



Rural Nonfarm Employment and Incomes in Brazil: Patterns and Evolution

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Summary. — In decades past, a large contingent of workers left farms and small towns to move to the large cities of Brazil. But in the 1990s, not only has this flow subsided, but one even observes an “urbanization” of rural areas via a large increase in nonfarm activities in rural areas during the 1980s and 1990s, especially in the Center-West and Southeast regions of Brazil. Exclusively agricultural rural households have lower incomes than “multiactive households” (those with activities in both the farm and nonfarm sectors) and than nonfarm rural households. One even notes a significant reduction in the number of purely farm households over 1992–97 in all regions of the country. © 2001 Elsevier Science Ltd. All rights reserved.

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1. INTRODUCTION

Until recently, it was assumed that rural and agricultural employment was in decline in Latin America. It was also postulated that the smaller the rural population, the more developed is the region. The OECD countries, after decades of depopulation of their farmlands and the brutal concentration of their populations in large cities, began in the mid-1980s to design specific policies to avoid what is conventionally called the desertion of their rural areas (USDA, 1997). In the meantime, in Latin American countries, the rural exodus and abandonment of small and medium cities was accepted as inexorable.

Anderson and Leiserson (1980), in their pioneering work, noted however that nonfarm activities were expanding very rapidly in farming regions of Africa, Asia, and Latin America as a result of agricultural development itself, and merited special attention in the design of rural and even urban development strategies. According to data from 15 developing countries (among them, Brazil), they showed that nonfarm income constituted 20–30% of rural employment in 1970, and the percentage could have been as high as 30–40% if villages and

small towns are included as part of rural areas. The authors note that these percentages should be taken as minima in that the official employment figures reflect the “primary occupation” during a particular period (generally only the week before the census interview) and often ignores the rural nonfarm employment (RNFE) of small farmers and of women in rural areas.

Klein (1992) also called attention to the fact that in Latin America, rural farm employment (in terms of numbers of economically active persons) decreased 0.8% per year in the 1970s and RNFE increased 3.4% per year, faster than the average growth of GNPs. In 12 of the 18 countries for which census information is available, RNFE was increasing more rapidly than overall employment, as was the case in

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Brazil; in eight countries RNFE increased more rapidly than urban employment.

Using Brazilian census data similar to those used by Klein, Graziano da Silva (1996) noted that in the 1960s and 1970s a substantial number of rural workers moved from the countryside to the rural-urban periphery, thus urbanizing a large part of the agricultural workforce that formerly lived on farms. In the 1980s, by contrast, this movement was substantially reduced, with a veritable urbanization of the Brazilian countryside via the growth of nonfarm employment in rural areas, especially in the Center-West and Southeast regions. In the 1990, for example, for each five persons residing in rural areas of the region where agriculture is the most developed in Brazil (in the state of São Paulo), at most two were employed in agriculture. Another three were employed in nonfarm activities, principally in processing industries (agroindustry), domestic services, civil construction, commerce, and social services.

The main objective of this paper is to extend the analysis of rural nonfarm employment trends to the 1990s, and explore the determinants of these trends. A principal finding is that RNFE continued to grow and farm employment to fall. The paper proceeds as follows. In Section 2 we present a summary of available data on the evolution of farm and nonfarm and rural and urban employment in Brazil. In Section 3 we discuss the principal patterns of RNFE over regions. In Sections 4 and 5 we present an analysis of the main categories of employment and income of rural families. In Section 6 we conclude and present implications.

2. TRENDS IN RURAL AND AGRICULTURAL EMPLOYMENT

Brazil undertook its latest Demographic Census in 1991, and a population update in 1996, enumerating persons according to sex, age, and place of residence. On the basis of this universe, the Brazilian Institute of Geography (IBGE) undertook annual National Household Sample Survey (PNAD),¹ which is the only source of data with coverage of the principal urban and rural areas of the country.²

Unfortunately, several changes made it impossible to compare PNAD data from 1992 to 1997 with those of prior years.³ It is, however, possible to reconstruct a data series from 1992 on, using the same criteria as those

used in the PNAD surveys in the 1980s,⁴ excluding those persons engaged exclusively in production for home consumption/use, as well as unpaid workers who work less than 15 hours per week (Graziano da Silva & Del Grossi, 1997). We use these reconstructed data, which we call "restricted EAP (economically active population) to distinguish them from data published from the PNADs during 1992-97, which we call "broad EAP."⁵

Note that the agricultural EAP varies according to the reference period for the definition of principal activity of the survey respondent, given the great seasonal variation of agricultural activities. IBGE uses the last week of September as the reference period for defining principal occupation; we use that definition as well, even though we note that this underestimates the number of persons that consider agriculture their principal activity during the year.

