second, this UIS/agriculture job combination occurs among different household members, giving Group 2 households more opportunity to sustain a certain level of household income, when compared with households in Group 1.

The second feature of the three subgroups is the components of the occupational structure of the household, i.e., the status of each worker in the household and his/her participation as an income earner. Regardless of the status in the household, the sectoral linkage is between the agricultural jobs with the coffee growing farms (as a regularly hired worker or as a coffee harvester) and the urban sector working in jobs which are typical in the UIS. An example would be the combination of a household head who works as a coffee harvester while his son works as a construction worker, or vice versa.

The primary earner of the household income does not necessarily have to be the household head; it could be one or more of the adult male children. This observation can be seen in the classification of the workers in each subgroup according to age and their relation to the household head. The proportional of household members in the category "children" is quite high in general, and especially high for Group 2 (53.7 per cent). The average of age for total household members working is much lower than that for working household heads. This

TABLE IV
CHARACTERISTICS OF HOUSEHOLD GROUPS CLASSIFIED ACCORDING TO THE TYPES
OF SECTORAL LINKAGE IN OCCUPATION

Size of household	Group 1		Group 2		Group 3	
	Cases	%	Cases	%	Cases	%
2 persons	4	10.8	0	0.0	14	7.0
3 persons	4	10.8	4	7.5	29	14.6
4 persons	11	29.7	6	11.3	43	21.6
5 persons	5	13.5	7	13.2	56	28.1
6 persons	6	16.2	12	22.6	27	13.6
7 persons	2	5.4	7	13.2	16	8.0
More than 8 persons	5	13.5	17	32.1	14	7.0
Total	37	100.0	53	100.0	199	100.0
Average	5.05		6.55		4.86	
Number of workers	Cases	%	Cases	%	Cases	%
1 person	23	62.2	8	15.1	112	56.3
2 persons	10	27.0	15	28.3	56	28.1
3 persons	3	8.1	10	18.9	21	10.6
4 persons	1	2.7	9	17.0	6	3.0
5 persons	0	0.0	8	15.1	3	1.5
6 persons	0	0.0	3	5.7	1	0.5
Total	37	100.0	53	100.0	199	100.0
Average	1.51		3.06		1.53	
Indicator of economic dependency (persons)						
Minimum	1.3		1.0		1.0	
Maximum	12.0		6.0		8.0	
Average	3.3		2.1		2.9	
Monthly income by work (Colombian peso)						
Average (nominal)	23,218		23,525 (non-agri.) 21,490 (agri.)		91,117	
Monthly income per capita (Colombian peso)						
Average (nominal)	8,997		11,941		14,675	
Relation of worker to household head	No. of Worker	%	No. of Worker	%	No. of Worker	%
Household head						
himself	29	51.8	39	24.1	162	48.8
Spouse	0	0.0	15	9.3	28	8.4
Children	17	30.4	87	53.7	119	35.8
Others	10	17.9	21	13.0	23	6.9
Total	56	100.0	162	100.0	332	100.0
Average of the age (years of age)						
All workers	35		29		33	
Household head	45		45		40	

THE DEVELOPING ECONOMIES

TABLE IV (Continued)

Educational level	Group 1		Group 2		Group 3	
	No. of Worker	%	No. of Worker	%	No. of Worker	%
Nothing	12	21.4	21	13.0	27	8.1
Primary unfinished	28	50.0	76	46.9	87	26.2
Primary finished	8	14.3	40	24.7	92	27.7
Secondary unfinished	7	12.5	20	12.3	98	29.5
Secondary finished	1	1.8	4	2.5	18	5.4
Higher/other ed.	0	0.0	0	0.0	10	3.0
Not identified	0	0.0	1	0.6	0	0.0
Total	56	100.0	162	100.0	332	100.0
Sex of workers	No. of Worker	%	No. of Worker	%	No. of Worker	%
Male	55	98.2	119	73.5	221	66.6
Female	1	1.8	43	26.5	111	33.4
Total	56	100.0	162	100.0	332	100.0
Household head	Persons	%	Persons	%	Persons	%
Male	29	100.0	37	94.9	130	80.2
Female	0	0.0	2	5.1	32	19.8
Total	29	100.0	39	100.0	162	100.0
Length of residency†	Persons	%	Persons	%	Persons	%
0-2 years	3	10.3	5	12.8	11	6.8
3-5 years	4	13.8	2	5.1	3	1.9
6-10 years	5	17.2	8	20.5	19	11.7
11-20 years	6	20.7	5	12.8	27	16.7
More than 20 years	4	13.8	6	15.4	32	19.8
Whole life	7	24.1	13	33.3	70	43.2
Total	29	100.0	39	100.0	162	100.0
Birth place†	Persons	%	Persons	%	Persons	%
Rural sector*	3	12.0	0	0.0	0	0.0
Same dept. (Caldas)	11	44.0	12	46.2	63	68.5
Dept. of Antioquia	3	12.0	4	15.4	4	4.3
Dept. of Boyacá	1	4.0	0	0.0	2	2.2
Dept. of Quindío	2	8.0	0	0.0	0	0.0
Dept. of Risaralda	1	4.0	3	11.5	5	5.4
Dept. of Tolima	3	12.0	3	11.5	9	9.8
Dept. of V. del Cauca	1	4.0	4	15.4	9	9.8
Total	25	100.0	26	100.0	92	100.0
Rural sector	11	50.0	15	57.7	33	35.9
Urban sector	10	45.5	11	42.3	58	63.0
Not identified	1	4.5	0	0.0	1	1.1
Total	22	100.0	26	100.0	92	100.0

Source: Author's household survey in the marginal barrios in Manizales and Chinchiná, October–November 1988.

