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Migratory Dynamics and the Process of Occupation of
Central-Western Brazil: the case of Mato Grosso

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Introduction

The present State of Mato Grosso, in Western Brazil, is one of the two states (the other is Mato Grosso do Sul) that resulted from the 1977 subdivision of the former state of Mato Grosso. The region, now a state in its own right, has had a long and complex history of occupation, and began taking on real importance in the country with waves of pioneering settlers coming from the State of São Paulo in mid-20th century. These settlers first trekked south to occupy the northern part of the State of Paraná and, later, spread out to the southern part of Mato Grosso, engaging largely in cattle-raising for beef production. In the 1960s many others migrated from Rio Grande do Sul and Paraná to engage in wheat and soybean growing (IPEA and FJN, 1997).

The socioeconomic dynamics and spatial configuration of Mato Grosso are quite similar to the "phases" seen earlier in other states in the Central-Western Region of Brazil such as Goiás and the present state Mato Grosso do Sul. But in recent decades the process of demographic and economic occupation has intensified and has had considerable and rapid impacts on the region's production and land structure. This process has clearly had significant implications on its migratory dynamics.

The impacts can be seen through two main aspects. The first regards the migratory trends seen in recent decades, more specifically in the 1980s and 1990s, when there was a significant reduction in the migratory flows to the area. The second consists of the characteristics and forms of insertion of the migrants into the production system. Likewise, this process of transformation can be seen on the intra-state level by observing the demographic behavior in numerous sub-spaces in the state, whose types reflect the regional differences and the peculiarities of the various micro-regions both in regard to the process of economic occupation and the stages of occupation of the agricultural frontier.

A number of different factors allow one to understand the state's demographic dynamics in general and, in particular, its migratory movements. These factors include the advance of soybean production, continued and extensive

cattle raising, gold mining, and the intensification of rural settlements, especially during the 1990s.

The data analyzed here in regard to migration show that the process of occupation of the state has declined significantly, although there are still regions in the northern part that are quite dynamic in terms of migrations. Not only were there fewer migrants arriving in the state, but the receiving areas moved ever farther to the north and northwest of the state, where the agricultural frontiers (or what remained of them) still had some possibility for demographic occupation.

It will be clear from the analyses to be presented below that the way in which Mato Grosso was originally occupied has gradually lost its impetus. This is largely due to the fact that the inclusion of migrants as either settlers or small landowners has become progressively more difficult because of the newer and more vigorous forms of economic occupation of the territory.

Besides this reduction in the intensity and volume of immigration to Mato Grosso, there has also been increased emigration from there. The information analyzed in this regard shows up two very different characteristics: on the one hand, a good part of this emigration really consists of the return of many former immigrants returning to their places of origin, after having failed in their attempt to guarantee their social reproduction in Mato Grosso. This group constituted over 54% of the emigration in the 1990s. Another significant part of the emigration consists of a movement that, during the research, was labeled as "the frontier route" (Cunha, 2002; Cunha, Almeida and Raquel, 2002; and Cunha and Silveira, 1999). In other words, this is not specifically a process of demographic flows of natives or long-time dwellers, but rather of a spatial redistribution of a migrant population that, due to factors of change (to use Singer's terminology, 1980), are forced to seek new places for their possible and "final" settlement.¹

To summarize, it can be seen that, in terms of migrations, Mato Grosso is quite different from what it was in the 1970s and part of the 1980s, due to the progressive disappearance of one of the factors that most contributed to its occupation, namely, the expansion and maintenance of the agricultural frontier areas.

It is not by mere chance that the state today is highly urbanized, because the cities have become the last options for migrants who hope to stay on, in spite of the areas' limited capacity to absorb them.

¹ In an earlier text (Cunha, 2002), we used the expression "story without end" to describe the situation of many settlers or small land owners who, working on the frontier route, are periodically forced to move on to other areas, usually more distant and less hospitable.

II. Mato Grosso: a brief contextualization of its process of territorial occupation

The Central-Western Region of Brazil, and especially the State of Mato Grosso, have an essentially agricultural economy, but still also consists of a great deal of woodland and forest area. These characteristics contribute to its demographic and environmental diversity, which, in turn, explains its vigorous economic growth in recent years.

In the 1960s the Central-West began undergoing a change in its production structure, strongly impelled by governmental incentive programs for modernizing farming and cattle raising and integrating the region into the country's broader markets. These aspects had significant consequences on the state's demographic dynamics and the process of spatial redistribution of its population.

This governmental action was originally spurred on by the concern for integration of the country's various regions during the military regime of the 1960s and 1970s. Considerable investments were made in large farming and cattle-raising projects, including many large projects in the Amazon Region. "While Brazilian society was being harshly repressed by the military administrations that succeeded one another in power during this period, the region of the Araguaia River, Mato Grosso and other parts of the Amazon were invaded by large corporate groups which set up farming and cattle-raising projects." (Oliveira, 1997: 290)

This intervention by the federal government was effected principally by the PRODOESTE Program (Program for Development of the Central-West), put into action through efforts by SUDAM (Supervisory Office for the Development of the Amazon). In the process, numerous economic groups benefited from various aspects of the process of occupation of the Amazon frontier. It should be recalled that many of the projects that were approved, some of which were truly megalomaniac, never got to the operational stage, and a number of scandals involving fraud and graft were uncovered.

Besides the government's concern for national integration there was the so-called *modernization policy*. One of its central objectives was to accelerate the occupation of the Northern and Central-Western regions of the country. Heavy governmental investments were therefore made in infrastructure in these regions, especially for transportation and communications, and a broad policy of tax incentives and lines of credit was set up. However, the small producers had no access to these advantages and were thus excluded from the so-called process of

modernization. This fact caused the process to be known as "conservative modernization."

According to Guimarães (1998), the 1970s and 1980s were marked by the implementation of large agro-industrial companies set up with Brazilian and international capital, often associated with government investments in infrastructure, tax incentives, subsidized credit and the involvement of governmental support organs.

The literature also suggests that the 1970s were basic to any clear understanding of the production structure and urbanization of the Central-West, because the region was greatly benefited by the "modernizing march to the West," a process that brought about an intense degree of migration to the more promising areas.

Later the state joined up with private groups to offer incentives to aid small producers in becoming involved in colonization projects, characteristic of the 1980s, to replace the large farming and cattle-raising projects of the 1970s. For this reason, the 1980s were characterized by the implementation of such colonization projects based on settlements of families on small plots of land. These projects were executed by both public and private companies.

However, in spite of their size, these projects were actually quite limited and had little chance of surviving due to a number of aspects, including the quality of the land, the difficulty faced by producers in obtaining credit and, finally, the fact that most of the colonized areas were extremely isolated (especially in the case of the northern part of Mato Grosso). To illustrate this problematic, it should be recalled that the migrant settlers, especially those from Paraná, had hoped to maintain their experience with coffee plantations, but they soon realized that their land would require special treatment before it could become suitable for planting. Numerous types of crops could not be grown in many specific areas. In addition, when they did manage to produce, they then faced great difficulties in getting their products to market.

In this regard, the opening of major highways, especially the BR-163 between Cuiabá and Santarém (1971-1976), was an important milestone for the full implementation of colonization projects. This period was also characterized by the technological modernization of agriculture and by the demographic growth of these regions.

As a consequence of this "accelerated colonization," many new municipalities were established in frontier areas, including in northern Mato Grosso, which still suffer today from the lack of infrastructure and services. Most of these

towns are small, with populations varying between 20,000 and 50,000 inhabitants and geographically very distant from one another.

In view of this form of demographic occupation, a new, highly capitalized and mechanized type of agriculture was implemented. In Mato Grosso, this type of system is seen mostly for soybean growing. According to Becker (2000), soybeans are a viable option in dense woods, and can also be used to reclaim grazing lands, especially with genetically improved seeds, managed through studies financed by private enterprise with backing from the State, with positive results. However, the author fears for the increase in the deforesting that soybean crops often cause when the planted areas advance too far north, thus increasing the trend of destruction of the environment.

