



## ANALYSIS OF PRODUCTIVE RESTRUCTURING AND EMPLOYMENT DYNAMICS IN BRAZIL'S MIDWEST IN 2010 AND 2023

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**Abstract:** This article analyzes productive restructuring and employment dynamics in Brazil's Midwest region in 2010 and 2023, based on regional indicators such as the Location Quotient, Specialization, Redistribution, and Restructuring Coefficients, and the Shift-Share model. The results reveal significant changes in patterns of specialization and sectoral location, highlighting the strengthening of activities such as mining, industrial public utility services, and tertiary sectors, in contrast to the decline in the relative importance of public administration and civil construction. A strong redistribution of jobs was also observed in strategic sectors, such as services and public utilities, indicating expansion beyond major urban centers. The Federal District and Goiás demonstrated greater capacity for structural adaptation, while Mato Grosso and Mato Grosso do Sul maintained more static production profiles, with low internal diversification. Analysis using the Shift-Share model revealed that employment performance in the region was driven by both favorable sectoral structures and specific local competitive advantages, although territorial disparities persist. It is considered that the continuity of the productive restructuring process will depend on integrated policies for regional development, technological innovation, infrastructure, and workforce training, in order to enhance economic competitiveness and reduce intra-regional inequalities.

**Keywords:** Productive restructuring; regional development; sectoral employment; specialization indicators; shift-share.

### 1 Introduction

According to Santos (1996), the restructuring of territories in Brazil is closely linked to the expansion and sophistication of the service sector, which has established itself as a central element in the organization of geographic space and the redesign of regional productive functions. In this context, the service sector not only keeps pace with ongoing economic transformations but also plays a decisive role in the process of regional development, particularly due to its growing share of the labor force and its contribution to the creation of skilled jobs. In the case of the Midwest region—comprising the Federal District, Goiás, Mato Grosso, and Mato Grosso do Sul—this dynamic highlights a structural shift in the regional economic base, which has historically been centered on agribusiness and public administration.

The motivation for this study arose from the economic changes in the Midwest region after 2010, leading to the following question: How did the service sectors influence the distribution and performance of employment between 2010 and 2023?

Starting in 2010, outsourcing and the expansion of logistics, financial, educational, healthcare, and information technology services repositioned the Midwest within the national

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economy, moving beyond agribusiness. According to Brandão (2013), the recent productive reconfiguration identifies specialized services and logistical integration as key factors for strengthening regional economies, especially in historically peripheral areas such as the Midwest. The Federal District stands out as an administrative center; Goiás, as a logistics and university hub; Mato Grosso, for linking services to the agricultural export sector; and Mato Grosso do Sul, for regional integration. According to Cezar (2014), the growth of specialized services drives innovation and regional integration. Behrendt (2010) emphasizes that sectors such as logistics and technology are fundamental to strategic regional development.

Thus, the objective of this article is to analyze the spatial distribution and sectoral performance of employment in Brazil's Midwest region from 2010 to 2023. This analysis will be useful in identifying the most dynamic sectors in terms of job creation and their spatial distribution across the region's four states. The results will provide empirical insights for understanding the new productive arrangements and the structuring role of services in the Midwest's regional development.

It should be noted that this analysis presents an alternative interpretation of the sectoral dynamics of employment in the region, taking into account the spatial reorganization of productive activities and its influence on patterns of regional specialization. In this regard, the measures of localization and specialization aim to reveal the degree of importance of each sector and the productive diversity of the states within the occupational structure of the Midwest region.

The first section of the article presents the theoretical and methodological elements used to construct the indicators for regional analysis. The second section analyzes the empirical results, highlighting the patterns of localization, redistribution, specialization, and restructuring of employment across economic sectors in the states of the Midwest. Complementing this analysis, the third section addresses the differential-structural dynamics of employment. Finally, the last section presents the overall results of the study and discusses the current situation of the service sector in the regional development of the Midwest region in the 21st century.