* Rural sector in the same municipality (Manizales, Chinchiná).

† Regarding household heads.

also shows the significant presence of young adult children in the occupational structure of the household.

The third feature is the existence of a remarkable difference in educational level between the workers in the different subgroups. In general the working children show a higher level of education than their fathers (see Table III), and the non-agricultural workers show a higher level than the agricultural workers. The average level of education is the highest in Group 3 and the lowest in Group 1. This could be interpreted as the upward social mobility between the two generations due to the increase in access to formal education in the urban sector. It also indicates that the low level of education for urban workers employed in the agricultural sector is one of the biggest barriers to entrance into the formal urban sector.

To sustain my hypothetical interpretation about the socioeconomic implication of sectoral linkage in the labor market, the foregoing static analysis based on my household survey with its limited time reference is insufficient. A historical analysis is also needed. Therefore, I carried out structured interviews of twenty-six selected households from the same barrios. The main points of these interviews was to gather background data on workers regarding such matters as their migration from the countryside, their occupational experiences, the reasons for migrating and changing jobs, their personal evaluation of city life, and their occupation preferences.

All of the workers interviewed were either agricultural workers or coffee harvesters who had been born in rural areas of municipalities in the Department of Caldas or in neighboring departments and had migrated to urban areas. None of the interviewees showed any preference for working as coffee harvesters or agricultural workers in general. Rather they complained of the hardness and bad working conditions of jobs on coffee growing farms. There was no positive motivation to work as coffee harvesters. They contracted to do such work because they had no other alternative.

Unlike the complaints about work, everyone expressed deep attachment to city life, although the reasons for this preference differed between the married and single men. The former migrated to an urban area and want to stay in the city because of the needs of the family. As they expressed it, "*por la obligación*" (out of obligation; for my family that depends on me). They were concerned about their children's education and about medical care; they hoped for an opportunity to get a job in the urban sector. Their biggest worry about living in an urban area was obtaining their own housing. It is a struggle to get a new job in the urban sector and to settle and become integrated into urban society. The interviewees ran into barriers, like formal education requirement or legal documentation,¹⁷ which obstructed their way, and they gave up searching for jobs in the formal

¹⁷ Normally, to get a job in the urban formal sector, a male worker is required to present his "yellow card" which certifies that he has done his military service. However, in the countryside, many adult males neglect to do military service because they have to stay home as the principal family supporting wage earner and this becomes a definite obstacle to participate in the formal labor market.

sector. They were forced into the UIS and, worse still, they have to return to the countryside to get seasonal work in order to subsist.

Unlike the married men, the younger single men (they are not independent from their parents' household) are quite casual about working as coffee harvesters. Still free from the serious responsibility of feeding their own family, these single men have no clear incentive to work. They have not yet decided on any permanent job, and working on the coffee farms is one of the easy ways to get pocket money, and their contribution to the household income is quite limited. Most of these young men have the expectation of getting into a nonagricultural occupation in the near future, beginning with a temporary job in construction, and then moving into some office work such as a messenger boy.

Both married and single men consider that their living standard improved after migrating to the city, and they prefer to continue living in the urban sector even though they have to go back to work in the rural sector. Therefore, the present situation of these urban-resident agricultural workers has to be understood as a transitional stage in their process of integration into the urban socioeconomic structure. The reason for getting a job in the rural sector and be involved in the circular labor migration from the city to the coffee growing sector varies from one person to another, depending on their educational level, status in the household, and their responsibility for supporting the family. The mixture of these elements influences the differentiation in the occupational structure of the households and therefore the linkage in the labor market between the UIS and coffee cultivation.

CONCLUSION

The principal objective of this study was to show the linkage between the urban and rural socioeconomic sectors in the coffee growing zone in Colombia. At the same time, this sectoral linkage in the labor market was analyzed in relation to the socioeconomic function of the UIS.

Throughout the study, the rural-urban migration has been considered as a phenomenon having a direct relation with the linkage between the workers in the UIS and the coffee harvesters.

As shown in the third section, three important findings of the household survey in the marginal barrios in Manizales and Chinchiná confirm my hypothetical argument. These are:

(a) In the occupational structure of these households, a strong linkage was observed with the labor market in coffee production. This is evidence of geographical linkage between the rural and urban areas in the labor market.

(b) The presence of the occupational linkage between the UIS and the work in coffee cultivation, specially as coffee harvesters, showed up more clearly in the occupational structure at the household level than at the individual level.

(c) The socioeconomic implication of this sectoral linkage of the labor force in the household is interpreted as a strategy to alleviate economic pressure and to assure the subsistence of the household in these marginal barrios.

These findings also support the argument put forward by Errázuriz about the

sectoral linkage of workers in coffee agriculture with the urban sector in the labor market as well as with the areas where they reside.

Compared with previous studies on the UIS and labor migration in general, the dimensions of my analysis expanded the traditional framework for approaching the UIS to include both the urban and rural sectors. Under this wider framework of regional economy covering the coffee growing zone, a new function of the UIS was pointed out: the workers engaged in the UIS could be identified as a "reserve" labor force for the rural sector as well. However, as also pointed out, this sectoral linkage can also be the process for integrating migrants into urban society. Further research will be carried out to follow the changes in this sectoral linkage and to examine its implications for the subsistence of the household. This will also require consideration of the determining elements like the process of structural transformation of coffee agriculture as well as the dynamics of urban economic activities in the region.

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