# THE SHIFT-SHARE ANALYSIS OF TUNISIAN REGIONS LOCAL AND STRUCTURAL DYNAMICS

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**Abstract**

The regional dynamics can be embodied in various ways. The shift-share analysis (ASR) is a methodology that allows us to observe the influence of global and local sectoral dynamics on regional growth. We start from the idea that the growth of a region is due in part to global sectoral dynamics and partly to specific regional dynamics. Applying this analysis to the case of Tunisia dishes highlight regional imbalance with the consolidation of the coast and the lower regions of the interior.

**Keywords:** shift-share analysis, regional dynamics, imbalance
**Classification JEL :** R11, N9

## Introduction

The regional dynamics can be embodied in various ways. One speaks in this case of quantitative development activities on one side and the qualitative development of content and the change in the internal sectoral structure of local economies on the other. Various factors, both exogenous and endogenous come into play in this context. Other socio-economic parameters such as production, value added, export or income may be used.The phenomena of economic growth and recession at the national level are connected and create a series of factors that will impact the regional industry dynamics. But all sectors are not affected with the same intensity and / or the same rate in the region at the national level by global dynamics. Some sectors may experience growth locally, while a decline was registered in the country. The reverse is also possible. This is due to specific local dynamics. A methodology has been established to determine the impact of global dynamics on the one hand and specific local dynamics on the other, the growth of the study area. It is the shift-share analysis.

Different models can be used to analyze regional economic dynamics, but we will focus in this article on the structural - residual method (Shift -Share Analysis) tool now become essential for many specialists (Aydalot, 1985; De Brabander et al 1992; Merenne et Schoumaker, 2002). This type of analysis is useful because it allows us to distinguish, for each industry, the relative growth of each region according to national growth and determine the amount due to the initial regional structure and that due to externalities location (Mérenne et Schoumaker, 2002). To better understand the reasoning of the ASR (Structural Analysis - Residual); a presentation of the method is necessary in the first place. Then, in a second part, we analyze the results (Fisher, 1973).

### *The method of residual structural analysis: principle and formulation*

#### *The principle*

The shift-share analysis (ASR) based on the principle that regional development is a combination of a double structure (regional and sectoral ) and a residue obtained by difference, related to factors specific to each region. Economic dynamics of a given region i can be decomposed into different components (Derycke, 1992) times below:

The regional component (CR) is the saved in a region i in theoretical share of period (t - t') if regional activity (employment or employed population) had evolved at the national rate. A given region i is, in one way or another, influenced by the global economic dynamics of the country. CS expresses the inertia that makes the additional national employment between t and t ' is distributed in proportion to the initial weight of each region. The gap between actual and theoretical growth of a region is the effect of two components: one called the local structural and forming together the so-called Net Employment Share (PNE) that is to say the net Employment Shift (NES).

The structural component (CS) expresses the effect of an efficient initial structure in a given place and time t (Proportionality Shift). Overall regional dynamics is often a function of the initial economic structure; a region that has a favorable initial structure, with a high proportion of dynamic activities, would increase its overall growth compared to other other regions with less favourable structures (De Brabander et Verbist, 1992). The local component (CL) expresses the effect of region-specific local factors. These factors are related to the location and topology, history and traditions, material, technical and logistical, human, cultural and economic potential. CL is determined by subtraction and between CR and CS (Differential Shif).

### *The formulation*

The actual regional growth (Er'-Er) is the sum of the regional component (CR) and the net employment share, PNE (Net Employment Shift, NES) with:

$$\mathbf{E}_{r'} - \mathbf{E}_r = CR + PNE \quad (1)$$

With Er and Er: Regional employment in t and t '. Regional Component (CR ) is written: CR = Er ( (E ' - E ) / E ) with Er: Regional employment in t , E and E' : National employment in t and t '.Part Net Employment (PNE) expresses the difference between the recorded growth between t and t ' and the theoretical growth in a given region. NCB expresses a positive local dynamics more pronounced than that of the country while a negative score is rather a sign of a slower pace Regional  (Belhedi, 2005). We have :

$$\mathbf{PNE} = CR\,R - CRT \text{ with CRR and CRT: Regional growth real and theoretical;}$$

$$\mathbf{PNE} = (E_{r'} - E_r) - CR$$

$$\mathbf{PNE} = (E_{r'} - E_r) - E_r ((E' - E)/E). \quad (2)$$

In developing the formula, we obtain the following relationship NCB = Er' - Er (E ' / E) with Er and Er': Regional overall labor force in t and t'. E, E': overall labor force employed in t and t'.Structural Components and local component: The PNE is divided in turn into two: a structural component (CS) and a local component (CL): PNE = CS + CL. The structural component (CS) or Shift Proportioality expresses the effect of a good structure t, the presence in a given region at a time t of a higher proportion of jobs in dynamic activities, the variation regional employment due to spillover effects engines sectors and dynamic activities  (Haggett, 1973).For the calculation, it is necessary to establish the growth rate of regional employment that would record if all sectors behaved as globally. This is the theoretical growth rate. The difference between the theoretical rate of regional growth and overall growth rate gives the structural gap. Each sector can contribute positively or negatively to the structural gap. The sum of these contributions, participant downward and upward gap, actually gives the structural gap.

$$\mathbf{CS} = Si\,(Ej'/Ej - E'/E)\,Erj \quad (3)$$

Was the total active population occupied by sector and region SErj is equivalent to the total employed labor force in industry j (Ej = Erj) and therefore, we deduce as: CS = Si (Ej'/Ej - E'/E) Ej withCS: the structural component. Ej and Ej ': National labor force employed in industry j at time t and t'. E and E ': National labor force at time t and t. Finally, Erj represents the regional labor force employed in sector j at time t. If is equal to the sum of the areas i.The structural component may be null if the pace of development activity mimics the national, it is negative if the sectoral rhythm is less strong the cadence national and it is greater than 0 in the reverse case. A positive structural gap reveals that the region is more specialized than the average in overall growing sectors and/or less than average in overall declining sectors. A negative structural difference indicates that the region is more specialized than the average in overall declining sectors and less than the average in overall growing sectors. The local component or Shift Differential: it shows the trends followed by the activities of a medium according to the time (t - t ') with reference to their growth at the national level and thus affirms the effect of location more than that of the local structure. This

component explains the same way the impact of other location factors such as the attractiveness of the region. The local function is translated as follows :

$$\mathbf{CL} = \Sigma_i \, (E_{rj'} - E_{ri} (E_{j'}/E_j)) \quad (4)$$

Erj, Erj ': regional labor force engaged in activity j in t and t'. Ej ', Ej: labor force activity j in t and t'. Σi = Sum of regions i.

### *Changing dynamics of concentration: application of shift-share analysis (ASR)*

Various obstacles are mentioned to ensure a complete and thorough analysis. First, the data related to employment are generally partial and incomplete in Tunisia. They concern only certain activities relating to specific investigations (if job-population surveys conducted by the INS for example) or are limited to companies with more than ten employees. For this reason, we rely here on data on the employed population, identified by the last three censuses of 1984, 1994 and 2004 are considered the most reliable sources, both at global and regional levels. A reading of more recent developments from 2004 to 2014 completes our analysis. Second, the spatial division used can affect the truthfulness and accuracy of our results. It would be useful to choose the cut as thin as possible. In our case, it is advisable to take as a reference the level of delegations to enable us to conduct the most comprehensive study possible. Data on the employed population are not broken at the level of delegations for the case of 1994 and 2014. We will now present the specifics of the method of shift-share analysis for the case of Tunisian regions.

### *The application of the ASR in the case of Tunisia*

The data are not broken down by industry in 1994, contrary to the data of 1984, 2004 or 2014, which forced us to limit ourselves to the main sectors of economic activity (INS, 1984, 1994, 2004 and 2014) are the agriculture, forestry and fishing (AFP), manufacturing (IM), mining and energy (ME), construction and public works (CTP), services (trade, banking, transportation, counseling and repair) (S), administration, education and socio-community services such as health and culture (ASSC). Analysis of the variation of the population active occupied between 1984 and 1994 (see Appendix 1) shows that it increased by 29.1% thanks to the services, in particular, the administration and services collective socio (health, education, culture...), whose rates were 80% and 42% while secondary and primary activities have increased to a rate of 28.6% and 5.4% respectively.This trend has decreased slightly between 1994 and 2004 (see Appendice 2 ) with a growth rate of employed population by 23%.