Table 1 shows the evolution of Brazilian population over 10 years of age, during the period 1981-92 and 1992-97. Note that in the 1980s one observes a reversal of the tendency toward reduction in rural population, when it dropped at a rate of -0.2% per year. The data show that in 1992-97 the rural population aged 10 or more increased at 0.5% per year, well below that of the overall population. It is interesting that the above evolution was occurring alongside a change in the tendencies in the rural agricultural EAP, which rose although slowly in the 1980s and then dropped rapidly in the 1990s, at -2.2% per year, reflecting a rise in cropping and harvesting mechanization, especially in the regions on the agricultural frontier.

Rural unemployment also increased rapidly (at 7.4% per year) measured as "unemployed but looking for work during the recall week of the survey" as did inactivity (at 2.6% per year) in particular of retirees and pensioners (the latter at 6.4% per year). The growth in these categories (the unemployed and the retirees living in rural areas) is one of the most powerful indicators that Brazilian rural areas have already been converted into a place of residence disassociated from the place of work or even that those areas are no longer more than a private residence area as well as a place of work, and that rural residents are not necessarily employed or much less necessarily employed in agriculture.

In sum, rural residents do not limit their activities to agriculture (in the strict sense), but

Table 1. Population aged 10 or more, according to residence, occupation, and sector of activity, 1981–97 (millions of persons)^a

	Millions of persons			Annual growth rate (%) ^b	
	1981	1992	1997	81–92 ^b	92–97 ^c
Total pop. aged 10 or more	88.9	113.3	125.1	2.2***	2.0***
Urban pop. aged 10 or more	64.7	89.5	100.8	3.0***	2.4***
Rural pop. aged 10 or more	24.2	23.8	24.3	-0.2*	0.5***
<i>Rural "restricted EAP"</i>	13.9	15.0	14.6	0.7***	-0.8*
Employed	13.8	14.7	14.1	0.6***	-1.0**
Farm sector	10.7	11.2	10.1	0.4***	-2.2***
Nonfarm sector	3.1	3.5	4.1	1.2***	2.5**
Unemployed	0.3	0.3	0.4	7.6***	7.4***
<i>Noneconomically active</i>	10.3	8.8	9.7	-1.4***	2.6***
Retirees or pensioners	1.2	1.5	2.1	1.9***	6.4***
Other inactive persons	9.1	7.3	7.7	-2.0***	1.7*

^aSource: Special Tables of the Projeto Rurbano, Instituto do Economia, Universidade Estadual de Campinas, February, 1999.

^bThe *t* test indicates whether the difference between the two years is significant.

^cEstimate of the coefficient of a log-linear regression against time. The *t* test indicates whether there is a trend in the data.

*Significance at 20% level.

**Significance at 10% level.

***Significance at 5% level.

also undertake nonfarm activities. Around one million rural residents found jobs outside of agriculture, new jobs during 1981–97. It should be noted, after Anderson and Leiserson (1980), that measuring employment based on place of residence overestimate the capacity for generation of nonfarm employment in rural areas, in the cases where the respondents undertake their activities in urban areas. This can be understood as a new function of the rural areas, to provide residence for a substantial number of persons working in urban areas. This goes both for high-income urban residents who are looking for a better quality of life and leisure (in gated condominium communities, country homes, weekend cottages, and so on) as well as for low-income persons who live on the peripheries of large cities in order to fulfill their dreams of owning a home (or building it themselves), keeping in mind that rural housing laws are less restrictive than urban (Graziano da Silva, 1999).

Table 2 shows that nearly half of the persons employed in nonfarm activities were residents of the Northeast region. In relative terms, São Paulo state has a larger share of rural population employed in nonfarm activities and a higher growth rate of population in these activities during 1992–97. At first glance these observations suggest a close relation between RNFE and levels of agricultural moderniza-

tion. Moreover, as we show below, the main drivers of RNFE in São Paulo and other densely populated regions is the degree of urbanization and the size of the cities in a region, and that the activities and composition of Brazilian RNFE has little relation to the degree of agricultural development of a region.

With respect to farm sector employment, the 1980s showed a significant growth in the Northeast and the Center-West, where there is still an expansion underway of the agricultural frontier. In the 1990s there was a drop in agricultural employment in all regions, especially in the South and in São Paulo, driven by the mechanization of harvesting of cereals and sugar cane (Graziano da Silva, 1994).

Comparing farm sector employment in Brazil in general with that of São Paulo allows us to contrast the average national situation with that of the state that is the most urbanized and has the most modern agriculture. For example, Brazilian farm sector employment represents slightly more than 20% of total employment in 1997. Seventy-five percent of the persons thus employed live in rural areas. By comparison, in São Paulo EAP in the farm sector only represents 6% of the total, with less than half of them rural residents.