Another important economic activity in these frontier areas is cattle raising, which has been increasingly penetrating the forest areas. This aspect is emphasized by Cláudio Egler (2000), who shows how large state-based capital has invested in the constitution of a strong farming and meat-producing economy in the State of Mato Grosso (the state has the fourth largest herd of cattle in Brazil).

Other aspects should also be considered when one attempts to understand the process of occupation of Mato Grosso, especially the question of the native peoples, the problem of the environment and the practice of gold mining. Although these issues are not treated in this present article, the existence of various problems related to them in the state cannot be ignored, such as the frequent disrespect to native peoples, the way the environment has been managed and is being devastated and, finally, the predatory effect of the gold mining. These are all important aspects related to the process of occupation and expansion of the agricultural frontier in the State of Mato Grosso.

Another important issue in this process regards the forms of land ownership. The appropriation of the land in Mato Grosso took place in an illegal, although common, manner, namely, through claim-jumping, or paper-staking. With false documents in hand, large land-owners assume the ownership of land belonging to Indians and squatters, often with cooperation from local and state politicians (Oliveira, 1997).

These characteristics of the process of territorial occupation, plus the expansion of the conventional agrarian model, was extremely prejudicial to family producers, and had serious socio-environmental impacts, as can be seen from the data gathered by INPE (National Spatial Research Institute). This data indicates that 10% of the forest area had already been deforested by August 1998. The demand for wood is probably the major factor in this critical situation, because Mato Grosso and Pará are the largest log producers in Brazil. In addition, after burning,

cattle raising is the most immediate alternative for increasing the value of the land, and this situation causes a great deal of “social tension” in the state.

All these characteristics have had strong impacts on the migratory process in Mato Grosso and they can be seen not only in the trends of migration over time but also through their effects on the profile of this demographic mobility.

III. Demographic dynamics on a regional level

The data on demographic growth and the process of urbanization in Mato Grosso make it clear that the state underwent a significant inflection in its demographic growth during the 1990s (or, more precisely, during the second half of the 1980s).² This factor resulted basically from the changes that occurred in the state's process of economic development and in its production structure, among other factors.

After numerous periods of explosive demographic growth above 5% per year during the 1970s and much of the 1980s, the state's growth abruptly slowed down in the 1990s to somewhere around 2.4% per year. As can be seen in Table 1, however, this rate has been well above the national average and that of the other Central-Western states, especially of Mato Grosso do Sul.

The same table shows that even as the state's demographic growth fell, it nevertheless underwent rapid urbanization. According to the Federal Census of 2000, no less than 80% of its population lived in the cities. It is true that this degree of urbanization may be overestimated due to the method of collecting data used by the IBGE. As Veiga (2002) argues, the IBGE tends to define certain areas as “cities” even when they do not have the characteristics considered basic to this definition. In any case, for the purposes of this present study it should be recalled that only about 20% of the population of the State of Mato Grosso still live in truly rural zones.

For a state that was occupied and colonized on the basis of federal programs for rural settlements, it is not difficult to note that there is an apparent contradiction involved. A state with a clearly agricultural economic structure with a

² An earlier study indicated that the inflection in the process of occupation of Mato Grosso may have occurred as early as the mid-1980s. It should be recalled that during this same period there was an interruption in the sometimes abundant governmental incentives earmarked for projects for the colonization and expansion of the agricultural frontier (Martine, 1994). For more details on these trends, see Cunha, 2001; Cunha, 2002; and Cunha and Silveira, 1999.

very small proportion of its population living in rural areas reflects the style of development it went through historically. Thus, Mato Grosso is characterized by the predominance not only of large land holdings, but also by primary production based on monoculture and considerable cattle raising. It should be recalled that monoculture today is highly technicized and therefore uses very little labor in its operations.

Table 1
Total population, annual growth rate and degree of urbanization
Brazil and the Central-Western States
1970/2000

State	Population				Annual Growth Rate (%)			Degree of Urbanization			
	1970	1980	1991	2000	70/80	80/91	91/00	1970	1980	1991	2000
Distrito Federal	537.492	1.176.935	1.598.415	2.043.169	8,15	2,82	2,77	96	96,8	94,7	95,7
Goiás	2.414.325	3.125.354	4.012.562	4.994.897	2,61	2,3	2,46	45,9	67,5	80,8	87,9
Mato Grosso	598.879	1.134.230	2.022.524	2.498.150	6,59	5,4	2,37	38,8	57,7	73,3	79,4
Mato Grosso do Sul	998.211	1.393.019	1.778.741	2.075.275	3,39	2,25	1,73	45,3	66,8	79,4	84,1
Rondônia	111.064	491.069	1.130.874	1.377.792	16,03	7,88	2,22	53,6	46,5	58,2	64,1
Tocantins	516.447	743.750	920.116	1.155.251	3,71	1,95	2,56	24,8	40,1	57,7	74,3
Total	5.176.418	8.064.357	11.463.232	14.144.534	4,53	3,25	2,36	48,2	66,5	77,1	83,5

Source: FIBGE, Demographic Censuses 1970, 1980, 1991 and 2000. Special Tabulations (NEPO/UNICAMP).

This reduction in the intensity of the demographic growth clearly mirrors the fall in migrations. The census data show that immigration from other states fell off almost 23% between the 1980s and the 1990s, although it still attained rates above those seen in the 1970s.³ However, the impact of these migratory flows on the population of the state, measured by the average annual rates of immigration, have clearly been losing strength, since this rate fell from 0.94% per year in the first period analyzed to 0.58% in the 1990s. That is, it fell approximately 50% in 20 years.

In regard to the more significant migratory flows, Table 2 and Graphs 1, 2 and 3 show that, besides the fall in immigration, a significant change occurred in the profile of the movements in terms of last residence of the migrants. At the high point of occupation of the territory, persons from Paraná represented approximately 35% of all immigrants. These, plus the new arrivals from Goiás (14%), São Paulo (13%) and Mato Grosso do Sul (11%), represented approximately 3/4 of all

³ A methodological explanation would seem in order at this point. The Censuses of 1991 and of 2000 make it possible, at state level, to enumerate migrants in regard to their "last place of residence" (last stage), and their "place of residence 5 years [before the census]" (fixed date). But in the 1980 Census information on "fixed date" was not collected. Although each of the types of "definition" of migrant has its advantages and disadvantages (Carvalho and Machado, 1992) there is preference in this present study for the "last stage," as it reflects the most recent movements and allows for a longer time span. Therefore, the numbers derived from both forms of identifying the migrants, besides referring to different time intervals, are also of different natures and are comparable only in situations that need not be gone into here.

immigration. The situation was considerably different in the 1990s, there having been a fall in the relative weight of Paraná (19%), which resulted in a higher relative share of persons from other places, such as Rondônia.

But in some cases, as in the micro-region of Colíder, there was also significant presence of Northeasterners during the 1980s, attracted especially by the lure of the gold mines. Of the three major areas in northern Mato Grosso, this micro-region of Colíder, received the heaviest volume of immigration. This situation makes clear the differences among the various types of migration that moved to the state. Motivations were different as well as the nature of the migrations made by northeasterners and southerners.⁴

The slowing down of the immigration was not the only demographic factor responsible for the reduction in populational growth in the State of Mato Grosso. There was an unquestionable fall in the state's power to attract migrants, especially those interested in the "promises" of the agricultural frontiers that were welcoming small landholders who intended to establish farms on a family basis. Nevertheless, there was also considerably greater emigration from Mato Grosso as of the 1980s and an enormous increase in the 1990's (approximately 100% greater than in the 1970s).

In any case, it is important to note that emigration virtually stabilized between the 1980s and the 1990s and, as a consequence, underwent a reduction in intensity (from 0.39% per year as compared to 0.34% per year, respectively).