This decline affects most sectors such as agriculture, forestry and fishing fell by 8% and mining and energy with a negative rate of 8.5%. The only exception is the area of administration and public social services (76% growth rate) continues to reinforce the now tertiary character of the Tunisian economy. More recently, a renewed strength in the primary sector knows that from 2004 to 2014 and a significant increase of nearly 23% is noted (Appendice 3)The analysis of additional occupied population (POA) between 1984 and 1994 reflects the consolidation of the Tunisian coast. The regional dimension is summarized by dividing the country into two: one Tunisia where the employed population grew faster than the national rate formed by the governorates of Ariana , Ben Arous , Nabeul, Sidi Bouzid, the Sahel ( Governorate Sousse and Monastir and Mahdia ) and Sfax, Kebili , Gabes and Médenine. The rest of the country recorded a lower than national average dynamics. It is in the Greater Tunis ( except Tunis Governorate ) we recorded both the highest rate ( Ariana with a rate of 16% and Ben Arous which records a rate of 29% ) and lower ( the Zaghouan with employed labor force decreased by 28%).

The second decade of our study reflects a lower growth of the workforce nationwide. Ring formed by the Tunis Ariana , Ben Arous and the Sahel region ( with the exception of Mahdia ) and governorates Kebili Médenine continue to have growth greater than the national average workforce. The good surprise comes from the governorates of Zaghouan (18%) , Gafsa ( 4%), Jendouba ( 1%) and Tozeur ( 7%) experiencing a return to form during this period.However governorates of Sidi Bouzid (-16%), Mahdia (-11%) and that of Gabes (-6%) begin to see a remarkable slowdown in their dynamic sign of slowing down. This slowdown is generalized to the case of the last three years of our study and now reaches of governorates deemed untouchable as Monastir (-3%) and Nabeul (-1%), while a modest recovery taking shape in the rate of population growth Employed for governorates as Bizerte (3%), Beja (1%), Kef (17%) and Kairouan (3%). This analysis will allow us to identify and try to understand the general trends of regional population growth occupied during the three periods covered by this study. Indeed, there are large dominant trends that we take successively.

### The consolidation of the coastline and the decline of the Interior

The analysis of the evolution of the regional population share additional occupied (POA) in each governorate reveals strengthening the capital Tunis and the coastal area in general, divergent dynamics of coastal and inland areas and evolution nuanced within each of these two sets.

### The strengthening of the area of Grand Tunis

The essential dynamics of the employed population is captured by regions of Central East and Greater Tunis. Indeed, the latter sees his weights strengthen over 26.8% of the additional occupied population (POA) between 1984-1994 (see Table 2). Nearly 27% between 1994 to 2004 (see Table 3) while it represented 24.1% of the employed population (PO) in 1994 (see table 2). She has recorded a higher than allowed his weight POA. The center of this region, represented by the governorate of Tunis, has lost its weight in favor of devices Ben Arous, Ariana and Manouba governorates (see Table 1).

### The consolidation of coastal areas

The coastline has collected 75% of this additional population occupied whereas it was in 1984 that 62.7% of the working population while the interior has seen its momentum is reduced with 15% of employed people against additional weight 37.3% in 1984 (see Table 2). The trend since the early 1980s has continued and was consolidated in the following years with 76% share in the additional occupied population for the period between 1994 and 2004 (see Table 3) given the socioeconomic conditions structural adjustment adopted since 1986, liberalization, globalization and agreements of free trade area with Europe, but also the mechanisms of inertia and spatial accumulation that play in favor of coastal areas and dynamic (Belhedi, 1992). The Centre East is the first dynamic space to display additional 28.7% of the employed population (POA) between 1984 and 1994 and 28.7 % between 1994 and 2004 against a weight of 21.4 % in 1984. The Northeast and Southeast are respectively 3 and 4 rows (see Tables 2 and 3).

### A latent delay in inland areas

Most interior regions recorded a decrease in their relative weight because they have a workforce additional occupied less consistent than their predestined weight in 1984 and 1994 and showed them and declined during the period from 1984-2004 (Map 1 , table 2 and 3). However, tentative signs of recovery in the growth dynamics of the population are employed additional to report at the governorate as Bizerte, Beja, Kef and Kasserine for the period from 2004 to 2014.
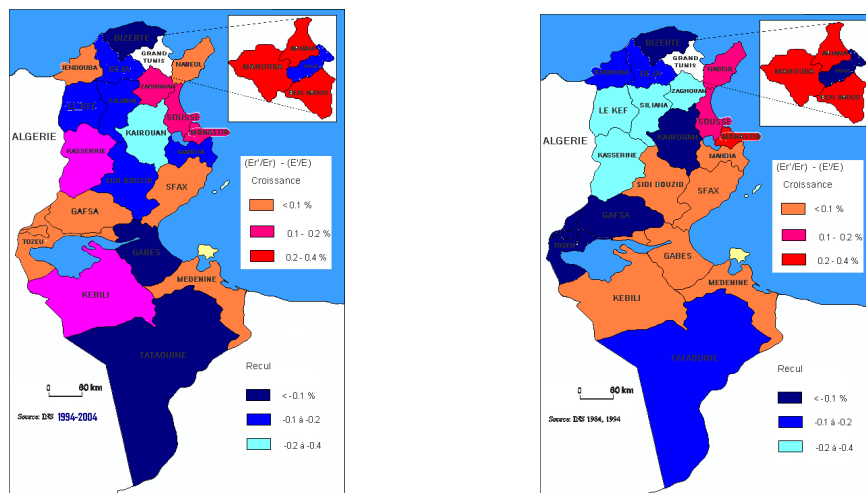


**Map 1: Dynamics of the labor force between 1984-1994-2004**

Source: Personal treatment

### A two-speed within the regions development

The deepening of our analysis by comparing governorates same region shows that the growth rate of the employed population is not done with the same pace and often , there is completely contradictory situations ( table 2). Indeed, this dynamic is far from homogeneous in Greater Tunis with Tunis as central governorate continues to give room for

the neighboring governorates are Ariana and Ben Arous. At the East Center is the governorates of Sousse and Monastir earning points unlike the governorates of Mahdia and Sfax not improve their position very slightly between 1984 and 2004. However, since 2004 there has been a remarkable recovery Sfax which contrasts with the situation in Monastir which stalled. In the North East, at first Nabeul earn points while Zaghouan loses with Bizerte back a little. From the second decade covered by this study, there is a general recovery in this region with the exception of Bizerte which continues to mark time. It was not until 2004 that we are witnessing a real departure from the governorate of Bizerte while Nabeul begins to show signs of slowing mainly due to the saturation of the seaside resort of Hammamet (table 3).

With regard to inland regions, the general trend is to the downside, with the exception of Sidi Bouzid during the first period of the study and Kebili who have seen their situation improve as a result of development of the productive apparatus and administration, especially in agriculture. The analysis of the evolution of the contingent of unemployed shows that the majority of governorates recorded greater than the national average scores except the governorates of Tunis, Bizerte and Zaghouan for the North East, North West for the Beja , and Monastir for the Centre East.Other governorates such as Mahdia, Sidi Bouzid , Kairouan, Kef and Siliana recorded negative performances. Factors combine to explain this situation. On the one hand, there is a decongesting Tunis in favor of neighboring governorates and, secondly, large flows of migrants, who are due to rural exodus to neighboring regions most dynamic in the creation of jobs such as East and Greater Tunis Centre may explain these negative performance (table 4).

*The internal dynamics of the spaces*

Regional trends Share Net Employment (PNE) by activity and governorate during the three periods covered by this study shows that across large parts of the country , there are two completely different trajectories. Governorates North East and Central East continue to show net positive dynamics of employment regardless of the period covered by the study. For its part, the regions of Central West and North West stand out with negative results, despite a positive trend reported for the Central West in 2004. With regard to the southern regions, we note that the South East is starting to show negative results in 1994, which contrasts with the situation in the South West. All these findings are caused different types of relationships that will be developed in what follows.

*The relationship between sectoral dynamics and local dynamics*

In this section, we will try to explain the local dynamics taking into account the structural changes that knows the local economy each governorate, which will be divided into two types of areas:

- those down compared to the negative evolution of their share of net employment;
- those dynamic that display a positive net employment share

This will be trying each time to establish the list of engines sectors that have the greatest level of employment and the level of overall growth in each governorate hand. The analysis is a comparative analysis because data are available for three periods (1984-1994, 1994-2004 and 2004-2014). From a structural point of view, the spatial dynamics of employment is based in fact on important high-growth activities such as industry and services , where agriculture to some medium, such as Sidi Bouzid, and Ariana Manouba. Table 1 summarizes the situation in the first study period, which runs from 1984 to 1994 specifying the areas that drive the regional dynamics of each governorate as well as those who experience a reverse path to the overall space concerned.Motor activity is the anchor of the regional dynamics and has a lasting impact on the stability and growth in the medium and long term in this environment. It changes according to the potential of each space. Thus, we can talk about the role played by the administration in the governorate of Kebili and this motor activity becomes associated with agriculture Gabes and Mahdia and services Médenine. Agriculture is partnering with industry in the case of Monastir and industry for the governorate of Nabeul. Services rather characterize Ariana and Médenine and are in addition to the industry to structure the local economic space in the governorates of Sfax , Monastir, Sousse.