Note also that in Table 2 that the South region has a share of EAP in nonfarm activities

Table 2. *Economically active population resident in rural areas, according to branch of activity and region of residence, 1981–97^a*

Regions ^b	Rural employed EAP	Millions of persons			Annual growth rates	
		1981	1992	1997	1981–92 ^c	1992–97 ^d
Northeast	Total	6.1	7.2	7.0	1.5***	-0.8
	Farm sector	4.5	5.6	5.3	1.8***	-1.1
	Nonfarm sector	1.5	1.6	1.7	0.5	0.0
São Paulo	Total	1.0	1.0	1.0	-0.1	-0.7
	Farm sector	0.7	0.6	0.5	-1.0	-5.9***
	Nonfarm sector	0.3	0.4	0.5	1.6*	5.9***
Southeast (less São Paulo)	Total	2.3	2.3	2.3	0.1	-0.3
	Farm sector	1.8	1.7	1.5	-0.8**	-1.8***
	Nonfarm sector	0.4	0.6	0.7	3.3***	3.5***
South	Total	3.7	3.2	2.8	-1.2***	-2.3***
	Farm sector	3.0	2.6	2.1	-1.5***	-4.1***
	Nonfarm sector	0.6	0.6	0.8	0.4	3.9***
Center-West (plus Tocantins)	Total	0.8	1.0	1.0	2.6***	-0.1
	Farm sector	0.6	0.8	0.7	2.3***	-2.8***
	Nonfarm sector	0.2	0.2	0.3	3.7***	7.2***

^a Source: Projeto Rurbano, Instituto do Economia, Universidade Estadual de Campinas, February, 1999

^b This does not include the Great Northern region, except the state of Tocantins that is counted in the Center-West.

^c The *t* test indicates whether the difference between the two years is significant.

^d This is the estimate of the coefficient of a log-linear regression on time trend.

* Significance at the 20% level.

** Significance at the 10% level.

*** Significance at the 5% level.

well below the national average. It is also the South that has the most EAP living on small farms and in a context of diffused industrialization, with the latter much less concentrated than in the Southeast region. The reason is that the small farmers are actually multiactive workers, combining farm and nonfarm sector activities during the year (Schneider & Navarro, 2000).⁶

To understand what drives the growth of RNFE in the country it is essential to know what the principal subsectors are involved⁷ and the main types of employment in them. In aggregate terms for Brazil, 30% of RNFE employment is in service provision, or more than 1.2 million persons in 1997. Within that sector, the most important is domestic services, with 680,000 persons employed. In order of importance of the other subsectors, the first is processing (with 19% of RNFE), employing 780,000 persons, including the food industry and agroprocessing as the most important employers. The next in order of importance is commerce, mainly constituted by petty commerce in food products, followed by social services,⁸ civil construction with about

450,000–500,000 persons each, and with 11–13% of RNFE each. Each of these subsectors has manifested rapid growth since 1981.

In terms of professional categories that compose RNFE, the principal ones in 1997 were: domestic service employees (537,000), builders (246,000), independent service providers (207,000), waiters and waitresses (174,000), primary school teachers (162,000), truck and bus drivers (158,000), cleaners (137,000) and builders' assistants (129,000).

Over different regions of the country, personal services, in particular domestic services, continues to be by far the most important RNFE subsector. The main difference over regions is in the relative importance of agroindustrial employment. The latter is the second ranked source of RNFE in the South region and in the state of São Paulo. In the other regions (the Northeast and the Center-West), the second ranked activities are civil construction and commerce.

Noteworthy also is the importance of the public sector in generating RNFE, especially in the Northeast, in particular where public schools emerge as the single most important

source of RNFE (207,000), in front of domestic services (198,000) and civil construction (178,000). In Brazil, public administration directly employs 212,000 persons (59% of whom are in municipal administration) and another 347,000 in public schools, revealing a fundamental aspect of “urbanization of rural areas”⁹ which is access to public services.

It is also worth noting that by aggregating the various branches of service provision, one arrives at half the persons employed in RNFE and residing in rural areas in 1997. Moreover, the services linked to agriculture (including among them those used by modern agriculture) employ only a very small share (around 2%) of RNFE, even in the state of São Paulo, but now are growing rapidly in the 1990s.

That is, the great majority of persons employed in service provision in RNFE are involved in domestic services, petty commerce of foodstuffs (bars, food shops) and in ambulatory commerce, an activity still typical of the rural interior of the Brazilian Northeast. This means that the great bulk of the rural population engaged in RNFE are working in poorly paid jobs that demand few skills and little schooling, even in the most developed agriculture regions of the country. Moreover, a large part of RNFE is constituted by domestic services that depends on well-off families employing maids, and that is linked to the high degree of concentration of income in Brazil, one of the highest in the world.