This relative stabilization of demographic losses shows, on the one hand, that the strongest impact of the broad changes in production systems in the state seem to have occurred between the mid-1980s and the early 1990s. The losses also indicate the significant reduction in immigration, discussed above. In fact, with fewer migrants moving to the state, one would also expect a fall in the number of departures as well.

⁴ For a discussion on the differences between migrations of northeasterners and of southerners, see Cunha and Azevedo, 2001, for example.

Table 2
Numbers of immigrants and emigrants with less than 10 years of residence
State of Mato Grosso
1980-2000

More important Flows	1980		1991		2000		Variação % 80/00	
	Immig	Emigr	Immig	Emigr	Immig (*)	Emigr	Immig	Emigr
Total	328.376	121.731	543.179	244.438	420.296	249.423	28,0	104,9
Paraná	112.440	4.529	164.597	52.559	76.516	39.839	-31,9	779,6
Goiás (**)	46.706	16.027	51.121	29.528	55.976	42.747	19,8	166,7
São Paulo	41.833	20.176	64.120	37.689	46.387	45.425	10,9	125,1
Mato Grosso do Sul	35.297	13.091	68.320	24.828	52.777	26.561	49,5	102,9
Minas Gerais	31.708	6.289	24.267	12.120	18.358	9.331	-42,1	48,4
Rondônia	3.692	47.455	30.509	39.531	46.194	26.766	1151,3	-43,6
Bahia	7.831	1.182	12.262	2.595	10.192	3.584	30,1	203,3
Rio Grande do Sul	17.893	1.047	27.800	8.738	20.610	8.103	15,2	673,6
Santa Catarina	7.703	597	25.880	6.320	17.193	8.415	123,2	1310,2
Pará	2.006	2.451	13.210	7.970	14.289	11.897	612,2	385,5
Maranhão	1.463	376	22.148	2.504	13.525	4.014	824,7	967,8
Distrito Federal	1.765	2.310	4.923	2.744	3.598	4.534	103,8	96,3
others	18.040	6.204	34.022	17.312	44.682	18.207	147,7	193,5

Source: FIBGE, Demographic Censuses 1980, 1991 and 2000. Special Tabulations (NEPO/UNICAMP).

(*) This figure considers the "pro-rata" distribution of migrants who failed to declare state of prior residence

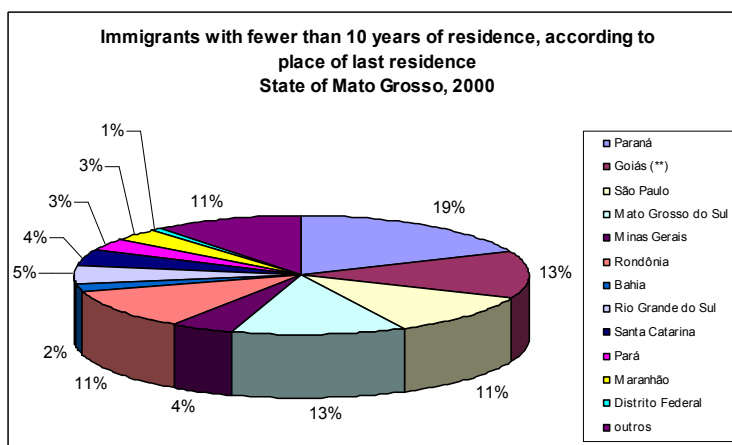
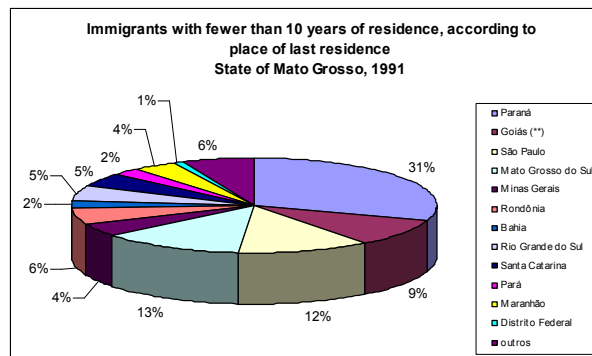
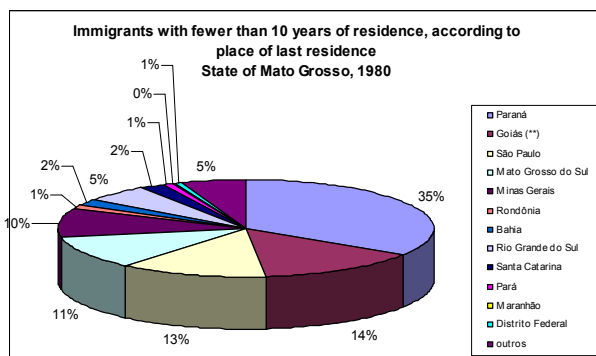
(**) In order to maintain comparability for 1991 and 2000 the numbers for the State of Goiás were added to those of Tocantins, which was dismembered from the former in 1988.

One further aspect should be considered in analyzing the emigration from Mato Grosso, namely, the return of many former migrants to their areas of origin, especially during the 1990s. As can be seen in Graph 4, of the total number of persons who left the state, over 54% moved back to their states of birth. This rate is higher than that seen in the previous decade, which was a little over 21%.

This fact allows one to observe that this emigration cannot be characterized as a simple process of departure of these migrants from Mato Grosso, but rather a process of return to their places of origin due to the difficulties encountered in settling down in that state. Such factors undoubtedly involve the interaction of various aspects, such as the nonexistence of suitable land, already claimed by the large landholders, ineffective policies regarding homesteading, and the absence of alternative sources of work that would allow social reproduction.

However, the low rate of return during the 1980s affected not only the southerners, who traditionally almost never return (Cunha and Azevedo, 2001, and Cunha, 2004), but all other migrants as well, regardless of origin, including northeasterners. This fact leads one to consider the hypothesis that, during the 1980s other frontiers were still opening up, and this fact allowed migrants to continue looking for other possibilities rather than return to their states of origin. This hypothesis is strengthened when one realizes that, during the 1990s, even the southerners showed significant numbers and proportions of returning migrants.

Graphs 1, 2 and 3



Source: FIBGE, Demographic Censuses 1980, 1991 and 2000. Special Tabulations (NEPO/UNICAMP).

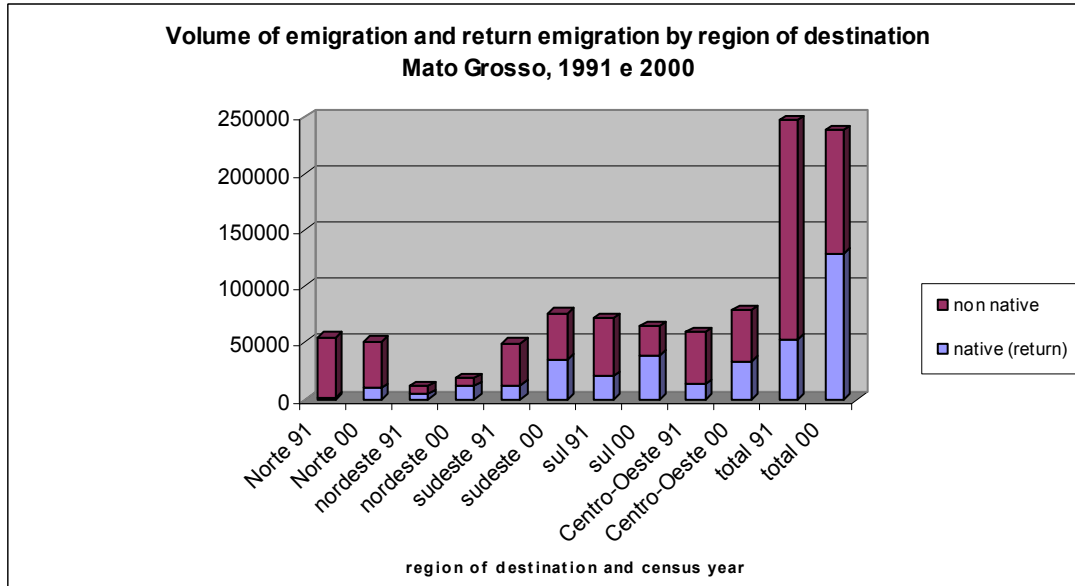
The migratory characteristics of Mato Grosso can be better perceived and interpreted by desegregating the analysis in regional terms,⁵ for a number of reasons. There is the heterogeneousness of the state not only with respect to demographic behavior and the specific aspects of its process of occupation (including the different historical periods), but also with changes in the economy, the land-ownership structure, the use, occupation and covering of the soil, and others.