Similarly, we find that the sectors of industry, services and administration explain the positive dynamics surrounding the capital governorates observed an opposite trend since the governorate of Tunis is in this period, a space down. Indeed, this decline is general and affects all the activities, especially the administration, services and industry, through the processes of loosening and decentralization implemented locally.

Only agriculture is undergoing a significant improvement, probably because mechanisms modernization and peri-urban agriculture increasingly shaped by market requirements. The same trend is unfortunate, for different reasons, Beja where industry, construction and administration fell sharply. The manufacturing sector is designated as responsible for the regional decline in the case of the governorates of Bizerte, Beja and Tozeur, given the weakness of their industrial activities, however, the decline in agricultural activities negatively affect the circles that form the North West and Centre West ( Siliana, Kef, Kasserine and Kairouan ).

For its part, the crisis in the mining industry has profoundly affected the governorate of Gafsa. The administration and services operate in the opposite direction in the case of Zaghouane governorates of Kasserine and Tataouine, while this is the case for industry and services in Kairouan and Gafsa and Kef BTP (Table 5). Continuing our analysis to the second decade that covers our work, that is to say from 1994 to 2004, we note that the major governorates of Greater Tunis (especially Ariana and Ben Arous) and East Central ( Sousse and Sfax to a lesser degree Monastir ) continue to show positive net job performance , a clear sign of local employment dynamics (Table 6) hand. For other regions, the results are negative or change course between the two decades that treats our analysis. At this level, we are talking about a set composed of eight governorates that have followed different trajectories pendants two decades. The cas of Sidi Bouzid , the explanation comes from the significant loss of speed CTP sector and industry sector considered engines sectors. Mahdia Médenine , meanwhile suffer from agriculture , forestry and fisheries in agony as he is the main source of employment in these two areas. For its part, Gabes is struggling to implement a more efficient service sector industries sector which has failed to attract investment despite the potentialities this region.

The opposite case is the governorates of Jendouba , Tozeur , Gafsa and Zaghouan. They start to hold their own game because the first two have managed to revitalize the primary sector more services for Tozeur. Zaghouan and Gafsa have reversed thanks to the two industry sectors and Administration and Services Socio Collective (table 6).The last study period, which runs from 2004 to 2014, is characterized mainly by the new breath, facing the North West and the two governorates of Bizerte and Sidi Bouzid. This dynamic is the result of the revival of agriculture, forestry and fisheries for the two governorates of Kef and Beja, and industry sector and that of construction. For their part, the two governorates of Monastir Nabeul and experience their first signs of slowdown due to the stalling of agriculture, forestry and fisheries for the first associated with the industry to the second governorate (table 7)Generally, the trajectories, observed throughout the three periods of this study, show two distinct spatial ensembles: a first which brings together the regions of the coast (with resulting greater Tunis and East Central governorates) and which expresses a structural dynamics since the initial structure predestines it to an additional occupied population growth.

### *The structural component: growing importance of services*

During the first decade that covers our work (1984 to 1994), we note that on a general level, two significant in economic activities between services production activities trends are highlighted, indicating the stage of regional development (see Appendix 9). On the one hand, it is mainly in service sectors that are at the origin of the local structural dynamics as they experienced higher than average national employed population growth rate. On the other hand, the production activities (agriculture, industry, mining, energy and construction) showed, for the most part, generally lower than the national average. The initial sectoral structure strongly permeates the local economic dynamics, or upward if dynamic activities are driven either to the drop if space is located in a very dynamic set of activities.

Governorates, the most dynamic for the period from 1984 to 1994, recorded values above 0 structural component and are in descending order (see Annex 9) : Tunis, Ariana , Sousse , Sfax , Monastir, Ben Arous and Médenine. All these governorates, except Médenine , Sousse and Sfax, maintain a positive structural component between 1994 and 2004 , however with some upheaval in the ranking now looks as follows : Tunis, Ariana , Ben Arous , Bizerte, Gafsa, Gabes , Tozeur , Monastir ( see Annex 10).This new ranking shows the important role played by the structural component in the dynamics of employment for some southern governorates and reveals a transformation of the economic fabric and Sfaxien Soussien , which are choking situation and begin to look for new firstly less polluted areas and diversify other. The initial economic structure gives these governorates (those with a positive structural component), a widely employed population higher than what they actually recorded during these two periods. Other governorates have values of the structural component (CS) below 0. The lowest values are those of the Central West, North West and North East (minus the Grand Tunis). The Southern region generally experiences lower scores, especially in the South East, and is located in an intermediate phase for the first period from 1984 to 1994. This transition is marked by positive scores recorded by Gabes, Tataouine, Tozeur and Gafsa for the second decade covered by this work.

The structural component made out four engines households take their gas service activities and industry with an intensity that fades from North to South. We are talking of Greater Tunis whole which records the effects of loosening metropolisation and around the capital, Tunis, Sousse and Monastir, Sfax and Gafsa. Other interior regions have an unfavorable structure (the North West and Central West), while the South has a structure which, without being favorable , is not too debilitating. This inventory changes during the second period of our analysis (see Appendix 10). One notices that the services recorded negative values of their structural component while the construction sector began to experience a return to form with the positive values of its structural component. The dynamics of the structural component at this level is shaped largely by the government sector, education and health. It is essentially public investment in infrastructure improvements at this level.

The analysis across different regions of the country shows that the capital Tunis, the North East, the East Midlands and South East show a clear positive dynamic situation that contrasts with the western regions which fell regardless the study period (table 8). Structural composition reveals two areas: first we talk Greater Tunis, where the central governorate of Tunis has all the structural advantages, but also the peripheral areas (governorates of Ariana and Ben Arous), which also show positive. results Secondly, speaking of East Centre governorates of Sousse and Monastir , excluding Mahdia Governorate which presents itself as an unfavorable structure and Sfax probably shows signs of slowing , following a period of rapid industrial growth and services. For the South East, the two governorates of Tataouine and Gabes took over the Medenine marks not now.

### *The local component: the two differentiated spaces*

The local component shows the importance of the intrinsic characteristics of the space in the dynamics of each region. It is calculated by subtracting between actual developments and theoretical of each activity, if it had followed the national trend. This component expresses, in fact, the attractiveness of each governorate and reflects the role played by specific determinants or random which have nothing to do with the general evolution of the economy or its structural composition. The distribution of the values of the local between 1984 and 1994 component highlights the importance of local factors to the economic dynamics of coastal, South West and the governorates of Kairouan and Sidi Bouzid who show positive results, while the other governorates show negative values sign of the low attractiveness of this area (see appendice 8). In this case, the maritime strategic opening and the existence of fertile land largely explain these results. The local component of the concentration is in favor of the coastal front (NE, CE and SE) , with the exception of Tunis, Gafsa and Tataouine. Generally found the following pattern: the most attractive areas are , in descending order , the outskirts of Tunis , including the governorate of Ben Arous and Ariana , the Cap Bon Nabeul with that class pole position , while the East Midlands including Monastir and Sousse, Sidi Bouzid ( third nationally ) and Central West , most of the South ( Kebili , Tozeur , Gabes and Médenine ).

In this ranking, Sfax farm walk which denotes an average explanatory power of local factors for local economic dynamics. Other governorates are presented as unattractive spaces ( for multiple factors) as is the case in the governorates of Tunis, Zaghouan, Kasserine , Gafsa and Tataouine The spatial configuration of the local component remains broadly the same for the period 1994 to 2004 , however, some changes to note in the standings or at the impact on some governorates component which is now negative (see Appendix 7) We note also the entry in the classification of two governorates that are beginning to take advantage of the effects related to the rental of their industrial activities: it is Jendouba and Kasserine. The reverse situation is two governorates of Mahdia and especially Sidi Bouzid who register now obvious negative sign of the inability of local factors to promote a dynamic and attractiveness of their territories results.