3. THE DYNAMICS OF THE CREATION OF RNFE IN BRAZIL

The results presented above concerning the composition and growth of RNFE, both in Brazil in general and in São Paulo, do not differ much from the general patterns found in other Latin American countries as presented in Berdegué, Reardon, and Escobar (2000). Yet it is important to keep in mind the heterogeneity of the activities lumped into the general “sector” of RNFE. Moreover, the phenomena that are driving the growth of RNFE activities in other countries are different and depend on the links between the RNFE activities and other sectors of economic activity in the country, not least of which the agriculture sector itself. As noted above, Anderson and Leiserson (1980) relate the growth of RNFE with the development of agriculture, for example in the case of the growth of services to agriculture.

Moreover, there can also be external drivers of RNFE growth:

historical evidence reveals a rising share of the labor force engaged in nonfarm work. This is partly a result of the slow growth of labor absorption in agriculture and partly a result of the increasing division in rural areas between farm and nonfarm work induced by high elasticities of demand for nonfood goods and services with respect to changes in rural incomes and agricultural output. (...) their main markets are those generated by the growth of agriculture and rural incomes. External markets for handicrafts and for the processed produce of large-scale agro-industries are also important in some countries (Anderson & Leiserson, 1980, p. 241).

The work of Klein (1992) and Weller (1997) identify five main dynamics (obviously not mutually exclusive) of determination of RNFE in various countries of Latin America. Three of them are directly linked to agriculture, to wit: (a) activities arising from “production-linkages” between the farm and nonfarm sectors, either in the commerce, transport, and processing of farm products, or the provision of farm inputs; (b) activities arising from rural consumer demand for nonfarm products, either from rural or urban firms; (c) activities arising from the abundant supply of labor from peasant families (seeking survival employment), including domestic services, farm wage labor, and other activities to complement meager farm incomes.

The other two dynamics are not linked to agriculture: (d) the demand by the urban population of nonfarm goods and services produced in rural areas, such as handicrafts, rural tourism services, and so on; (e) public services in rural areas.

These five dynamics are, we feel, sufficient to explain the rise of RNFE (in both wage and self-employment) in regions that are mainly agricultural, especially in those with dualistic agrarian structure, with large farms using hired labor and with many small family farms, with interlinked rural and urban labor markets. Most Andean country rural areas fit that picture (as in Chile, Bolivia, Peru, and Colombia) as do those in Central America, as noted in Klein (1992) and Weller (1997).

In the case of countries such as Brazil, the demand generated by the urban sectors, independently of local agriculture, can be decisive in the growth of RNFE. Brazil has in practically all its regions large metropolitan areas that profoundly influence the flows of products

and persons whether in the direction city to countryside or countryside to city. The agricultural activities in a given region can be recon'd by urban residents living near rural areas, urbanites in search of leisure, tourism, and environmental preservation. Thus is born another dynamic of RNFE creation, based in what we have termed "new agricultural activities" such as "fee fishing," hunting lodges, production of ornamental plants and animals, and so on. The term "new" was placed between quotation marks because many of these activities in reality are traditional but until recently did not attain economic importance. Some of these activities are traditional, such as hobby farms, small family firms and farms related to fish farming, horticulture, flower farming, fruit farming, raising small animals, and so on. Others are not traditional, such as fee fishing. But they ended up being transformed into important sources of incomes and employment for rural families in recent years. Many of these activities, before little developed and quite dispersed geographically, have become veritable productive chains involving agro-industrial operations, personal services, and relatively complex and sophisticated systems of distribution, communications, and packaging.

That is, in the Brazilian case one can find both the five dynamics cited above. They are not, however, the main drivers of RNFE in regions where the rural agricultural population is relatively small, where cities are large, and a large part of the farm sector PEA live in urban areas, as one finds in the Center-South of Brazil (Graziano da Silva, 1996). In addition, in the regions where the process of agricultural modernization has been most intense (as in the state of São Paulo and the South region, for example), farming generates very little demand for labor and the labor it demands is usually skilled, and that is provided by agricultural service provision firms located in nearby cities (Laurenti & Del Grossi, 2000). Thus, due to the importance in several regions of the demand for RNFE products from urban populations as well as the rural population not linked to agriculture, it is crucial to three additional dynamics not directly related to agriculture beyond the last two mentioned above: (i) demand for RNFE goods and services based in high-income urban households, for rural places providing leisure and/or second homes (country and summer homes, recreational farms) as well as for personal services connected to these activities (gardeners, maids, home maintenance

employees, and so on); (ii) demand for land in rural areas and associated RNFE goods and services by low-income urban households intent on building their own homes; (iii) demand for nonagricultural land by industrial firms and service provision firms that are looking to rural areas to escape the traffic and pollution and congestion of big cities.