## **2 Theoretical Framework**

### **2.1 Theoretical and Methodological Framework**

Diniz (2012) draws attention to the fact that the reconfiguration of regional economies is linked to specific historical and structural processes, such as the expansion of urbanization, the decentralization of production, and the progressive diversification of economic activities, with an emphasis on services. According to the author, the growth of the service sector in Brazilian regions is closely linked to the release of labor from the agricultural sector, the reorganization of urban



production chains, and the attraction of new investments, especially in regions with developing infrastructure. In the case of the Midwest, these conditions have favored the transformation of the regional productive profile in recent decades.

Unlike Diniz (2012), Cano (2017) develops a theoretical model focused on the relationship between internal trade, income, and regional integration, arguing that, even in contexts of dependency, intraregional trade can become one of the main drivers of development. According to the author, regions such as the Midwest, by intensifying internal trade and expanding their logistics infrastructure, create their own value-added circuits, boosting consumption and productive investment in sectors such as commerce, transportation services, and civil construction. For Cano, regional development is directly linked to the creation of autonomous territorial systems of production and consumption.

Unlike Cano (2017), Araujo (2018) adopts an endogenous approach, in which regional development is conceived as the result of activating local capacities, primarily through income generation and the formation of domestic markets. In contexts such as that of the Midwest, the mobilization of human capital, the upskilling of the workforce, and the expansion of access to public and private services are seen as central elements for overcoming external dependence. Thus, regional growth is not merely a consequence of integration into national and global flows, but rather of the internal reorganization of its socioeconomic structures.

It is true that the expansion of the tertiary sector is part of broader structural changes in regional economies during the development process. Recent studies by Lemos and Silva (2020), focused on the Midwest region, demonstrate that, at the beginning of the regional development process, agriculture and extractive industries play a dominant role but gradually lose ground to urban and specialized services, especially in regional centers with universities, hospitals, wholesale markets, and transportation networks. As the process matures, the economy shifts from a rural-agricultural continuum to an urban-logistical continuum, linked to other regions through road, digital, and institutional infrastructure.

In analyzing regional dynamics, the Midwest region is considered a geographic unit characterized by unique features in its productive structure, consumption patterns, labor force distribution, and cultural and political elements. According to Oliveira et al. (2021), the Midwest's regional identity is shaped by recent processes of territorial occupation, combined with the prominence of agribusiness and the growing importance of urban services, especially in state capitals and medium-sized cities.

According to Costa and Borges (2019), these transformations directly impact the spatial structure of production and the organization of labor in the region. Therefore, this analysis aims to understand, through regional analysis methods, employment patterns in the productive sectors and



how they change over time and space. To this end, the shift-share model and measures of sectoral localization and specialization were used. The main variable analyzed was the number of employees, distributed regionally by economic sector.

The analysis is based on the assumption that the most dynamic sectors generate the most jobs over time. This is directly reflected in the region's income, consumption, and socioeconomic structure. Consequently, increases in regional employment and total payroll contribute to strengthening the domestic market and reinforcing development processes.

Data on the number of employees were extracted from the Annual Social Information Report (RAIS) database of the Ministry of Labor and Employment (MTE). The sectors were grouped as follows: Mineral Extraction; Manufacturing; Industrial Public Utility Services; Construction; Trade; Services; Public Administration; Agriculture, Plant Harvesting, Hunting, and Fishing. Civil construction and commerce were analyzed separately from the secondary and tertiary sectors due to their significance as major employers of low-skilled labor, a prominent characteristic in several microregions of the Midwest.

The analysis covers the years 2010 through 2023, allowing for the tracking of recent trends in the labor market and the reorganization of production.

Specialization and localization measures, combined with the shift-share model, make it possible to identify patterns of economic growth in the Midwest region and its subregions.

## 2.2 Measures of Specialization and Location

Localization measures (such as the Location Quotient and the Redistribution Coefficient) focus on the sectoral distribution of employment across regions, highlighting trends toward concentration or dispersion. Specialization measures (Specialization Coefficient and Restructuring Coefficient), on the other hand, indicate the degree of productive diversification and economic repositioning in each state.