### The differentiation of spaces according to the two components of the regional dynamics

Building on the results of each governorate according to both local and structural components for the period from 1984 to 2014 can be divided into four groups according to the spatial and structural impact on local dynamics and attractiveness of environment.

- **Spaces Initial favorable structure and strong regional attractiveness (CL > 0, CS> 0)**

It is on the outskirts of Tunis with the governorates of Ariana and Ben Arous, the governorates of Sousse, Monastir Center East, finally the Gafsa and Tozeur in the South. At the level of large regions, we find the East Centre belongs to this group. These are spaces where the initial sectoral structure is very favorable and dynamic activities are

represented (services, industry, intensive agriculture.), the situation is also attractive. Note that these results are practically the same for the period from 1984 to 1994 with the exception of Sfax and Médenine that, between the two periods, have lost some appeal at the sectoral component of regional economic dynamics. The opposite case is the governorates of Gafsa and Tozeur in the South that are beginning to show a promising global regional dynamic.



**Map 2: Typology of spaces according to the structural residual analysis**
**Source:** Personal treatment

- ▪ **spaces in favour but little attractive original structure (CS > 0, CL < 0)**

Can be distinguished in this category, the governorate of Tunis whose structure is more favorable, but the effects of congestion and diseconomies make it less attractive Two other governorates are in the same situation: it is Gabes and Tataouine suffering a near- isolation does not allow them to benefit from localization externalities Efforts in improving the road infrastructure especially in this case is an urgent necessity.

- ▪ **attractive spaces to unfavourable structure  (CS < 0, CL > 0)**

To begin with, we talk governorate of Nabeul and Kebili which retain their status in the previous period while Zaghouan Jendouba Kasserine and improve the attractiveness of their space. For their part, Sfax and Médenine are asked to review their industrial structure through diversification or modernization of the productive apparatus. At the level of the major regions was the North East, South West and Central West in this case.

- ▪ **spaces to unfavourable and little attractive original structure with (CS < 0, CL < 0)**

Found in this set governorates of Bizerte, Kef, Siliana , Beja , Mahdia , Kairouan and Sid Bouzid. At the regional level, it is called the Northwest. This type of region is a deep crisis affecting local externalities localization economic structure as well.

**Conclusion**

At the end of this analysis we can say that the shift-method allowed us to identify the determinants of regional economic dynamics for all available spaces between 1984.1994, 2004 and 2014, building on the employed population, which allowed us to analyze the trajectories of different regions and offer an explanatory spatial typology of the operation and evolution of the Tunisian space. In Tunisia we distinguish evolution at two speeds: positive being metropolisation for eastern regions of the country and a negative trend for the rest of the country. However, this type of shift-share analysis suffers from some deficiency that is worth quoting. This method decomposes the trajectory of local employment in a structural component and a residual other (local), and quantifies the associated impact these two components. Its usefulness is limited to the identification function.

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**APPENDICES**

**APPENDICE 1: Variation in % by governorate and economic activity of the active population occupied between 1984 and 1994**

| | Agric, Forestry and Fishing | manufact Industry | Mines and energy | C.T.P | Services | Administration, Edu/Health | Not reported | Total |
|---|---|---|---|---|---|---|---|---|
| **Tunis** | 9,7 | 8,1 | -6,9 | 2,1 | 52,4 | 19,4 | -60,5 | 20,0 |
| **Ariana** | 1,6 | 66,5 | 39,1 | 45,6 | 52,5 | 70,9 | -20,6 | 44,8 |
| **Ben Arous** | 25,6 | 60,0 | 39,7 | 45,1 | 104,8 | 65,9 | -60,3 | 58,5 |
| **Nabeul** | 18,0 | 63,8 | 21,1 | 32,8 | 93,8 | 26,0 | -40,8 | 40,0 |
| **Zaghouan** | -6,7 | -25,5 | -26,2 | -13,7 | 74,8 | 50,5 | -54,6 | 1,6 |
| **Bizerte** | 4,1 | 40,8 | 5,7 | 10,9 | 67,1 | 56,8 | -31,7 | 28,1 |
| **Béja** | 24,1 | -7,7 | -18,5 | 4,7 | 64,2 | 22,9 | -75,9 | 16,0 |
| **Jendouba** | 19,8 | -41,1 | -36,8 | 46,0 | 91,3 | 42,0 | -67,8 | 14,3 |
| **Le Kef** | -20,7 | -33,6 | -32,8 | 50,0 | 109,2 | 46,2 | -78,2 | 3,1 |
| **Siliana** | -14,0 | -14,9 | -30,0 | 44,3 | 98,2 | 21,2 | -87,1 | 3,3 |
| **Kairouan** | -8,6 | 62,9 | 25,4 | 24,5 | 101,6 | 33,6 | -9,1 | 23,4 |
| **Kasserine** | -25,5 | -1,4 | 25,2 | 33,8 | 104,6 | 90,1 | -79,7 | 9,6 |
| **Sidi Bouzid** | -2,3 | 103,0 | 75,5 | 97,4 | 153,5 | 82,2 | -73,8 | 37,2 |
| **Sousse** | -9,0 | 54,3 | 51,1 | 28,0 | 106,8 | 28,1 | -50,6 | 45,6 |
| **Monastir** | 35,6 | 70,0 | 3,1 | 14,6 | 95,8 | 24,9 | -63,0 | 50,7 |
| **Mahdia** | 33,2 | 25,4 | 46,0 | 5,4 | 94,2 | 33,5 | -76,5 | 31,8 |
| **Sfax** | 7,9 | 41,9 | 58,9 | 38,0 | 62,0 | 36,4 | -74,6 | 33,1 |
| **Gafsa** | 8,7 | -0,4 | -36,1 | 52,8 | 94,4 | 92,7 | -78,6 | 20,8 |
| **Tozeur** | 37,7 | -41,7 | 100,7 | 76,6 | 171,8 | 69,0 | -93,0 | 24,8 |
| **Kébili** | 19,7 | -29,5 | 80,0 | 9,5 | 151,1 | 118,2 | -89,7 | 31,1 |
| **Gabés** | 36,9 | 28,2 | 100,6 | 35,9 | 92,7 | 63,8 | -83,5 | 39,2 |
| **Médenine** | 1,0 | 25,1 | 14,4 | 12,4 | 120,1 | 53,0 | -52,9 | 38,6 |
| **Tataouine** | -29,0 | 11,1 | 30,9 | 22,0 | 53,6 | 99,4 | -84,9 | 11,9 |
| **TOTAL** | 5,4 | 32,0 | -3,3 | 28,7 | 79,5 | 42,0 | -62,6 | 29,1 |

Source : Personal treatment

**APPENDICE 2: % change governorate and economic activity of the labor force between 1994 and 2004**

| | Agric, Forestry and Fishing | manufact Industry | Mines and energy | C.T.P | Services | Administration, Edu/Health | Not reported | Total |
|---|---|---|---|---|---|---|---|---|
| **Tunis** | -30,3% | -6,2% | -11,0% | 13,6% | 4,7% | 46,2% | -45,1% | 12,0% |
| **Ariana** | -6,7% | 32,8% | 5,3% | 45,9% | 38,0% | 116,1% | -25,2% | 45,0% |
| **Ben Arous** | 3,0% | 31,8% | 15,3% | 38,4% | 33,5% | 103,1% | -16,3% | 43,9% |
| **Nabeul** | -10,4% | 56,9% | 5,3% | 29,8% | 22,6% | 88,5% | -32,3% | 26,8% |
| **Zaghouan** | -9,6% | 145,8% | -17,4% | 36,3% | 23,8% | 66,7% | 24,0% | 40,8% |
| **Bizerte** | -15,9% | 31,3% | -13,3% | 37,2% | 9,5% | 43,5% | -38,5% | 16,0% |
| **Béja** | -4,6% | -13,3% | -0,9% | 10,9% | 5,6% | 61,5% | -42,2% | 7,6% |
| **Jendouba** | 37,7% | -11,2% | -18,2% | -0,1% | 12,4% | 76,9% | -59,8% | 23,6% |
| **Le Kef** | -9,5% | -0,5% | -32,4% | -18,2% | -3,6% | 79,7% | -55,1% | 5,9% |
| **Siliana** | -13,5% | -6,3% | -6,6% | 6,3% | -0,6% | 99,2% | 9,6% | 11,0% |
| **Kairouan** | -6,2% | -43,4% | -12,3% | 2,1% | 14,2% | 66,5% | -53,2% | 0,5% |
| **Kasserine** | 33,0% | -6,1% | -14,9% | 12,5% | 31,5% | 102,7% | -35,0% | 32,9% |
| **Sidi Bouzid** | -4,3% | -43,1% | -21,7% | 1,5% | 18,3% | 79,5% | 62,6% | 7,1% |
| **Sousse** | -17,1% | 41,3% | -25,6% | 32,6% | 30,5% | 89,4% | 66,1% | 38,5% |
| **Monastir** | -24,5% | 57,6% | 15,5% | 43,4% | 21,6% | 71,4% | 178,3% | 40,6% |
| **Mahdia** | -32,6% | 18,7% | 14,7% | 71,2% | 41,0% | 61,2% | -9,1% | 11,9% |
| **Sfax** | -24,6% | 26,9% | -9,9% | 44,2% | 18,1% | 85,4% | 128,8% | 23,4% |
| **Gafsa** | -5,0% | 21,0% | -14,0% | 40,2% | 7,2% | 96,8% | 12,1% | 27,5% |
| **Tozeur** | 2,3% | 40,2% | -18,9% | 8,9% | 30,1% | 76,9% | -32,3% | 29,6% |
| **Kébili** | 29,4% | -7,3% | -29,7% | 60,5% | 26,0% | 84,4% | 7,8% | 40,6% |
| **Gabés** | -9,2% | 1,7% | -10,0% | 42,2% | 8,0% | 59,8% | 16,9% | 16,7% |
| **Médenine** | -35,2% | -22,1% | -4,9% | 34,1% | 43,2% | 83,8% | 32,6% | 23,0% |
| **Tataouine** | -24,8% | 26,5% | 37,9% | 31,9% | -12,6% | 89,1% | 106,3% | 19,2% |
| Ensemble | -7,9% | 21,7% | -8,4% | 24,6% | 19,4% | 75,9% | -17,1% | 23,0% |