These three dynamics—related to real estate—are very important in the Brazilian case, and are driven more than anything by urbanization in certain regions, especially those in the Center-South of the country that contain the great majority of the upper income households and also the most modern farm sector. Each of the dynamics generates different types of RNFE. In general, these dynamics have been undertreated in the RNFE literature in Latin America.

4. EMPLOYMENT OF RURAL FAMILIES

In this section we analyze the farm and nonfarm sector employment of members of rural families, as the combination of these activities determines their incomes per capita. Thus, in this and the next section, the unit of analysis will be extended families in rural areas that include, beyond the nuclear family, parents and others who live in the same domicile with them. By this criterion we construct a consumption and income unit consisting of persons living under the same roof and who share a common fund of monetary and nonmonetary resources.

The typology we use classifies extended families by type of domicile (rural or urban) and employment status (employer, self-employed, employee, and unemployed). Families with at least one employed person are classified as farm, nonfarm, or multiactive (participating in both farm and nonfarm sectors) according to the activities undertaken by their members in the reference week. Farm families are those in which all employed members are engaged in farm sector activities as their principal employment. In the contrary case, the family is considered a nonfarm family. The multiactive family is one in which at least one person works in the farm sector and one in the nonfarm sector, or when at least one member declares doing several types of farm activities (principal and secondary) in the reference week. The families in which one or more members declare that they are engaged in nonfarm activities

Table 3. Number of families, and family income composition and per capita incomes by activity and type of family, Brazil, 1997^{a,b}

Type of family	1000 Families	Farm (%)	Nonfarm (%)	Retired (%)	Others (%)	Income per capita	
						US\$	Relative
All	40,644	6.3	75.2	14.1	4.4	251.57	260
Rural	7,379	43.1	38.5	15.3	3.1	96.48	100
Employers	310	49.0	41.5	6.7	2.7	352.97	366
Farm	172	85.5	0.0	9.7	4.8	284.17	295
Multiactive	76	52.9	39.1	6.0	1.9	356.74	370
Nonfarm	63	0.0	95.5	3.6	0.9	499.24	517
Self-employed	3,531	51.5	31.0	15.2	2.3	84.58	88
Farm	2,093	77.3	0.0	20.5	2.3	72.58	75
Multiactive	904	49.7	37.2	10.9	2.2	82.82	86
Nonfarm	534	0.0	88.0	9.4	2.6	134.73	140
Employees	2,854	36.2	52.8	8.9	2.1	87.57	91
Farm	1,355	88.2	0.0	10.1	1.8	58.68	61
Multiactive	448	55.5	36.6	6.9	1.0	78.01	81
Nonfarm	1,051	0.0	88.5	8.8	2.7	129.64	134
Unemployed during the reference week	684	0.0	0.0	82.7	17.3	83.39	86

^a Source: Projeto Rurbano, May 2000.

^b 1US\$ = 1.096 reals in September 1997.

both as principal and secondary activities were considered nonfarm families (Del Grossi & Graziano da Silva, 1998).

Table 3 shows that 40.6 million extended families exist, and at least around 7.4 million (around 19%) live in rural areas. The Northeast region has nearly half (49%) of rural families; the South has 18%, the Southeast has 17% and the Center-West and the state of São Paulo, 8% each in 1997. The biggest group of rural residents is the self-employed, with 3.5 million families, about half of the rural families. The Northeast contains 57% of them (more than two million families of this category); the South contains 20%. The great majority of these are farm families (60% or 2.1 million) and are distributed over regions in a way similar to the self-employed in general. There are also nearly one million multiactive self-employed families; 65% of them are in the Northeast, the other 538,000 self-employed are nonfarm families, half of which live in the rural Northeast.

Nearly only the nonfarm self-employed numbers grew over 1992–97 both in the aggregate and in all the regions considered. There was a sharp drop in farm family self-employed in the South and in the state of São Paulo and the number merely was static in other regions. Next to the self-employed, the biggest group is the employees, 2.9 million

families in 1997. The multiactive employees' families plus the nonfarm ones equal 1.5 million families, which surpasses the number of farm employees families. That is, the number of rural families with at least one member working in the nonfarm sector exceeded the number with only farm sector employees in 1997.

The regional distribution of these employee families shows a concentration in the regions with more developed farm sectors, such as the Southeast with 35% (including São Paulo which itself contains 13%), while the Northeast still comprises the biggest group (39%) of these landless rural workers.

During 1992–97 there was a sharp increase in the number of employee families living in rural areas, especially nonfarm employees families the number of which leapt in all regions. There was also a sharp increase in the number of families of unemployed in all the regions considered, that is, families with persons over 10 years old who were not employed in the reference week—going from 592,000 to 778,000 families during the period, a growth of 186,000 in five years.