These tools are particularly useful for avoiding distortions caused by differences in size among regions. By using relative values and proportional weights, these measures become reliable instruments for comparing economic structures across spatial units of different sizes, such as the Federal District, Goiás, Mato Grosso, and Mato Grosso do Sul. Overall, these analyses provide insight into the relative importance of each sector and its regional evolution, offering a basis for more effective territorial development strategies.

The following equations are used to estimate these measures:

$$\sum ij = \text{Number of employees in sector } i \text{ in the region;} \quad (\text{I})$$

$$\sum_j Eij = \text{Number of employees in sector } i \text{ across all regions;} \quad (\text{II})$$

$$\sum_i E_{ij} = \text{Number of employees in all sectors in region } j; \quad (\text{III})$$

$$\sum_i \sum_j E_{ij} = \text{Number of employees in all sectors and all regions.} \quad (\text{IV})$$

Based on equations (I, II, III, and IV), Table 1 is organized, summarizing the location/specialization measures and their analysis framework.

Chart 1 – Presentation of the Analysis Framework for Location and Specialization Measures

| Indicators                      | Mathematical Expression                        | Discussed Results                                                                                                    |
|---------------------------------|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| Location Quotient (LQ)          | $QL_{ij} = (E_{ij} / E_i) * (E / E_{ij})$      | $QL \geq 1$ / Location Significant<br>$0.50 \leq QL \leq 0.99$ / Moderate Location<br>$QL \leq 0.49$ / Poor Location |
| Specialization Coefficient (CE) | $CE_j = \sum_i \frac{( iej - ie )}{2}$         | Close to 0 = Significant Diversification<br>Close to 1 = Specialization<br>Significant                               |
| Redistribution Coefficient (CR) | $CR_i = \sum_j \frac{( jeitl - jeit0 )}{2}$    | Close to 0 = non-relevant locational redistribution<br>Close to 1 = significant locational redistribution            |
| Restructuring Coefficient (Cr)  | $CR_{ee} = \sum_i \frac{( iejtl - iejt0 )}{2}$ | Close to 0 = Irrelevant restructuring<br>Close to 1 = significant restructuring                                      |

Source: Haddad (1989), adapted by the authors of this study.

The Location Quotient (LQ) is used to compare the relative share of employees in a given sector across the federal units of the Midwest, identifying which economic activities stand out in terms of labor concentration within the region itself. When the quotient's value is equal to or greater than 1, that federal unit is considered to specialize in that sector compared to the others in the region. This tool allows for the observation of the degree of concentration or dispersion of productive activities across the different territories of the Midwest.

Since the QL is based on the proportion of employees (E) by sector, it provides a measure of the relative importance of each economic activity within the regional structure, making it possible to identify trends in productive specialization and the territorial organization of employment in the Midwest region as a whole.

The Specialization Coefficient (Cesp) is designed to measure the degree of diversity in the



productive structure of each state compared to the others in the region. When the value approaches zero, it means that the sectoral composition of employment in that state is similar to that of the other states in the Midwest, indicating a more diversified productive structure. Conversely, coefficients close to 1 point to a high degree of specialization, suggesting that the distribution of jobs is concentrated in a few specific sectors.

The Redistribution Coefficient (CR) is used to measure changes in the distribution of employment in a given sector among the states in the region over time. Values close to zero indicate that there were no significant changes in the location of sectoral employment among the states, while values close to 1 signal major changes, with shifts in employment concentration from one state to another.

The Restructuring Coefficient (Cr), on the other hand, analyzes changes in the structure of employment within each state in the region between two distinct periods. When the value is close to zero, it is understood that the sectoral composition remained stable, with no major changes in the state's productive profile. Conversely, values close to 1 indicate a profound reconfiguration, signaling significant structural changes in the local economy, with shifts in employment across economic sectors over time.