Source : Personal treatment

**APPENDICE 3: % change governorate and economic activity of the labor force between 2004 and 2014**

| | Agric, Forestry and Fishing | manufact Industry | Mines and energy | C.T.P | Services | Administration, Edu/Health | Not reported | Total |
|---|---|---|---|---|---|---|---|---|
| Tunis | 4,04% | 7,78% | -5,76% | -6,38% | 7,98% | -0,01% | -54,43% | 3,33% |
| Ariana | 2,28% | 12,06% | -4,17% | 4,21% | 13,93% | 9,68% | -59,17% | 8,91% |
| Ben Arous | 9,53% | 22,44% | 0,60% | 2,35% | 13,77% | 2,62% | -25,85% | 11,09% |
| Nabeul | 5,05% | 4,54% | -2,71% | 14,21% | 8,71% | 5,16% | 12,86% | 6,76% |
| Zaghouan | 57,96% | 10,51% | -20,43% | 9,83% | 15,99% | 17,00% | -13,09% | 22,13% |
| Bizerte | 35,76% | 9,33% | -1,95% | 7,07% | 1,72% | 6,46% | -39,76% | 11,25% |
| Béja | 24,39% | -11,16% | 18,25% | -16,88% | 6,07% | 3,79% | 207,39% | 9,11% |
| Jendouba | -17,55% | -20,85% | 15,29% | -17,44% | 5,76% | 1,54% | -10,22% | -9,59% |
| Le Kef | 106,72% | -16,24% | -34,62% | -4,62% | 5,10% | 3,50% | 53,73% | 25,55% |
| Siliana | 52,48% | -27,43% | 9,31% | -26,69% | -3,42% | -10,28% | 71,04% | 3,77% |
| Kairouan | 43,34% | -4,52% | 2,77% | -16,50% | 5,85% | 2,79% | 80,52% | 11,39% |
| **Kasserine** | 42,93% | -21,92% | 43,27% | - | -1,23% | -7,56% | 269,23% | 4,43% |

| | | | | 26,20% | | | | |
|---|---|---|---|---|---|---|---|---|
| **Sidi Bouzid** | 59,15% | -22,28% | 27,23% | -5,66% | 19,05% | -2,94% | 25,14% | 22,55% |
| **Sousse** | 23,98% | 6,00% | 51,42% | 5,26% | 16,07% | 6,46% | -48,54% | 9,62% |
| **Monastir** | -7,70% | -1,65% | 6,27% | 10,95% | 16,19% | 13,41% | -63,57% | 4,95% |
| **Mahdia** | -10,05% | -3,09% | 0,30% | -5,51% | 1,62% | 12,58% | 115,00% | -1,11% |
| **Sfax** | 32,26% | 15,28% | 41,56% | 33,30% | 16,76% | 10,61% | 46,05% | 19,73% |
| **Gafsa** | 21,38% | -9,20% | -18,24% | 10,57% | 8,13% | 4,02% | 66,36% | 5,02% |
| **Tozeur** | -6,77% | -31,67% | 6,56% | -32,39% | -4,75% | 0,62% | 250,99% | -7,70% |
| **Kébili** | 6,24% | -11,53% | -28,06% | -12,20% | -1,16% | 0,91% | 112,05% | 0,29% |
| **Gabés** | 14,41% | -15,16% | 17,23% | -14,91% | 17,15% | 4,69% | 70,29% | 2,54% |
| **Médenine** | -16,37% | -3,19% | 9,96% | 13,65% | 8,05% | -0,24% | 10,14% | 3,80% |
| **Tataouine** | -16,72% | -11,86% | -1,21% | -8,12% | 16,20% | 6,94% | -30,46% | 0,32% |
| Ensemble | 22,68% | 4,76% | 2,06% | -0,64% | 10,20% | 4,18% | -0,87% | 8,07% |

**Source :** Personal treatment

**APPENDICE 4: Labour Force by District in 2014**

| | |
|---|---|
| **Grand Tunis** | 891061 |
| **North East** | 537418 |
| **North West** | 427941 |
| **Center East** | 860470 |
| **Center West** | 422057 |
| **South East** | 283013 |
| **South West** | 171267 |
| **Total** | 3593227 |

National Institute of Statistics

**APPENDICE 5: The labor force as a percentage of District 2014**

| | |
|---|---|
| **Grand Tunis** | 24,8% |
| **North East** | 15,0% |
| **North West** | 11,9% |
| **Center East** | 23,9% |
| **Center West** | 11,7% |
| **South East** | 7,9% |
| **South West** | 4,8% |
| **Total** | 100,0% |

National Institute of Statistics

**APPENDICE 6: Internal Migration Migration inter governorate by district (1999-2004)**

| | **Incoming** | **Outgoing** | **Net Migration (1999-2004)** | **Net Migration (1989-1994)** |
|---|---|---|---|---|
| **Grand Tunis** | 200,3 | 141,8 | 58,5 | 47,8 |
| **North East** | 41,5 | 37 | 4,5 | -0,3 |
| **North West** | 25,2 | 70,5 | -45,3 | -35,9 |
| **Center East** | 106,6 | 57 | 49,6 | 18,6 |
| **Center West** | 22,1 | 74,6 | -52,5 | -23,9 |

| | | | | |
|---|---|---|---|---|
| **South East** | 32,7 | 37,2 | -4,5 | -2,7 |
| **South West** | 16,2 | 26,5 | -10,3 | -3,6 |
| **Total** | 444,6 | 444,6 | 0 | 0 |

National Institute of Statistics (RGPH 2004)