It is worrying that on one hand there is a decline or stagnation in the number of family farmers, farm worker families, and multiactive families, and on the other hand, the number of landless families of rural employees and the unemployed is growing rapidly. This pattern

magnified in 1995–97 as a fruit of the recessionary effects of the Plan Real, an attempt to attain monetary stability.

5. RURAL FAMILY INCOMES

Using the PNAD data of 1990, Graziano da Silva (1996) showed that, for a given branch of activity, the average income in that activity of an urban resident always exceeds that of a rural resident. Among those working in agriculture, those living in the city earn on average nearly three times more than those living in rural areas. The author also found that nonfarm incomes were substantially higher than agricultural incomes for rural residents; the exception was farm incomes relative to personal service incomes in the Center-West. These two findings combined indicate that it is the low farm incomes that lower the average income of rural residents relative to urban residents.

The data in Table 3 show that these differences continued in 1997: farm sector families continued to have an average per capita income lower than the multiactive for a given employment status (employer, self-employed, or employee). Note also that the rural nonfarm families, both the self-employed and the employees, have a higher per capita income that is almost the double of farm families and well above those of the multiactive. This is due to the heterogeneity of rural nonfarm activities, as we showed above, noting that within the category of nonfarm self-employed or employees one can find anything from maids to highly skilled technicians.

Additional data that because of limitations of space we cannot present here, show that monthly incomes *per capita* decline as one moves from urban to rural, and from general rural to rural areas where farming predominates both for farm and multiactive families. Moreover, rural per capita incomes are higher in São Paulo and the Center-East and South, and decrease as one moves toward the North-east and Southeast regions.

The composition of rural incomes is also presented in Table 3. It shows a strong reliance by self-employed families on income transfers as pensions and retirement payments. For self-employed farming families with farms less than 10 ha, the share of pensions and other retirement payments is between a quarter and a third of family income. Among the multiactive, this share is much lower, around 10–15% among

multiactive smallholders. This means that transfers from Public Social Security play an important role in the reproduction of small farm families and suggests that Social Security be combined with an extension of public services to rural areas to together constitute an important policy package to stem rural exodus, while at the same time serving as an income safety net for small family farmers in the less-developed regions such as the Northeast.

It is practically impossible to analyze the evolution of family incomes during the first half of the 1990s, given the difficulties in finding comparable estimates over time given high inflation rates and the distortions produced by the two economic stabilization programs (The Collor Plan the Plan Real) applied during the period. The growth rates calculated for the period of the Plan Real (1995–97) show that the average monthly income of all Brazilian families did not grow. If one then considers the different types of rural families, it is only the employers that did not show significant losses. Self-employed and employee families, whether farm or multiactive families, suffered a significant drop in their incomes. Even more interesting is that nonfarm self-employed families experienced an increase in their incomes (Del Grossi & Graziano da Silva, 2000).

There is also another indication of the drop in farm sector incomes and the rise in nonfarm incomes in rural Brazil. We aggregated all the incomes of rural households in Brazil in the data of the PNADs, and found that total farm sector income stagnated from 1992 on, with a minor decreasing trend starting in 1995. Total nonfarm income, by contrast, grew through the period. By 1997 total nonfarm income and total farm sector income were equal, and then nonfarm income pulled ahead in 1998, according to PNAD data from 1998. This is not only due to the fact that the number of persons employed in the farm sector dropped over the 1990s, but also that there was a decline in farm prices. Monteiro (1998) provides evidence that the latter was the case for the principal agricultural commodities for the past 30 years. The drop in prices was accelerated in the 1990s by a policy of indiscriminate opening of the economy to agricultural product imports subsidized by developed countries, with the short-term objective of controlling inflation and afterward with policies of high interest rates and overvaluing of the exchange rate introduced by the Plan Real starting in 1994.

6. CONCLUSIONS AND IMPLICATIONS

One can no longer characterize the dynamic of the Brazilian rural areas as determined exclusively by agriculture. Rural employment can no longer be explained in terms of the agricultural calendar and of the expansion or reduction of agricultural production and area. There is a set of new agricultural activities and nonfarm activities such as the provision of services (personal services, leisure activities, and services linked to other economic activities), commerce, and even industrial activities, that are springing from rural population dynamics distinct from those that were important in the past, such as “rural urbanization” from temporary movement of high-income urbanites into rural areas for weekend or summer stays and more permanent movements of lower income urban households into rural areas to build affordable homes within commuting distance of cities. Rural nonfarm activities are developing from this “rural urbanization,” including construction and maintenance of housing, tourism and leisure services, maid services, environmental preservation services, and production aimed at niche markets.