Until the 1980s the state could be divided into two vaguely defined portions: the north, an area of greater demographic dynamism over the last two decades, and the south, a more consolidated area with lower rates of demographic growth. In fact, while, areas in the far north such as Alta Floresta, Colíder and Alta Teles Pires grew at very high rates during the 1980s, the same was not true of the more southern regions, with the exception of Cuiabá and Rondonópolis. Even in the

⁵ Due to the lack of comparability among censuses regarding information on inter-municipal migration, the information on place of residence 5 years before the Census for 1991 and 2000, and last place of residence for migrants over age 5 and with less than 5 years of residence for the 1980 Census, were used to analyze intra-state dynamics.

1990s these areas were growing at rates above 2% per year. In fact, these two cases involve micro-regions located where the most important cities in the state are located, with greater economic diversity, as might be expected. In addition, almost the entire administrative system of the state is located in Cuiabá, the State Capital.

Graph 4



Source: FIBGE, Demographic Censuses 1991 and 2000. Special Tabulations (NEPO/UNICAMP).

But three different situations could be seen in the 1990s: one occurred in the micro-regions of Cuiabá, Rondonópolis and Alto Pantanal, which are the most urbanized and most dynamic areas, where industry and services are well developed. The second situation is found in the central region of the state, which consists largely of dense woods and encompasses the micro-regions of Parecis, Primavera do Leste, Alto Teles Pires, and Canarana. This latter region has undergone a somewhat different process of occupation, since soybeans are its predominant crop, although cotton and corn production are also common. The third situation is found in the northern part of the state, which, until the late 1980s, saw the expansion not only of the agricultural frontier, but an even more intense growth of gold mining, causing a high rate of demographic growth until the 1990s, when it again fell.

Table 3
Population and annual demographic growth rate by Micro-region
State of Mato Grosso, 1970, 1980, 1991 and 2000

Micro-regions	Total Population				Annual Population Growth		
	1.970	1.980	1.991	2.000	1970/1980	1980/1991	1991/2000
Alta Floresta	1.287	23.011	86.229	89.848	33,4	12,8	0,5
Alto Araguaia	13.437	17.888	22.007	24.117	2,9	1,9	1,0
Alto Guaporé	8.095	19.738	48.250	60.663	9,3	8,5	2,6
Alto Pantanal	75.186	82.941	117.037	123.141	1,0	3,2	0,6
Alto Paraguai	25.187	34.624	43.407	30.512	3,2	2,1	-3,8
Alto Teles Pires	7.028	19.069	50.643	101.610	10,5	9,3	8,0
Arinos	2.911	22.281	48.842	67.447	22,6	7,4	3,7
Aripuanã	1.405	15.888	70.949	96.989	27,5	14,6	3,5
Canarana	12.099	34.476	65.904	79.086	11,0	6,1	2,0
Colider	1.702	26.004	138.683	129.325	31,3	16,4	-0,8
Cuiabá	145.046	314.045	601.449	740.648	8,0	6,1	2,3
Jauru	39.064	107.145	112.083	106.358	10,6	0,4	-0,6
Médio Araguaia	11.183	43.607	54.371	61.073	14,6	2,0	1,3
Norte Araguaia	10.094	27.602	57.535	87.251	10,6	6,9	4,7
Paranatinga	7.840	23.273	27.924	28.591	11,5	1,7	0,3
Parecis	3.055	10.235	32.156	61.771	12,9	11,0	7,5
Primavera do Leste	10.956	12.839	18.507	56.959	1,6	3,4	13,3
Rondonópolis	114.222	139.663	187.068	223.741	2,0	2,7	2,0
Rosário do Oeste	26.898	28.374	30.563	31.347	0,5	0,7	0,3
Sinop	3.658	23.959	74.186	131.445	20,7	10,8	6,6
Tangará da Serra	24.840	54.940	73.854	112.086	8,3	2,7	4,7
Tesouro	53.686	52.628	60.877	54.142	-0,2	1,3	-1,3
Total	598.879	1.134.230	2.022.524	2.498.150	6,6	5,4	2,4

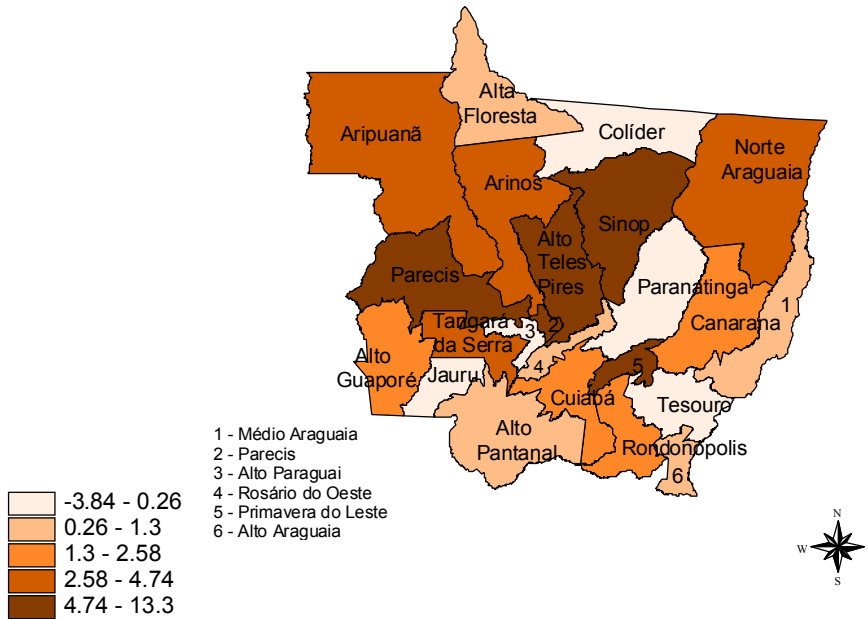
Source: FIBGE, Demographic Censuses 1970, 1980, 1991 and 2000. Special Tabulations (NEPO/UNICAMP).

The northernmost regions of the state, white Alta Floresta and Colider drastically reduced their growth during the 1990s, other areas in the state, farther to the west, such as Parecis, Alto Guaporé, Alto Teles Pires and Aripuanã, maintained significant demographic dynamism (Map 1), although at a slower pace. The same can be said of areas in the northeast, especially the micro-region of Norte Araguaia. In Alta Floresta and Colider the almost complete depletion of gold-mining operations in the region may explain a good part of this process, but in the other new areas, settlement projects (especially in Aripuanã, to the northwest, and Norte Araguaia, in the northeast) and, principally, the implementation of soybean plantations (in the other regions) might be the aspects that best explain these changes.

In fact, as can be seen in Graph 5, several of the regions mentioned above were among those most affected by the project, including the number of families involved,⁶ such as the micro-regions of Norte Araguaia and Aripuanã.