These measures, applied exclusively to the context of the Midwest, provide insight into the region's internal dynamics, identifying which states stand out for specific activities, which are diversifying, and how the distribution of employment and productive specialization have evolved over time.

### 2.3 Differential-Structural or Shift-Share Model

The differential-structural analysis model, or shift-share model, allows us to demonstrate the pattern of employment growth across the states of the Midwest. Through this model, it is possible to analyze the variation and shifts in the labor force across economic sectors over time, identifying the local and structural effects that explain these dynamics.

Originally developed by Davis (1940) and adapted to the Brazilian context by Haddad (1989), the model breaks down the total variation in employment into components that reflect the influences of the regional productive structure and local competitive advantages.

Based on the distribution matrix of the number of employees by sector in the states of the Midwest, the following general equation is obtained:

$$VLT = Et2 - Et1$$

Where:

VLT = Total Net Change in Employment;



$E$  = Number of employees by sector in the periods analyzed;

$t_1$  and  $t_2$  = Comparison periods.

The VLT indicates the absolute difference between the number of employees in two periods. Positive values indicate relative growth of the sector in relation to the regional structure; negative values indicate relative decline. The magnitude of the VLT demonstrates the sector's contribution to regional growth.

The TNE is broken down into two components: the Differential Net Change (DNC), which reflects local or endogenous effects, and the Structural Net Change (SNC), which reflects exogenous effects related to sectoral composition.

The VLD measures the specific dynamism of each sector in a state in the Midwest, given that some sectors grow faster locally than the regional average. It is calculated using the formula:

$$VLD = E_{t1} * (g_{local} - g_{sectoral})$$

Where:

$g_{local}$  = the sector's growth rate in the state

$g_{sectoral}$  = average growth rate of the sector in the Midwest region

A positive VLD value indicates specialization and a local competitive advantage for the sector; a negative value indicates dynamism below the regional average.

The VLE captures the impact of the state's productive structure, showing whether employment is concentrated in dynamic sectors of the region. The formula is:

$$VLE = E_{t1} * (g_{setorial} - g_{total})$$

Where:

$g_{total}$  = total employment growth rate in the Midwest region

A positive VLE indicates a concentration in highly dynamic sectors; a negative VLE suggests a predominance of less dynamic sectors.

Thus, the shift-share model, as proposed by Davis (1940) and adapted by Haddad (1989), makes it possible to identify the sectors and states in the Midwest that contribute to growth through the regional economic structure and local competitive advantages, offering a detailed understanding of regional employment dynamics.

### 3 The Pattern of Employment Distribution Across the Federal Units of the Midwest

The following section presents the results obtained by applying the regional analysis methodology, considering the distribution and performance of employment across economic sectors in the federal units of Goiás, Mato Grosso, Mato Grosso do Sul, and the Federal District.

Table 1 presents the evolution of locational quotients (LQs) for economic sectors in the



Federal District, Mato Grosso do Sul, Goiás, and Mato Grosso between 2010 and 2023, revealing distinct trends in employment specialization associated with structural, institutional, and territorial factors.

Table 1 – Location Quotient (LQ) by State and Economic Sector in the Midwest, 2010–2023.