An explanation for these changes can be found in the concept of the “commodotization of the free time” of rural families (Long *et al.*, 1986) or rather of the members of peasant families that are not employed in farm sector activities and that become engaged in nonfarm productive activities (such as confection of sweets and jams, furniture and domestic utensils) and to leisure-related activities such as hunting and fishing, handicrafts, flower production, raising exotic animals, and so on. The difference is that these goods and services that once were home consumed are not produced and sold like any other commodity. In this process, agriculture takes up less and less labor time of rural families and thus agriculture becomes part-time employment and only a share of the incomes of rural families (Marsden, 1990). This trend was accelerated by the drop in farm incomes over the long term (since the 1980s) from the drop in farm commodity prices in the international market. The data suggest that a drop in farm incomes and a rise in nonfarm self-employment income, and rural families are shifting from being farm families to being multiactive and nonfarm families.

Moreover, our results point to the policy importance of income transfers in the form of pensions and retirement incomes for farm

families. An implication is the need for an active social security policy that can be an effective instrument for combating rural poverty in poor regions, such as in the extensive rural areas of the Northeast.

Another implication is that programs supporting family farms cannot continue to ignore the fact that an important share of the incomes of their potential beneficiaries comes from nonfarm activities and from public social security transfers (Hill, 1999). The criterion used in these Brazilian programs is that program participants earn most of their incomes from farming; yet this means that the programs benefit families with relatively large farms. The families with relatively small farms that are multiactive (also work in the nonfarm sector, as is common) end up being excluded in their great majority from programs supporting family agriculture.

Finally, the growth of the number of unemployed and retirees and pensioners living in the countryside is one of the most important indicators that Brazilian rural areas have been converted into residential districts, and not just workplaces, and that those living in rural areas are not necessarily employed nor working in the farm sector. This increasing disassociation between place of work and residential location, which already occurred in cities, is one more indication of the urbanization of the Brazilian rural areas, and that in the near future rural workers will not need to migrate to urban centers if they wish to be urbanites.

We issue a warning concerning these trends, however. The fact that rural nonfarm employment is growing does not in itself signify an improvement in working conditions and incomes of rural Brazilians. We showed that most of these jobs are in personal services—the majority in maid jobs—and other activities with low levels of qualifications as well as pay. These types of RNFE should not be associated in policymakers minds with the dynamic and self-sustaining growth of the “new rural and agricultural activities” that we have described. Moreover, the personal services are linked to demand based on highly concentrated incomes and to the lack of public policies that address the development needs of the nonagricultural dimension of rural Brazil.

We emphasize that the Brazilian rural areas should be seen by policymakers as areas of opportunity to generate new forms of employment and incomes in the rural nonfarm sector for the segments of the population living there,

which include many persons who lack the skills and qualifications needed to participate in the more dynamic sectors of the Brazilian economy. From this it is necessary to create a new set of nonfarm policies to spur rural development, which today cannot be achieved only by agricultural modernization, whether it ever

could. In the final instance, it is necessary to promote a real “urbanization” of the rural world, to create better living and employment conditions in rural areas so that migration to cities is no longer necessary because one can live in rural areas enjoying the same goods and services that one can find in urban areas.

NOTES

1. There is household research using a subsample undertaken in the intercensus years that did not, however, cover rural populations in the North of Brazil, with the exception of Tocantins (TO). Despite these and other limitations, the PNADs are increasingly important for researchers as they represent one of the few sources of countrywide data that is kept reasonably up-to-date. See Graziano da Silva and Del Grossi (1997).

2. Note that when we refer to aggregate data for Brazil we are actually excluding the rural population of the states of Acre, Rondônia, Roraima, Amazonas, Amapá, and Pará, belonging to the North region.

3. For example, the new classification of employed persons by employment status that was just adopted adds two categories: workers producing for home consumption and workers in construction for their own use, and distinguishes a specific category called (paid) domestic workers. Via the inclusion of the two new categories, IBGE began to consider as employed persons aged 10 years or older that undertake some unpaid activity at least 1 h during the reference week instead of the 15 h required heretofore (Fundação IBGE, 1995).

4. The new PNADs have two recall periods: the year or the week before the interview. In 1997, for example, there were 14.6 million persons who declared having agriculture as their principal activity during the year, a

number which falls to 13.4 million when the recall period is the last week in September.

5. Del Grossi (1999) shows the difference between the two series—what he refers to as the “conceptual expansion”—is constituted mainly by the retired, the young of school age, and women involved in domestic chores, as well as those cultivating small gardens and husbanding small animals. Using the published data (broad EAP) we find that nearly 21% of the EAP in agriculture in 1997 was engaged exclusively in subsistence farming; the majority were unpaid (34%) or self-employed workers (30%). Farm employees constituted just 33% of the EAP in agriculture in 1997.