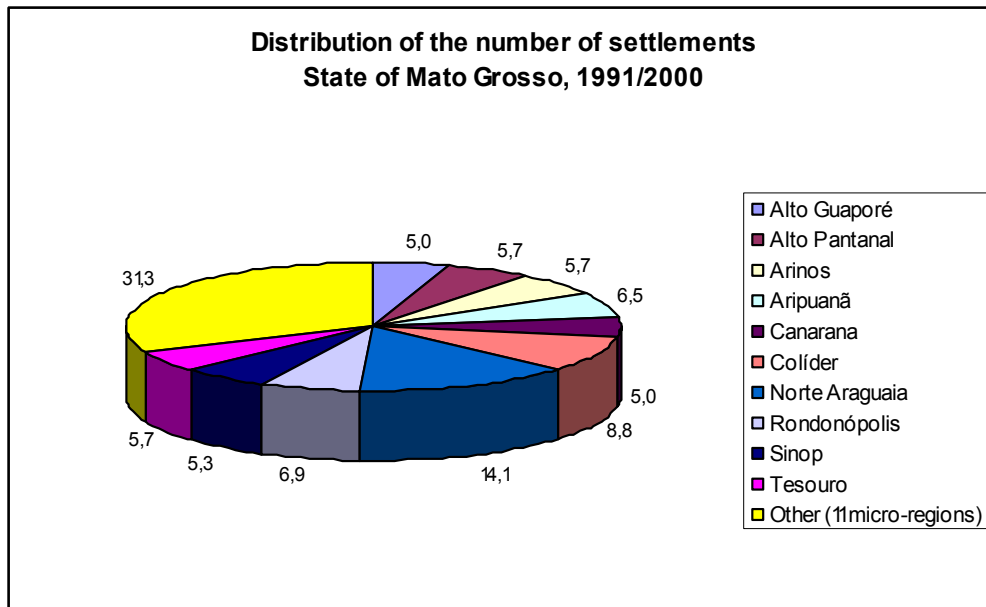
⁶ It should be recalled that settlement projects are very heterogeneous in terms of areas occupied and the number of families involved.

Map 1
Average Annual Growth Rates by Micro-region
State of Mato Grosso
1991/2000



Source: FIBGE, Demographic Censuses 1991 and 2000. Special Tabulations (NEPO/UNICAMP).

Graph 5



Source: INCRA - MT, Regional Superintendence of Mato Grosso - SR-13/MT. Special tabulations, NEPO/UNICAMP

Table 4
Volume of Last-stage Interstate Immigration by Micro-region
State of Mato Grosso, 1980/2000.

Micro-region of residence	Volume of interstate immigration		
	70/80	80/91	91/00
Alta Floresta	9729	46226	15061
Alto Araguaia	20679	5060	4034
Alto Guapore	30793	14133	11056
Alto Pantanal	6428	10695	8249
Alto Paraguai	16527	4181	2230
Alto Teles Pires	4616	25671	35361
Arinos	17567	18411	12139
Aripuana	6153	36407	30090
Canarana	7669	20879	16379
Colider	16735	72161	23304
Cuiaba	14483	112783	83149
Jauru	7817	20321	9926
Medio Araguaia	23902	12186	10106
Norte Araguaia	35858	18286	23669
Paranatinga	7547	5640	3490
Parecis	977	13627	20752
Primavera do Leste	0	9887	17505
Rondonopolis	50490	34136	29986
Rosario Oeste	8139	1721	1445
Sinop	7414	37734	34979
Tangara da Serra	30647	18724	22411
Tesouro	4206	7009	4973
Total	328376	545878	420294

Source: FIBGE, Demographic Censuses 1980, 1991 and 2000. Special Tabulations (NEPO/UNICAMP).

Although Mato Grosso has been urbanizing at a very fast pace, in recent decades, specifically in function of the broad changes its rural areas have been undergoing, there is still significant migration to these areas in various regions.

On the one hand, it can be seen that migrations to rural areas throughout the state fell both in absolute numbers (from 128,000 between 1986 and 1991, to 51,800 between 1995 and 2000) and in percentage (from 55% to less than 21%).⁷ On the other hand, during the 1990s, 40% of the migrants moved to the rural areas in micro-regions such as Norte Araguaia, Alto Guaporé and Rosário do Oeste. No less significant were the percentages from the micro-regions in the north, including Aripuanã, Colíder and Alta Floresta, which, during the same period, reached approximately 30% (Table 5).

During the last decade, as a consequence of the social costs of this pattern of development, which caused repercussions on the concentration of land and a significant fall in the number of jobs in agriculture (Mattei, 1998), national public

⁷ It is clear that the total for the state is influenced by the weight of Cuiabá and Rondonópolis because, since the 1970s, a large proportion of the migrants who moved to urban areas can be found in these cities (see Table 5).

policies were addressed somewhat more directly to the question of land reform. Notwithstanding its various deficiencies,⁸ this step resulted in an increase in the number of settlements throughout the country. Mato Grosso, for example, saw a boom during this period. According to data published by INCRA (National Land Reform Institute, an organ of the federal government),⁹ during the period extending from 1986 to 1991, only 25 settlements were established in the entire state, but this number rose to 262 during the 1990s.

IV. Characteristics of migration in Mato Grosso: consequences of the form of occupation and economic changes

In this article the authors intend to show that the characteristics of migrants were fully consistent with the structure of determinants that this study identifies as explanations for the migratory trends seen in the period in question. It is also significant that these migrants show a certain selectivity that tends to dissipate with time, as the process of occupation on the frontier also dissipates. In other words, as the profile of the migrants changes from one decade to the next, it is also "molded" to a more urban reality as the rural areas gradually become less predominant and less feasible, in view of the way the state is structured in economic and land-ownership terms.

⁸ There is no place here for a discussion on the various types of problems involved in land reform in Brazil and on its true effectiveness to constitute a viable solution for the population that still live in rural areas in the region or in other parts of the country. Some of the challenges encountered have to do with regularization of the ownership of the land that is occupied, the economic feasibility of the settlements (which involves credit mechanisms), the lack of technical support and infrastructure, especially in terms of roads and highways, depleted land that is of poor quality for farming, land in forest areas, legal problems, and others. It is important to stress that all these issues were repeatedly mentioned during the interviews held in the various regions of the state of Mato Grosso. Regarding these topics, see Leite, 1998; Gomes, 2000; and Ferreira, Fernandez and Silva, undated.

⁹ INCRA-MT, Regional Supervisory Board of Mato Grosso - S-13/MT.

Table 5
Interstate Migrants according to situation of household in the area of destination, by Micro-region
State of Mato Grosso 1970/80, 1981/91, and 1991/2000

Microrregiões	Urbano			Rural		
	70/80	81/91	91/00	70/80	81/91	91/00
Aripuanã	28,3	58,1	65,4	71,7	41,9	35,4
Alta Floresta	27,6	55,1	60,5	72,4	44,9	39,5
Colider	10,0	62,5	63,6	90,0	37,5	36,4
Parecis	26,5	52,8	73,1	73,5	47,2	26,9
Arinos	25,4	64,3	70,7	74,6	35,7	29,3
Alto Teles Pires	34,8	58,3	74,5	65,2	41,7	25,5
Sinop	44,3	63,0	82,0	55,7	37,0	18,0
Paranatinga	28,5	53,2	64,1	71,5	46,8	36,0
Norte Araguaia	20,5	37,7	82,5	79,5	62,3	49,9
Canarana	31,3	54,4	65,4	68,7	45,6	34,6
Médio Araguaia	67,0	84,5	88,0	33,0	15,5	12,0
Alto Guaporé	38,9	57,7	56,7	61,1	42,3	43,3
Tangará da Serra	40,7	79,4	83,7	59,3	20,6	16,4
Jauru	31,2	63,2	63,5	68,8	36,8	36,5
Alto Paraguai	38,8	85,0	82,7	61,2	15,0	17,3
Rosário do Oeste	52,8	55,7	51,3	47,2	44,3	48,7
Cuiabá	91,9	97,4	95,2	8,1	2,6	4,8
Alto Pantanal	49,7	70,1	74,8	50,3	29,9	25,2
Primavera do Leste	-	68,5	86,9	-	31,5	13,1
Tesouro	32,6	67,6	76,6	67,4	32,4	23,4
Rondonópolis	64,7	81,1	87,0	35,3	18,9	13,0
Alto Araguaia	60,7	70,6	82,5	39,3	29,4	17,5
Total UF	45,0	69,9	79,4	55,0	30,1	20,6

Source: FIBGE, Demographic Censuses 1980, 1991 and 2000. Special Tabulations (NEPO/UNICAMP).