|                                             | DF          |             | MS          |             | GO          |             | MT          |             |
|---------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Economic Sectors</b>                     | <b>2010</b> | <b>2023</b> | <b>2010</b> | <b>2023</b> | <b>2010</b> | <b>2023</b> | <b>2010</b> | <b>2023</b> |
| Mineral extraction                          | 1.3278      | 0.7524      | 0.7280      | 1.2052      | 0.9984      | 1.0011      | 0.5913      | 1.3085      |
| Manufacturing                               | 0.9896      | 1.0078      | 0.9705      | 1.0221      | 0.9855      | 1.0109      | 0.9660      | 1.0256      |
| Industrial public utility services          | 0.9827      | 1.0130      | 0.6585      | 1.2578      | 0.6015      | 1.3008      | 0.8368      | 1.1231      |
| Construction                                | 1.1174      | 0.9113      | 1.0013      | 0.9989      | 1.0951      | 0.9281      | 0.9709      | 1.0219      |
| Trade                                       | 1.0936      | 0.9292      | 0.9600      | 1.0301      | 0.9838      | 1.0122      | 0.8965      | 1.0780      |
| Services                                    | 0.8917      | 1.0817      | 0.7929      | 1.1563      | 0.7397      | 1.1964      | 0.7312      | 1.2028      |
| Public administration                       | 1.5029      | 0.6202      | 1.1101      | 0.9168      | 1.3261      | 0.7537      | 0.8152      | 1.1395      |
| Agriculture, forestry, hunting, and fishing | 1.1177      | 0.9111      | 0.9429      | 1.0430      | 0.9333      | 1.0503      | 0.8357      | 1.1239      |

Source: The authors, based on RAIS data.

In the mineral extraction sector, an increase in QLs was observed in Mato Grosso do Sul (from 0.72 to 1.20) and Mato Grosso (from 0.59 to 1.30), while the Federal District saw a decline (from 1.32 to 0.75). This reflects the uneven expansion of mining, driven by demand from the construction sector, exports, and regional incentives (Silva; Parré, 2015; Pinheiro; Lima, 2011). In the manufacturing sector, growth was moderate across all states—in Goiás, the QL rose from 0.98 to 1.01—supported by agro-industrial supply chains and credit policies, such as the Constitutional Fund for Financing the Midwest (FCO) (Diniz; Crocco, 2008; Souza et al., 2017).

Industrial public utility services also expanded, particularly in Goiás (from 0.60 to 1.30), thanks to investments in energy infrastructure and sanitation through the PAC and private concessions (Brito; Perosa, 2018). In contrast, the construction sector showed a decline in QLs, indicating the completion of major projects, while maintaining its urban relevance (IBGE, 2022). The commerce sector, on the other hand, showed a general increase in QLs, reflecting greater urban dynamism, urbanization, and the impact of income transfer policies (Haddad, 2005).

The services sector saw a sharp increase (e.g., Mato Grosso, from 0.73 to 1.20), supported by the expansion of financial, health, education, and logistics activities (Diniz; Crocco, 2008;



Souza et al., 2017). On the other hand, public administration lost relative weight, especially in the Federal District (from 1.50 to 0.62), due to administrative modernization and hiring freezes (Haddad, 2005).

Agriculture and livestock maintained or expanded their specialization, as in Mato Grosso (from 0.83 to 1.12), bolstered by the expansion of the agricultural frontier and improvements in logistics (Souza et al., 2017). In summary, these changes point to economic diversification, particularly in agribusiness, services, and infrastructure, while traditional sectors, such as public administration and civil construction, have lost relative importance. The progress of these trends will depend on integrated regional policies, innovation, and sustainability.

Table 2 – Specialization Coefficient (Cesp) by economic sector in the Midwest, from 2010 to 2023.

| Economic Sector                             | Cesp        |
|---------------------------------------------|-------------|
| Mineral extraction                          | 0.217244178 |
| Manufacturing                               | 0.018955142 |
| Industrial public utility services          | 0.197953286 |
| Construction                                | 0.052299191 |
| Retail                                      | 0.054459582 |
| Services                                    | 0.181612868 |
| Public Administration                       | 0.241775184 |
| Agriculture, Forestry, Hunting, and Fishing | 0.087239355 |

Source: The authors, based on RAIS data.

The results presented in Table 2 indicate that public administration had the highest Cesp (0.2418), revealing a strong concentration, particularly in the Federal District, which has historically been more dependent on this sector. Next are mineral extraction (0.2172) and industrial public utility services (0.1980), sectors that expanded mainly in Mato Grosso and Mato Grosso do Sul, where the presence of mining concessions and investments in energy infrastructure have intensified. The services sector, with a Cesp of 0.1816, also exhibited a certain degree of concentration, although it showed a trend toward greater dispersion across the region.