**APPENDICE 7: Local Component (CL) by governorate and activity for the period between 1994 and 2004**

| | Agric, Forestry and Fishing | manufact Industry | Mines and energy | C.T.P | Services | Administration, Edu/Health | Not reported | Total |
|---|---|---|---|---|---|---|---|---|
| **Tunis** | -566 | -16458 | 46 | -1881 | -14927 | -21009 | -2121 | -56916 |
| **Ariana** | -715 | 3862 | 310 | 4946 | 3623 | 19623 | -898 | 30751 |
| **Ben Arous** | 93 | 3180 | 562 | 1845 | 4581 | 9204 | -343 | 19123 |
| **Nabeul** | -3531 | 12975 | 291 | 776 | -4236 | 16502 | -651 | 22126 |
| **Zaghouan** | -12 | 5975 | -27 | 424 | 532 | -2256 | 91 | 4727 |
| **Bizerte** | -4919 | 2851 | -128 | 1441 | 709 | -13206 | -1174 | -14424 |
| **Béja** | 2171 | -3041 | 30 | -2169 | -131 | -6310 | -121 | -9571 |
| **Jendouba** | 13285 | -2374 | -129 | -4321 | 103 | -1565 | -1518 | 3481 |
| **Le Kef** | 326 | -1086 | -462 | -4894 | -714 | -3761 | -408 | -10998 |
| **Siliana** | -1175 | -1404 | -9 | -1387 | -610 | -2183 | 132 | -6638 |
| **Sousse** | -1411 | 8074 | -35 | 973 | -3639 | 14558 | 1171 | 19690 |
| **Monastir** | -2142 | 14554 | 160 | 2193 | 533 | 294 | 2003 | 17596 |
| **Mahdia** | -10930 | 77 | 115 | 4679 | 3357 | -1094 | 237 | -3559 |
| **Sfax** | -5132 | 4376 | 193 | 3654 | 1939 | 2624 | 2156 | 9810 |
| **Kairouan** | -1767 | -14229 | -15 | -5438 | 1228 | -6561 | -266 | -27049 |
| **Kasserine** | 9033 | -2913 | -39 | -2073 | 2430 | -2776 | 316 | 3979 |
| **Sidi Bouzid** | 5945 | -5850 | -47 | -2343 | 2603 | -5062 | 212 | -4541 |
| **Gabès** | 1068 | -3346 | -115 | 1518 | 488 | -4036 | 237 | -4186 |
| **Médenine** | -4768 | -4786 | 151 | 803 | 2008 | 11571 | 448 | 5427 |
| **Tataouine** | -831 | 109 | 177 | 411 | -934 | -1055 | 286 | -1837 |
| **Gafsa** | 1732 | -348 | -928 | 228 | 785 | -2929 | 258 | -1202 |
| **Tozeur** | 438 | 255 | -17 | -480 | -192 | 301 | -60 | 245 |
| **Kébili** | 3806 | -453 | -82 | 1094 | 464 | -873 | 13 | 3970 |
| **Total** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Personal treatment

**APPENDICE 8: Local Component (CL) by governorate and activity for the period between 1984 and 1994**

| Governorates | Agric, Forestry and Fishing | manufact Industry | Mines and energy | C.T.P | Services | Administration, Edu/Health | Not reported | Total |
|---|---|---|---|---|---|---|---|---|
| **Tunis** | 138 | -8860 | -190 | -5146 | -20932 | -13719 | 341 | -23111 |
| **Ariana** | -710 | 9035 | 840 | 2511 | 10498 | 5263 | 2597 | 31218 |
| **Ben Arous** | 1156 | 6881 | 672 | 1037 | 4651 | 3208 | 140 | 20309 |
| **Nabeul** | 6235 | 9924 | 276 | 587 | 3306 | -2617 | 1178 | 13683 |
| **Zaghouan** | -1399 | -3495 | -121 | 2205 | -166 | 325 | 73 | -9139 |
| **Bizerte** | -400 | 3574 | 151 | -2296 | -1824 | 2183 | 1292 | -1866 |
| **Beja** | 5350 | -3201 | -118 | -2510 | -1412 | -1924 | -517 | -10088 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Jendouba** | 3918 | -8138 | -462 | 2205 | -21186 | 2 | -470 | -12653 |
| **Kef** | -5494 | -4584 | -640 | 1644 | 1717 | 316 | -850 | -15481 |
| **Siliana** | -4160 | -2416 | -184 | 1238 | 888 | -1397 | -1078 | -13853 |
| **Kairouan** | -6309 | 5034 | 170 | -911 | 2415 | -965 | 1407 | -6885 |
| **Kasserine** | -8612 | -2317 | 131 | 675 | 1749 | 2884 | -585 | -13418 |
| **Sidi Bouzid** | -2883 | 3568 | 244 | 5822 | 3861 | 2475 | -233 | 4681 |
| **Sousse** | -1723 | 6584 | 511 | -92 | 5261 | -2106 | 311 | 13399 |
| **Monastir** | 2786 | 11358 | 54 | -1461 | 1730 | -2183 | -7 | 15116 |
| **Mahdia** | 8196 | 83 | 197 | -2362 | 1223 | -677 | -313 | 1348 |
| **Sfax** | 983 | 6488 | 1431 | 1420 | -5820 | -1141 | -519 | 4928 |
| **Gafsa** | 288 | -1321 | -4212 | 1212 | 993 | -6428 | -289 | -4301 |
| **Tozeur** | 1238 | -1761 | 156 | 837 | 1756 | 738 | -972 | -832 |
| **Kebili** | 1146 | -1449 | 167 | -533 | 1532 | 1974 | -406 | 234 |
| **Gabes** | 3470 | 440 | 668 | 558 | 1183 | 1710 | -908 | 4970 |
| **Medenine** | -750 | 37 | 150 | -2017 | 5822 | 922 | 186 | 5653 |
| **Tataouine** | -2462 | -2442 | 110 | -224 | -1219 | 1458 | -371 | -3912 |
| **Total** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Personnal treatment

**APPENDICE 9: Structural Component (CS) activity and by governorate for the period between 1984 and 1994**

| Governorates | Agric, Forêt et pêche | Industrie manufact. alimentaire | Mines et énergie | B.T.P | Services | Administration, Edu/Santé | Non déclarés | TOTAL |
|---|---|---|---|---|---|---|---|---|
| **Tunis** | -777 | -2451 | -1755 | -224 | 38068 | 73356 | -14640 | 25257 |
| **Ariana** | -4567 | -1116 | -658 | -173 | 11197 | 2199 | -5710 | 1173 |
| **Ben Arous** | -1402 | -1008 | -518 | -73 | 9280 | 1625 | -5312 | 2591 |
| **Nabeul** | -12122 | -1311 | -376 | -169 | 11776 | 1983 | -4988 | -5206 |
| **Zaghouan** | -2829 | -359 | -176 | -60 | 1652 | 463 | -842 | -2150 |
| **Bizerte** | -7759 | -1147 | -558 | -148 | 7138 | 1787 | -3859 | -4546 |
| **Beja** | -7008 | -509 | -259 | -121 | 4523 | 1218 | -3600 | -5757 |
| **Jendouba** | -6687 | -638 | -459 | -147 | 10693 | 1129 | -8468 | -4577 |
| **Kef** | -5158 | -405 | -721 | -90 | 2411 | 813 | -4081 | -6744 |
| **Siliana** | -5251 | -314 | -229 | -92 | 2411 | 813 | -4081 | -6744 |
| **Kairouan** | -11092 | -680 | -196 | -247 | 5541 | 1382 | -2434 | -7726 |
| **Kasserine** | -6825 | -458 | -153 | -154 | 2975 | 725 | -3184 | -7073 |
| **Sidi Bouzid** | -9163 | -235 | -103 | -98 | 2616 | 744 | -1934 | -8174 |
| **Sousse** | -2927 | -1149 | -312 | -153 | 9749 | 1833 | -2388 | 4654 |
| **Monastir** | -2258 | -1294 | -276 | -120 | 7238 | 1548 | -1999 | 2840 |
| **Mahdia** | -7214 | -671 | -133 | -117 | 4253 | 964 | -2082 | -5000 |
| **Sfax** | -9754 | -1950 | -764 | -178 | 16299 | 2459 | -4026 | 2087 |
| **Gafsa** | -2155 | -271 | -4274 | -58 | 3409 | 1606 | -1675 | -3418 |
| **Tozeur** | -939 | -137 | -50 | -20 | 953 | 330 | -2961 | -2824 |
| **Kebili** | -1959 | -138 | -66 | -32 | 1073 | 313 | -1388 | -2197 |
| **Gabes** | -2696 | -660 | -213 | -90 | 4588 | 947 | -4026 | -2151 |
| **Medenine** | -42131 | -499 | -282 | -142 | 7208 | 1017 | -1768 | 1302 |
| **Tataouine** | -1758 | -105 | -106 | -38 | 2321 | 307 | -1545 | -925 |
| **Total** | -116530 | -18845 | -12638 | -2745 | 166705 | 32814 | -87991 | -39231 |