As for the demographic dimension, one of the first aspects that deserve emphasis is the age composition, by gender and family of the migrants. Authors such as Sydenstricker (1992), who studied migrations to frontier areas such as Machadinho, in Rondônia, have noted that even when the head of the family migrated first to prepare the land, either alone or with older sons, the family nature of this type of displacement was incontestable. The results published by Diniz (2002) also show, for the case of the State of Roraima, that there is a clear predominance of married persons, especially on the frontiers.¹⁰

¹⁰ The author develops a very interesting typology of "the evolutionary history of the frontiers" (p. 3), presenting the categories of pioneer, transitory, consolidated and urbanized. Although this classification could be very useful for the present analysis, the available data do not allow such a differentiation. For greater detail on this classification, see Diniz, 2002, or Diniz, 2003.

In fact, given the specific character of the "appeal" of the region for migration, as an agricultural frontier, especially in past decades, one might suppose that there would be a predominance of families¹¹ except in very specific cases, such as in the gold-mining regions. In demographic terms, this would have consequences on the form of the age pyramids, on the one hand and, on the other, on the profile of the migration according to the different types of domestic arrangements, including those related to "nuclear families," which would carry more relative weight. In this regard, the data presented below clearly demonstrate this behavior.

As can be seen by the age distribution shown (Graphs 6, 7, 8), there is clear evidence that interstate family-type migration has indeed been the predominant form in Mato Grosso, especially during periods when migrations were most intense, such as in the 1970s and 1980s. This fact can be seen by the pyramidal shape of the graphs. The participation of children under the age of 5 is not very expressive, a fact that would seem to fit in with the difficulties involved in migration to such inhospitable areas as the rural regions of Mato Grosso.

In any case, it is important to note that in the 1990s the age profile of migrants underwent significant modification, with a clearly higher concentration of individuals of productive ages and a corresponding reduction, although slight, of the importance of family-type migration. As will be seen below, this phenomenon points to a change, although slow and tentative, in the profile of migrants moving to Mato Grosso.

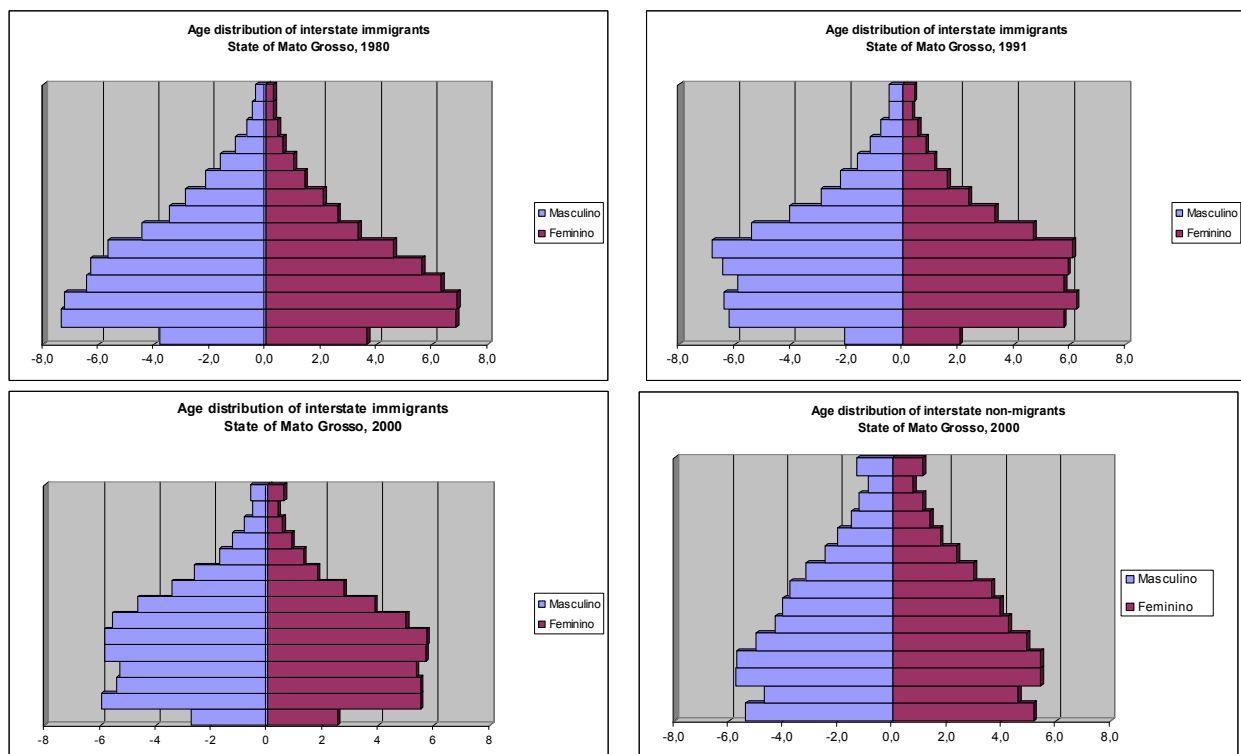
In 2000, when the typical "frontier-type" migration was clearly less important than before, the age distribution of the migrants showed greater selectivity in comparison with the "non-migrant" population (Graph 9),¹² especially of persons between the ages of 20 and 25.

¹¹ It should be noted once again that the census detects the domestic arrangement only at the moment of the census. Therefore, there is no guarantee that the same information applies at the time of migration.

¹² In this study "non-migrants" are considered those individuals who are native to the State of Mato Grosso and have never migrated, or those who have lived in the state for over 10 years.

Graphs 6, 7, 8 and 9

Age distribution of interstate immigrants and 2000 non-migrants State of Mato Grosso, 1980, 1991 and 2000



Source: FIBGE, Demographic Censuses 1980, 1991 and 2000. Special Tabulations (NEPO/UNICAMP).

The observations made in reference to the pyramids are fully backed up by an analysis of the distribution of the types of families with heads who are interstate migrants. Table 6 thus both confirms the predominance of family-type migration to the state and indicates a reduction in the weight of this category of domestic arrangement, especially in favor of the "individual" type.

From the point of view of the behavior of the micro-regions, the relationship between the profile of domestic arrangements and the moments in each area in the process of demographic occupation of the frontiers in Mato Grosso is quite clear. The reader need only observe the data for the northern and northwestern regions of Mato Grosso (Alta Floresta, Aripuanã, Colíder, Arinos, etc.) to realize that these are the same areas where, even as late as 2000, the proportion of nuclear families was more significant among migrants. This predominance of families was not seen in the micro-regions with more urban characteristics, such as Cuiabá, Rondonópolis and even Parecis that, as was commented on above, along with their intense demographic growth, also underwent rapid urbanization, probably due to the effects of the expansion of soybean production.

Another aspect that allows researchers to better understand the complexity of migration in the State of Mato Grosso is the form of the insertion of the migrant heads of families into the production system.¹³ On the basis of this analysis one can clearly understand the progressive "dismantling" undergone by the state in terms of the demographic and economic aspects of its traditional forms of occupation.