6. Saraceno (1997) associates these variables with the “diffused industrialization of the third Italy.”

7. The sector combines various occupations of a given branch of activity, for example, a cashier or bank manager under “financial services.”

8. Nearly 70% of persons employed in this category work in public schools and another 8% in public health. The rest are in various assistential services, sports organizations, clinics, and private schools.

9. Weller (1997) also underscores the importance of public services in RNFE in Central America.

REFERENCES

- Anderson, D., & Leiserson, M. (1980). Rural nonfarm employment in developing countries. *Economic Development and Cultural Change*, 28(2), 227–248.
- Berdegú, J., Reardon, T., & Escobar, G. (2000). *Rural nonagricultural employment and income in Latin America and the Caribbean*. Paper presented at the conference “Development of the Rural Economy and Poverty Reduction in Latin America and the Caribbean,” New Orleans, Inter-American Development Bank, March.
- Del Grossi, M. E. (1999). *Evolução das ocupações não-agrícolas no meio rural brasileiro, 1981–95*. Ph.D. dissertation, Campinas: Universidade Estadual de Campinas, Instituto de Economia.
- Del Grossi, M. E., & Graziano da Silva, J. (1998). A pluriatividade na agropecuária brasileira em 1995. *Estudos Sociedade e Agricultura*, 11, 26–52.
- Del Grossi, M. E., & Graziano da Silva, J. (2000). Ocupação nas famílias agrícolas e rurais no Brasil, 1992/97. In C. Campanhola, & J. Graziano da Silva

- (Eds.), *O Novo Rural Brasileiro: uma análise regional* (pp. 67–79). Jaguariuna: Embrapa-Meio Ambiente/ Instituto de Economia, Universidade Estadual de Campinas.
- Fundação Instituto Brasileiro De Geografia E Estatística (IBGE). (various years). *Pesquisa Nacional por Amostra de Domicílios*. Rio de Janeiro: IBGE.
- Graziano da Silva, J. (1994). Evolução do emprego rural na década de oitenta. In C. Alonso, *O Mundo do Trabalho: Crise E Mudança No Final Do Século* (pp. 619–640). São Paulo: Scritta.
- Graziano da Silva, J. (1996). *A nova dinâmica da agricultura brasileira* (2nd ed.). Universidade Estadual de Campinas: Edição Campinas.
- Graziano da Silva, J. & Del Grossi, M. E. (1997). A mudança do conceito de trabalho nas novas PNADs. *Economia e Sociedade*, Universidade Estadual de Campinas, 8 June, 247–261.
- Graziano da Silva, J. (1999). *O novo rural brasileiro* (2nd ed.). Coleção Pesquisas: Universidade Estadual de Campinas.
- Hill, B. (1999). Farm household incomes: Perceptions and statistics. *Journal of Rural Studies*, 15(3), 345–358.
- Klein, E. (1992). *El empleo rural no agrícola en America Latina*. Document 364, Santiago: PREALC/ILO.
- Laurenti, A.C., & del Grossi, M. (2000). A Evolução das Pessoas Ocupadas nas atividades agrícolas e nãoagrícolas nas áreas rurais do Brasil. In C. Campanhola & J. Graziano da Silva (Eds.), *O Novo Rural Brasileirs: Uma analise regional*. Jagua luna: Embrapr-Meio Ambiente/Instituto de Economia, Universidad Estadual de Campinas.
- Long, N. et al. (Eds.). (1986). *The commodotization debate: Labour process, strategy and social network*. The Netherlands: Agricultural University of Wageningen.
- Marsden, T. (1990). Towards the political economy of pluriactivity. *Journal of Peasant Studies*, 6(4), 375–382.
- Monteiro, M. J. C. (1998). Trinta anos de queda. *Agroanalysis* (Rio de Janeiro), 18 (2), 26–31.
- Saraceno, E. (1997). Urban–rural linkages, internal diversification and external integration: A European experience. Paper presented at FAO Seminário Internacional, Interrelación Rural–Urbana y Desarrollo Descentralizado, Taxco, Mexico, April.
- Schneider, S., & Navarro, Z. (2000). Emprego agrícola e novas formas de ocupação no RS. In: C. Campanhold, & J. Graziano da Silva (Eds.), *O Novo rural brasileiro: Uma analise estadual Sul, Sudeste e Centro-Oeste*. Jaguariuna, São Paulo: Embrapap-Meio Ambiente.
- United States Department of Agriculture (USDA), Economic Research Service. (1997). Rural areas show signs of revitalization. *Rural Condition and Trends*, 7 (3), 4–7.
- Weller, J. (1997). El empleo rural no agropecuario en el istmo centroamericano. *Revista de la CEPAL*, 62, 75–90.