**APPENDICE 10: The structural component (CS) activity and by governorate for the period between 1994 and 2004**

| Governorates | Agric, Forêt et pêche | Industrie manufact. alimentaire | Mines et énergie | B.T.P | Services | Administration, Edu/Santé | Non déclarés | TOTAL |
|---|---|---|---|---|---|---|---|---|
| **Tunis** | -998 | -1155 | -1532 | 216 | -53095 | 83350 | -1427 | 25361 |
| **Ariana** | -5429 | -721 | -858 | 238 | -23226 | 35780 | -1119 | 4665 |
| **Ben Arous** | -2061 | -626 | -680 | 101 | -17400 | 25653 | -521 | 4467 |
| **Nabeul** | -16738 | -833 | -426 | 213 | -20893 | 23787 | -728 | -15621 |
| **Zaghouan** | -3087 | -104 | -122 | 49 | -2644 | 6632 | -94 | 630 |
| **Bizerte** | -9454 | -627 | -553 | 156 | -10916 | 26663 | -650 | 4620 |
| **Béja** | -10178 | -182 | -198 | 120 | -6799 | 14241 | -214 | -3210 |
| **Jendouba** | -9371 | -146 | -272 | 204 | -7919 | 15264 | -673 | -2913 |
| **Le Kef** | -4785 | -104 | -454 | 127 | -5591 | 12684 | -272 | 1604 |
| **Siliana** | -5282 | -104 | -151 | 126 | -4374 | 9373 | -130 | -542 |
| **Sousse** | -3115 | -688 | -443 | 185 | -18451 | 22348 | -291 | -454 |
| **Monastir** | -3583 | -854 | -267 | 130 | -12704 | 18403 | -183 | 942 |
| **Mahdia** | -11248 | -326 | -182 | 117 | -7559 | 12244 | -120 | -7075 |
| **Sfax** | -12311 | -1074 | -1139 | 232 | -24168 | 31924 | -252 | -6788 |
| **Kairouan** | -11870 | -430 | -231 | 292 | -10224 | 17567 | -545 | -5442 |
| **Kasserine** | -5946 | -175 | -180 | 196 | -5573 | 13123 | -160 | 1286 |
| **Sidi Bouzid** | -10474 | -185 | -170 | 183 | -6070 | 12898 | -125 | -3942 |
| **Gabès** | -4321 | -329 | -400 | 116 | -8092 | 14762 | -164 | 1574 |
| **Médenine** | -5003 | -243 | -303 | 152 | -14525 | 14804 | -205 | -5323 |
| **Tataouine** | -1461 | -45 | -131 | 45 | -3264 | 5829 | -58 | 914 |
| **Gafsa** | -2740 | -105 | -2562 | 84 | -6066 | 14303 | -88 | 2826 |
| **Tozeur** | -1513 | -31 | -94 | 34 | -2372 | 5310 | -51 | 1283 |
| **Kébili** | -2744 | -38 | -112 | 33 | -2466 | 6504 | -35 | 1141 |
| **Total** | -143715 | -9125 | -11460 | 3350 | -274390 | 443445 | -8106 | 0 |

Personnal treatment

**Tables**
**Table 1: Employed Population additional (POA) in %**

| | 84-94 | 94-2004 | 2004-2014 |
|---|---|---|---|
| **Tunis** | -9% | -11% | -5% |
| **Ariana** | 16% | 22% | 1% |
| **Ben Arous** | 29% | 21% | 3% |
| **Nabeul** | 11% | 4% | -1% |
| **Zaghouan** | -28% | 18% | 14% |
| **Bizerte** | -1% | -7% | 3% |
| **Béja** | -13% | -15% | 1% |
| **Jendouba** | -15% | 1% | -18% |
| **Le Kef** | -26% | -17% | 17% |
| **Siliana** | -26% | -12% | -4% |

| | | | |
|---|---|---|---|
| **Kairouan** | -6% | -23% | 3% |
| **Kasserine** | -20% | 10% | -4% |
| **Sidi Bouzid** | 8% | -16% | 14% |
| **Sousse** | 16% | 16% | 2% |
| **Monastir** | 22% | 18% | -3% |
| **Mahdia** | 3% | -11% | -9% |
| **Sfax** | 4% | 0% | 12% |
| **Gafsa** | -8% | 4% | -3% |
| **Tozeur** | -4% | 7% | -16% |
| **Kébili** | 2% | 18% | -8% |
| **Gabés** | 10% | -6% | -6% |
| **Médenine** | 9% | 0% | -4% |
| **Tataouine** | -17% | -4% | -8% |

**Table 2: Regional dynamics of the additional employed labour force (POA) 1984-1994**

| Regions whose weight has been consolidated | | | | Regions whose weight has fallen | | | |
|---|---|---|---|---|---|---|---|
| **Région** | **%POA** | **% PO 1984** | **% PO 1994** | **Région** | **%POA** | **% PO 1984** | **% PO 1994** |
| **Grand Tunis** | 26,8 | 22.9 | 24.1 | **Centre West** | 10.27 | 13.2 | 12.52 |
| **Centre East** | 28.7 | 21,4 | 23.04 | **North West** | 5.02 | 14.77 | 12.52 |
| **North East** | 15.61 | 15.11 | 15.22 | **South West** | 3.74 | 4.65 | 4.44 |
| **South East** | 9.10 | 7.85 | 8.14 | | | | |

**Table 3: Regional dynamics of the additional employed labour force (POA) 1994-2004**

| Regions whose weight has been consolidated | | | | Regions whose weight has fallen | | | |
|---|---|---|---|---|---|---|---|
| **Région** | **%POA** | **% PO 1994** | **% PO 2004** | **Région** | **%POA** | **% PO 1994** | **% PO 2004** |
| **Grand Tunis** | 26,8 | 24.1 | 29,5 | **Centre West** | 6 | 13.2 | 11 |
| **Centre East** | 28.7 | 23.04 | 28,5 | **North West** | 7 | 14.77 | 12 |
| **North East** | 15.7 | 15.2 | 15 | **South West** | 6 | 4.65 | 5 |
| **South East** | 7 | 8.14 | 7 | | | | |

POA: Employed Population additional. PO: Employed Population.          Source: Personal treatment

**Table 4: Percentage change in the number of unemployed**

| | Unemployment 84-94 | Unemployment 94-2004 | Unemployment 2004-2014 |
|---|---|---|---|
| **Tunis** | 35% | 12,50% | -5,17% |
| **Ariana** | 82,5% | 69,70% | 29,23% |
| **Ben Arous** | 51,2% | 64,70% | 32,76% |
| **Nabeul** | 82,9% | 25,60% | 11,96% |
| **Zaghouan** | 179,3% | 7,60% | -52,24% |
| **Bizerte** | 39% | 9,90% | -16,23% |

| | | | |
|---|---|---|---|
| **Béja** | 33,1% | 1,40% | -2,59% |
| **Jendouba** | -10,6% | 24,70% | 27,52% |
| **Le Kef** | 34% | -1,90% | -1,60% |
| **Siliana** | 48,7% | -14,40% | 67,07% |
| **Kairouan** | 108% | -10,80% | -15,03% |
| **Kasserine** | 76,1% | 7,50% | 28,94% |
| **Sidi Bouzid** | 66% | -3,70% | -12,49% |
| **Sousse** | 64,4% | 25,80% | 27,25% |
| **Monastir** | 27,2% | 6,40% | 39,95% |
| **Mahdia** | 147,2% | -24,20% | 99,68% |
| **Sfax** | 61,6% | 23,50% | 14,41% |
| **Gafsa** | 62,7% | 11,70% | 5,52% |
| **Tozeur** | 91,5% | 27,10% | 84,74% |
| **Kébili** | 96% | 7,60% | 34,96% |
| **Gabés** | 39,2% | 17,10% | 60,87% |
| **Médenine** | 94,3% | 20,00% | 63,13% |
| **Tataouine** | 77,3% | 36,60% | 37,20% |
| **Ensemble** | 54,4% | 14,40% | 17,37% |

Source: Personal treatment

**Table 5: Dynamic characteristic activities and types of development areas 1984-1994**

| Spaces in decline | | | Dynamic spaces | | |
|---|---|---|---|---|---|
| **Governorate** | **Improvement activities** | **Characteristics Activities** | **Governorate** | **Activities hindsight** | **Characteristics Activities** |
| **Tunis** | AFP | S-ASSC-IM | Ariana | AFP | S-IM-ASSC |
| **Zaghouan** | ASSC | IM-CTP-AFP | Ben Arous | - | IM-S-ASSC |
| **Bizerte** | IM-ME-ASSC | CTP-S | Nabeul | ASSC | IM-AFP-S |
| **Beja** | AFP | IM-CTP-ASSC | Sidi Bouzid | AFP | CTP-S-IM-ASSC |
| **Jendouba** | AFP-CTP | S-IM | Sousse | AFP-ASSC | IM-S |
| **Kef** | S-CTP | AFP-IM | Monastir | ASSC-CTP | IM-AFP-S |
| **Siliana** | CTP-S | AFP-IM | Mahdia | CTP-ASSC | AFP-S |
| **Kairouan** | IM-S | AFP-CTP-ASSC | Sfax | S-ASSC | IM-ME-CTP |
| **Kasserine** | ASSC- -CTP | AFP-IM | Kebili | IM-BTP | ASSC-S-AFP |
| **Gafsa** | CTP -S | ME-ASSC-IM | Gabes | - | AFP-ASSC-S |
| **Tozeur** | S-AFP-CTP | IM | Médenine | CTP-AFP | S-ASSC |
| **Tataouine** | ASSC | AFP-IM-S | | | |

Source: The sectors are listed in descending order of importance, I-S- CTP shows that the first sector is the industry followed by private services and the Construction & Public Works. S : Services, AFP Agriculture - Forest Fishing, ASSC : Administration, Socio collective services (Education , Health , Culture ) IM : Manufacturing Industry , CTP : Construction and Public Works , ME: Mines and Energy.