Table 6
Families of Interstate Migrant Heads of Families by type and by Micro-region
State of Mato Grosso, 1970/80, 1981/91 and 1990/2000

Microrregiões	Individual			Familia Nuclear			Outras			Total		
	70/80	81/91	91/00	70/80	81/91	91/00	70/80	81/91	91/00	70/80	81/91	91/00
Aripuanã	21,3	8,7	9,3	65,8	71,3	70,7	12,9	19,9	20,0	2.713	10.272	8.393
Alta Floresta	6,4	6,5	9,9	77,4	67,1	68,5	16,2	26,4	21,6	4.638	12.628	4.598
Colider	7,3	8,2	11,0	76,9	61,7	62,9	15,8	30,0	26,1	7.581	20.836	6.861
Parecis	15,7	16,2	17,8	63,6	64,0	60,7	20,6	19,7	21,6	1.721	4.304	7.097
Arinos	8,5	5,5	10,8	78,3	74,2	72,0	13,2	20,3	17,2	3.834	5.272	3.964
Alto Teles Pires	9,6	11,1	8,4	72,1	69,4	69,6	18,3	19,5	22,0	1.097	7.761	10.776
Sinop	12,4	10,0	8,4	72,2	70,3	66,4	15,4	19,7	22,1	4.427	11.085	10.662
Paranatinga	9,2	3,7	14,1	72,4	78,2	70,1	18,3	18,1	15,7	1.555	1.430	1.152
Norte Araguaia	17,3	10,7	13,1	61,2	64,0	63,7	21,5	25,4	23,3	2.101	5.139	7.320
Canarana	5,3	7,7	15,1	71,1	71,2	63,6	23,6	21,1	21,3	3.935	6.072	5.176
Médio Araguaia	8,4	9,2	13,4	63,9	59,1	58,7	27,7	31,8	27,9	3.633	3.674	3.229
Alto Guaporé	7,1	10,3	12,2	74,4	65,5	61,0	18,5	24,2	26,8	1.808	4.044	3.377
Tangará da Serra	5,7	19,3	9,2	76,2	60,7	67,9	18,1	20,0	23,0	5.666	6.165	6.863
Jauru	4,2	6,7	8,3	80,1	72,8	66,3	15,6	20,5	25,3	8.364	5.826	3.056
Alto Paraguai	14,1	13,3	12,9	63,0	64,3	66,3	22,8	22,4	21,0	2.047	1.235	630
Rosário do Oeste	32,0	10,0	15,2	47,1	69,2	64,8	20,8	20,7	20,0	278	478	429
Cuiabá	14,2	8,9	13,1	59,8	62,0	60,2	25,9	29,1	26,7	14.864	34.291	26.726
Alto Pantanal	8,4	9,5	12,4	70,6	68,8	63,1	21	21,7	24,6	2.218	3.218	2.472
Primavera do Leste	-	11,2	10,1	-	66,3	64,2	-	22,5	25,7	-	3.154	5.414
Tesouro	14,6	10,8	13,1	60,7	60,4	66,2	24,7	28,8	20,7	1.960	1.957	1.482
Rondonópolis	9,5	8,8	13,2	69,1	66,9	60,7	21,4	24,3	26,0	7.996	10.238	9.531
Alto Araguaia	12,5	8,8	16,9	68,6	64,6	57,6	18,8	26,6	25,5	1.159	1.486	1.274
Total UF	10,0	9,3	11,7	70,1	65,8	64,3	19,9	24,8	24,0	83.595	160.565	130.481

Source: FIBGE, Demographic Censuses 1980, 1991 and 2000. Special Tabulations (NEPO/UNICAMP).

Among the main changes that the profile of migration underwent during the thirty-year period analyzed, that which allows the clearest inferences as to the determinants of the fall in migration to the state was the considerable reduction in the relative share of the category described as "self-employed in agriculture"¹⁴ in

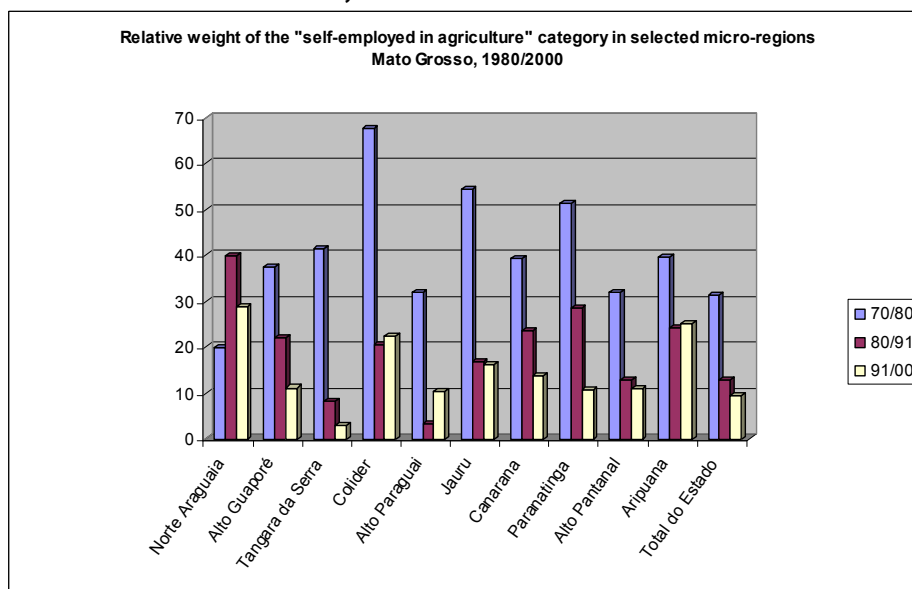
¹³ This variable was constructed in order to reflect the conditions of insertion of migrants into the social structure of their places of destination. The categories constructed on the basis of the crossing between the "sector of activity" and "position in the occupation" are not intended as a proposal for a social-occupational structure. Nevertheless, they do have the purpose of showing, at least approximately, how migrants are inserted into the state's social structure, especially regarding their bond with farming and urban activities. In addition, there may be a problem of comparability with the Census of 2000, which changed the form of obtaining information about the economically active population, although there were attempts at keeping the information generated close to the definitions applied in 1991 and 1980.

¹⁴ In this specific case, it is felt that, among the possibilities offered by the demographic census, this category is the closest to the definition of small-family properties.

the overall class of migrants. Associated with the reduction in migration during the period, it can be seen that, whereas in the 1970s this category absorbed 31.4% of the economically active migrant heads of families into production, this percentage fell to about 12.95% in 1991 and to 9.6% in 2000.¹⁵

The impact on the transformations in production in Mato Grosso becomes even clearer when the data is analyzed by micro-region. The procedure shows, on the one hand, even more dramatic reductions in this category of migrant heads of families, as is the case of Aripuanã (39.7% in 1980 to 25.2% in 2000), Colíder (67.7% to 24.5%), Paranatinga (51.3% to 10.6%), Jauru (54.4% to 16.2%) and Tangará da Serra (41.3% to 3.0%). One interesting case to be noted is Norte Araguaia, which, in the 1980s, saw an increase of migrants involved in family farming, consisting of 40% of the total. In the following decade this percentage fell to 29.0%. In this specific case, the area was an important "frontier route" only in the 1980s (Graph 10).