On the other hand, sectors such as manufacturing (0.0190), trade (0.0545), and construction (0.0523) exhibited the lowest coefficients, indicating a more homogeneous distribution across the states, likely because these activities are more widely dispersed within local economies. Agriculture and livestock (0.0872), although historically associated with the region, proved to be relatively balanced across the states, albeit with a certain concentration in Mato Grosso.

Table 3 – Redistribution Coefficient (RC) by economic sector in the Midwest, from 2010 to 2023.

| Economic sector                             | Redistribution Coefficient |
|---------------------------------------------|----------------------------|
| Mineral extraction                          | 0.574115972                |
| Manufacturing                               | 0.317165516                |
| Industrial public utility services          | 0.675161802                |
| Construction                                | 0.199688971                |
| Retail                                      | 0.307570997                |
| Services                                    | 0.642480968                |
| Public Administration                       | 0.388791576                |
| Agriculture, Forestry, Hunting, and Fishing | 0.352455272                |

Source: The authors, based on RAIS data.

The greatest redistribution was observed in the CR public utility services sector (0.6752), reflecting specific investments in energy, water, and sewage infrastructure in states such as Goiás and Mato Grosso do Sul. Next, the services sector (0.6425) also showed significant redistribution, indicating that its expansion was not limited to major urban centers but spread to medium-sized cities in the region.

The mineral extraction sector (0.5741) also experienced a significant reallocation of jobs, particularly in Mato Grosso and Mato Grosso do Sul. Other sectors with moderate redistribution include public administration (0.3888) and agriculture and livestock (0.3525). In contrast, the manufacturing (0.3172), trade (0.3076), and construction (0.1997) sectors maintained relatively stable locations, suggesting deeply rooted productive structures or low geographic mobility.

Table 4 – Restructuring Coefficient (Cr) by economic sector in the Midwest, from 2010 to 2023.

| Federal Units      | Restructuring Coefficient |
|--------------------|---------------------------|
| Federal District   | 0.06803                   |
| Mato Grosso do Sul | 0.01383                   |
| Goiás              | 0.0498262                 |
| Mato Grosso        | 0.02733                   |

Source: The authors, based on RAIS data.

Among the federal units in the Midwest, the Federal District showed the highest degree of restructuring (Cr = 0.0680), indicating a slight shift in its productive base, with a reduction in the share of public administration and growth in more dynamic tertiary sectors. Goiás followed, with Cr = 0.0498, also indicating a modest diversification of employment. Mato Grosso (0.0273) and Mato Grosso do Sul (0.0138), on the other hand, exhibited virtually static structures,



suggesting the continuity of consolidated productive profiles, with a strong presence of agro-industrial, extractive, and logistics activities, without major shifts.

Table 5 – Shift-Share Analysis for the Midwest, 2010–2023.

| Federal Units      | VLT       | VLE - POij (ei-e) | VLD - POij0 (ej-ei) |
|--------------------|-----------|-------------------|---------------------|
| Federal District   | 956.30179 | 586.00168         | 370.3001            |
| Mato Grosso do Sul | 79.259058 | 119.27208         | -40.01302           |
| Goiás              | 335.55035 | 297.44452         | 38.10582            |
| Mato Grosso        | 9.0123514 | 131.17217         | -122.15982          |

Source: The authors, based on RAIS data.

The shift-share model allows the total change in employment (VLT) to be broken down into two components: the structural effect (VLE), which reflects the extent to which the state is embedded in dynamic sectors; and the differential effect (VLD), which shows whether the state's performance is above or below the regional average.

The Federal District had the highest total net change in employment (956.3), driven by both a favorable sectoral structure (586.0) and local competitive advantages (370.3). This suggests that the Federal District not only concentrated dynamic sectors but also developed them with performance above the regional average, especially in the services sector.