**Table 6: Dynamic characteristic activities and types of development areas 1994-2004**

| Spaces in decline | | | Dynamic spaces | | |
|---|---|---|---|---|---|
| **Governorate** | **Improvement activities** | **Characteristics Activities** | **Governorate** | **Activities hindsight** | **Characteristics Activities** |
| **Tunis** | AFP | S-ASSC-IM | Ariana | AFP | S-IM-ASSC |
| **Sidi Bouzid** | AFP | CTP-S-IM-ASSC | Ben Arous | - | IM-S-ASSC |
| **Bizerte** | IM-ME-ASSC | CTP-S | Nabeul | ASSC | I-AFP-S |
| **Beja** | AFP | IM-CTP-ASSC | Jendouba | AFP-BTP | S-IM |
| **Mahdia** | CTP-ASSC | AFP-S | Sousse | AFP-ASSC | IM-S |
| **Kef** | S-CTP | AFP-IM | Monastir | ASSC-BTP | IM-AFP-S |
| **Siliana** | CTP-S | AFP-IM | Zaghouan | ASSC | IM-CTP-AFP |
| **Kairouan** | IM-S | AFP-CTP- | Sfax | S-ASSC | IM-ME-CTP |

| | | ASSC | | | |
|---|---|---|---|---|---|
| **Kasserine** | ASSC- -CTP | AFP-IM | Kebili | I-BTP | ASSC-S-AFP |
| **Gabes** | | AFP-ASSC-S | Gafsa | BT -S | ME-ASSC-IM |
| **Médenine** | CTP-AFP | S-ASSC | Tozeur | S-AFP-BTP | IM |
| **Tataouine** | ASSC | AFP-IM-S | | | |

Source: The sectors are listed in descending order of importance, I-S- CTP shows that the first sector is the industry followed by private services and the Construction & Public Works. S : Services, AFP Agriculture - Forest Fishing, ASSC : Administration, Socio collective services (Education , Health , Culture ) IM : Manufacturing Industry , CTP : Construction and Public Works , ME: Mines and Energy.

**Table 7: Dynamic characteristic activities and types of development areas 2004-2014**

| Spaces in decline | | | Dynamic spaces | | |
|---|---|---|---|---|---|
| **Governorate** | **Improvement activities** | **Governorate** | **Improvement activities** | **Governorate** | **Improvement activities** |
| **Tunis** | AFP | S-ASSC-IM | **Ariana** | AFP | S-IM-ASSC |
| **Sidi Bouzid** | AFP | CTP-S-IM-ASSC | **Ben Arous** | - | IM-S-ASSC |
| **Bizerte** | IM-ME-ASSC | CTP-S | | | |
| **Beja** | AFP | IM-CTP-ASSC | **Jendouba** | AFP-CTP | S-IM |
| **Mahdia** | CTP-ASSC | AFP-S | **Sousse** | AFP-ASSC | IM-S |
| **Nabeul** | ASSC | IM-AFP-S | | | |
| **Siliana** | CTP-S | AFP-IM | **Zaghouan** | ASSC | IM-BTP-AFP |
| **Kairouan** | IM-S | AFP-CTP-ASSC | **Sfax** | S-ASSC | IM-ME-CTP |
| **Kasserine** | ASSC- CTP | AFP-IM | **Kebili** | IM-BTP | ASSC-S-AFP |
| **Gabes** | | AFP-ASSC-S | **Gafsa** | CTP -S | ME-ASSC-IM |
| **Médenine** | CTP-AFP | S-ASSC | **Tozeur** | S-AFP-CTP | IM |
| **Tataouine** | ASSC | AFP-IM-S | **Bizerte** | IM-ME-ASSC | CTP-S |
| **Monastir** | ASSC-CTP | IM-AFP-S | **Beja** | AFP | IM-CTP-ASSC |
| | | | **Kef** | S-CTP | AFP-IM |

Source: The sectors are listed in descending order of importance, I-S- CTP shows that the first sector is the industry followed by private services and the Construction & Public Works. S : Services, AFP Agriculture - Forest Fishing, ASSC : Administration, Socio collective services (Education , Health , Culture ) IM : Manufacturing Industry , CTP : Construction and Public Works , ME: Mines and Energy.

**Table 8: Evolution of the PO, Part net job. Regional components, structural by local District between 1994 and 2004**

| Région | | | Evolution of PO | Regional components | PNE | Structural component | Local component |
|---|---|---|---|---|---|---|---|
| **Er'-Er** | **CR** | **PNE** | **CL** | **CS** | **CL** | | |
| **G T** | 150659 | 122243 | 28416 | 29021 | | | -579 |
| **NE** | 83389 | 80711 | 2678 | -11902 | | | 14580 |
| **NW** | 26811 | 78887 | -52076 | -24681 | | | -43464 |
| **CE** | 149872 | 115981 | 34791 | 4580.1 | | | 30211 |
| **CW** | 54862 | 70782 | -15622 | -22973 | | | 7351 |
| **SE** | 48638 | 41927 | 6711 | -1774 | | | 6322 |
| **SW** | 20559 | 24858 | -4899 | -8438 | | | -5334 |

Source: Personal treatment

**Table 9: Classification by governorate of the component locale between 1984 - 1994-2004**

| 1984-1994 | Ariana | Nabeul | Monastir | Ben Arous | Sousse | Kasserine | Zaghouan | Jendouba | Kebili | Sfax | Gafsa | Tozeur |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1994-2004 | Ariana | Nabeul | Sousse | Ben Arous | Ariana | Sousse | Monastir | Sfax | Médenine | Kebili | Tozeur | Sfax |
| Classement | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |

**Table 10: Results of the The shift-share analysis (ASR)**

| Gouvernorats | Variation de PO | CR | PNE | CS | CL |
|---|---|---|---|---|---|
| Tunis | 33656 | 64601,5676 | -30945,5676 | 28517 | -59462 |
| Ariana | 74843 | 38268,9253 | 36574,0747 | 5780 | 30794 |
| Ben Arous | 49365 | 25889,1427 | 23475,8573 | 6320 | 17155 |
| Nabeul | 51072 | 43806,3406 | 7265,65939 | -10733 | 17998 |
| Zaghouan | 13389 | 7544,55575 | 5844,44425 | -779 | 6623 |
| Bizerte | 20861 | 29960,9611 | -9099,96114 | -696 | -8403 |
| Béja | 6389 | 19413,4048 | -13024,4048 | -5498 | -7526 |
| Jendouba | 21919 | 21400,292 | 518,708018 | -4986 | 5505 |
| Le Kef | 3496 | 13675,7587 | -10179,7587 | -601 | -9579 |
| Siliana | 5949 | 12397,0439 | -6448,04387 | -2013 | -4441 |
| Kairouan | 670 | 29974,7702 | -29304,7702 | -6601 | -22704 |
| Kasserine | 23754 | 16626,0549 | 7127,94506 | -1124 | 8252 |
| Sidi Bouzid | 6271 | 20274,3969 | -14003,3969 | -6104 | -7899 |
| Sousse | 48011 | 28684,7779 | 19326,2221 | 4303 | 15023 |
| Monastir | 45663 | 25880,8573 | 19782,1427 | 2625 | 17157 |
| Mahdia | 11226 | 21746,438 | -10520,438 | -7548 | -2973 |
| Sfax | 47579 | 46754,3353 | 824,664682 | -2487 | 3312 |
| Gafsa | 15614 | 13073,6856 | 2540,31435 | 448 | 2093 |
| Tozeur | 5998 | 4657,78101 | 1340,21899 | 464 | 877 |
| Kébili | 10587 | 5994,49373 | 4592,50627 | -319 | 4912 |
| Gabés | 12445 | 17177,7251 | -4732,72512 | 741 | -5470 |
| Médenine | 20654 | 20692,3498 | -38,3497753 | -357 | 319 |
| Tataouine | 4678 | 5593,34182 | -915,341823 | 643 | -1559 |