Graph 10
Relative weight of the "self-employed in agriculture" category in selected
Micro-regions.
State of Mato Grosso, 1980/ 2000



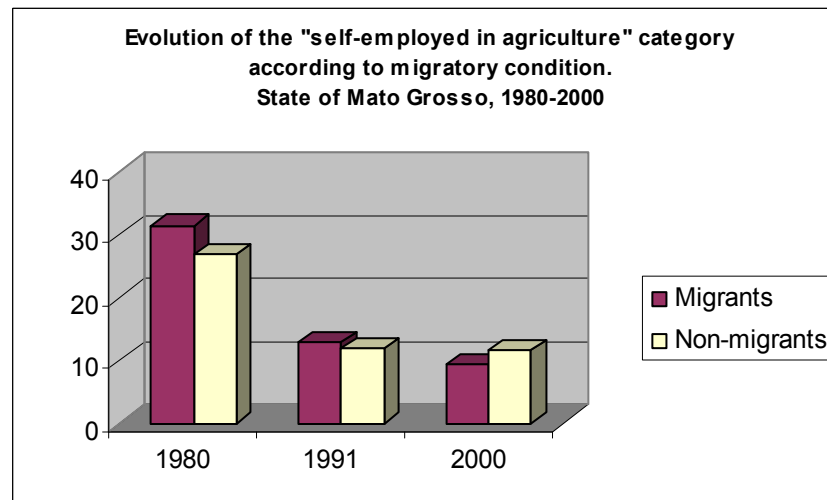
Source: FIBGE, Demographic Censuses 1980, 1991 and 2000. Special Tabulations (NEPO/UNICAMP).

¹⁵ It is important to alert the reader to the fact that there is a possibility in the Census of 2000 for the "self-employed in agriculture" category to also include sharecroppers, whose condition was not studied in that census. Therefore, in comparison with the earlier censuses, the percentages presented may even be over-estimated, even though the weight of sharecroppers has historically not been very representative in the state.

Graph 11

Evolution of the "self-employed in agriculture" category according to migratory condition.

State of Mato Grosso, 1980/2000



Source: FIBGE, Demographic Censuses 1980, 1991 and 2000. Special Tabulations (NEPO/UNICAMP).

It is also interesting to note that, in the State of Mato Grosso, the trend indicated for migrants also applies to "non-migrants," as can be seen in Graph 11. The participation of non-migrants also fell in the "self-employed in agriculture" category, a fact that shows that what happened to the migrants does not represent an isolated situation, but rather a trend going on in a state that is rapidly being urbanized and that therefore offers its inhabitants very few alternatives, especially in rural areas.

Among these alternatives, the settlements of rural workers struggling for land reform, in conjunction with spontaneous occupations, mostly of pioneers, have made family agriculture possible in the state or at least maintained it at a certain level.

Attention should be called to the town of Sinop. There, industrial operations (consisting basically of lumber companies) absorbed more than 40% of the migrants in 1991, a fact that indicates the strength of this type of activity in the area. However, in field visits the discourse of politicians in the region suggest signs of weakening of this industry, especially due to the depletion of the nearby forest reserves. Therefore, investments are now being channeled to more diversified activities, such as furniture manufacturing, and to an increase in the services sector, as well as the introduction of capitalized farming, especially of soybeans and rice.

Despite the importance of cattle raising in the state, the percentage of migrants absorbed as employees in this activity is relatively small. In 1991 it was just a little over 4%, a percentage that rose to almost 11% in 2000. During the last two decades most migrant heads of families were working in typically urban activities, such as "Commerce and Services" and "Industry," that generated jobs for 23.4% and 27.7% of the migrant heads of families in 1991 and 2000, respectively, against only 16.3% at the beginning of the period.

These figures indicate that the "potential appeal" of Mato Grosso as a non-consolidated frontier area will progressively become exhausted, and this fact reflects the possible forms of insertion of migrants (mostly rural workers and small farmers with minimum capital), for whom there are few alternatives in urban areas or in settlements allied to land reform.

Conclusions

As one of the last agricultural frontier areas in Brazil and, therefore, one of the few alternatives for migrants related to tilling the land, the state of Mato Grosso played a very significant role in the process of spatial redistribution of the Brazilian population until the mid-1980s. But its history in this process was one of the shortest among the Central-Western states due to the rapid and intense transformation in the systems of production and to the consequent intensification of the process of concentration of land to which it was exposed during the 1980s and 1990s.

In a mixture of economic development at an intense rate, and progressive "closure" of the pioneer agricultural frontiers, in less than 20 years the State of Mato Grosso ceased to be among the possibilities for thousands of Brazilians in search of alternatives for social reproduction in the rural environment, gradually becoming an alternative for large economic enterprises.

The data analyzed in this study show not only the reduction in migrations to the state, but also the relationships between this behavior and changes in the forms of insertion of the migrants, which reflect the process of "urbanization of the frontier" and the widespread de-articulation of the forms of occupation that enabled a good part of its territory to be "opened up" in the first place.

Although there are few concrete possibilities for Mato Grosso in general to remain an area for attracting migrants, many regions in the state still nevertheless represent important alternatives for absorbing the large numbers of persons involved in tilling the land. Today regions in the northwest of the state, for example,

are among the fastest growing in demographic terms and much of this growth is due to the new rural areas that have been created. It is also clear that a significant proportion of the demographic growth of the state is taking place in the urban areas, especially in the largest metropolitan areas: Cuiabá, Rondonópolis and Sinop.

The alternative of rural settlements has been a concrete possibility for reversing part of this process of "forced urbanization" of large numbers of migrants and even of natives and former residents returning to the state. Such projects can be found in almost all municipalities of Mato Grosso. However, it is essential that the form of implementation and management of these projects be re-examined in order to make them a "real" solution for those who intend to live *in* and *from the rural environment*. All the depositions collected in the interviews held in the state, including those given by agents not related to rural workers, attest to the technical, economic and social difficulties faced by the families that have settled there.

The hegemonic economic activities (cattle raising and soybean production) have left their marks on almost all the areas where they are found. As a rule, they entail considerable de-ruralization and urban growth, or even urban overgrowth that most of the State of Mato Grosso is unable to retain or absorb. This continuous "movement of the frontier" can be seen in the evaluation of the demographic trends of the various micro-regions in the state.

The point here is not to make an apology to possible negative effects of the capitalistic expansion of agriculture. It is a reality, and one of the most important pillars of Brazilian economic development. In fact, as the authors hope to have shown in this study, the effect of soybean production in some areas of Mato Grosso took place in a contrary way, that is, it enabled and dynamized demographic occupation. But there is no denying that the form the appropriation of wealth generated by this new activity has failed to guarantee adequate distribution of income. As a consequence, it has not resulted in better living conditions for the population, especially of persons or families who want to guarantee their social reproduction away from the urban context.

However, the history of the demographic growth of Mato Grosso shows that changes took place in the form of insertion of migrants during the period studied. It is therefore clear that agriculture, in combination with the strong hegemony, in spatial terms, of cattle raising, leaves few viable alternatives for continuing the intense process of occupation that occurred in past decades. Nor should one lose sight of the fact that part of this process is due to gold mining, which, although not entirely depleted in the state, is carried out mostly by large mining companies, and no longer requires significant numbers of migrants in order to operate.

One is therefore compelled to give more consideration to the strength of the larger cities such as Cuiabá, Rondonópolis and maybe even Sinop, although none of these places seems to have a productive structure that is diversified enough to provide sufficient alternatives to attract interstate migrants. Such migrants, in fact, precede the intra-state migrants who were "displaced" from the rural areas in ever greater numbers, which, in times past, were factors for occupying the frontier regions. This topic in itself would be an interesting theme as a follow-up to this present investigation.

In view of this overall situation, it would seem that Mato Grosso is moving in the direction of total depletion of its condition as an agricultural frontier and, therefore, as an alternative for migrants. Projects like the paving of important stretches of the Belém-Brasília Highway, in the State of Pará, might possibly facilitate the transportation of production. In addition, even more long-term projects, such as the dismembering of the State of Mato Grosso, could provide new directions for the state's demographic dynamics in the future. But it is difficult at the present time to imagine that the state could maintain the power of attraction it had in the 1980s and, consequently, show a migratory performance much beyond what is now within reach of just a few urban areas.

The analyses carried out indicate a few alternatives for the process of demographic occupation of Mato Grosso, even though the situation is changing rapidly. The future will undoubtedly be influenced by choices made by the state and federal governments in regard to very complex, often contradictory, issues for a dependent capitalistic country like Brazil, namely the challenge of reconciling economic development with human development without losing sight of environmental realities.

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