Goiás recorded significant growth (VLT = 335.6), with particular emphasis on the strength of its productive structure (297.4), although the local competitive advantage was more modest (38.1). This indicates that the state grew more because it was involved in sectors with strong regional performance (such as commerce and agribusiness) than because it possessed specific advantages.

On the other hand, Mato Grosso do Sul, although it has dynamic sectors (VLE = 119.3), exhibited a negative differential effect (-40.0), indicating local performance below the regional average, possibly due to low internal diversification and less sectoral dynamism.

The most critical case was that of Mato Grosso, whose total net variation was practically zero (9.0). Despite having a favorable productive structure (VLE = 131.2), the state had a strongly negative differential effect (-122.2), revealing that, even though it is active in sectors with growth potential, it failed to translate this into effective job creation, which may be related to problems with productivity, technology, or public policies.

An analysis of the four indicators shows that the Midwest region underwent a process of selective economic restructuring, with unequal sectoral and territorial redistribution. The services sector emerges as a dynamic pillar of the region's new productive organization, especially in larger



urban centers. The Federal District and Goiás demonstrate a greater capacity to adapt to and capitalize on these transformations, while Mato Grosso and Mato Grosso do Sul maintain more rigid structures, with growth dependent on traditional supply chains.

The continuation of these trends will depend on the coordination of public and private investments, infrastructure, technological innovation, and workforce training, in order to enhance regional competitiveness and reduce internal inequalities.

#### 4 Concluding Remarks

Analysis of the results shows that productive restructuring and employment dynamics in Brazil's Midwest between 2010 and 2023 reflect a heterogeneous transformation process, marked by significant changes in patterns of location, sectoral specialization, and structural variation. The behavior of locational quotients reveals that historically dominant sectors, such as public administration, have lost relative weight in most states, while activities linked to mining, agribusiness, and services have established themselves as drivers of economic diversification.

For example, states such as Mato Grosso do Sul and Mato Grosso have significantly expanded their specialization in mineral extraction, in line with the intensifying demand for strategic minerals and regional incentive policies. Similarly, the industrial public utility services sector has strengthened in all states, benefiting from investments in energy infrastructure and basic sanitation—factors that are crucial for supporting production chains and improving the quality of urban life.

The manufacturing industry, although it showed moderate growth, established itself as a key pillar for job creation, especially in Goiás and Mato Grosso do Sul, supported by credit policies, logistics, and tax incentives that stimulated agro-industrial and biofuel supply chains. The services sector, notably financial intermediation, healthcare, education, and logistics, has established itself as a cornerstone of the regional labor market, reflecting the progress of urbanization and the diversification of tertiary-sector activities.

On the other hand, the construction sector showed a decline in most states, indicating the completion of major infrastructure projects and the impact of fiscal adjustments and changes in public investment patterns. Public administration, historically responsible for absorbing a large portion of the workforce, experienced a significant reduction in its relative share, especially in the Federal District, highlighting efforts toward administrative modernization and spending restraint.

The location and redistribution coefficients also point to a dual trend: sectors such as industrial public utility services and mineral extraction exhibited high redistribution, signaling geographic expansion beyond traditional hubs, while activities such as commerce, manufacturing,



and construction maintained a more stable pattern, indicating low dynamism in territorial reallocation.

Application of the shift-share model revealed that the Federal District led the total net change in employment, supported by a favorable sectoral structure and local competitive advantages, particularly in the services sector. Goiás also posted significant results, albeit with a smaller competitive edge, while Mato Grosso do Sul and Mato Grosso showed limitations in transforming productive potential into actual job creation, a result of more rigid structures and lower internal diversification.

In summary, the data show that the Midwest is moving toward a more diversified productive structure, with an emphasis on agro-industrial chains, mining, technical support services, and infrastructure. However, the persistence of disparities among the states highlights the need for coordinated public policies that strengthen regional integration, encourage technological innovation, and promote workforce training. Only in this way will it be possible to ensure greater economic competitiveness, environmental sustainability, and a reduction in socio-spatial inequalities in the long term, consolidating the region as one of the country's main drivers of development.

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