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RESEARCH ARTICLE

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.

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:

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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 Shift).

The formulation

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

$$E_r' - E_r = CR + PNE \quad (1)$$

With E_r and E_r' : Regional employment in t and t' . Regional Component (CR) is written: $CR = E_r ((E' - E) / E)$ with E_r : 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:

PNE = CR R - CRT with CRR and CRT: Regional growth real and theoretical;

$$PNE = (E_r' - E_r) - CR$$

$$PNE = (E_r' - E_r) - E_r ((E' - E)/E) \quad (2)$$

In developing the formula, we obtain the following relationship $NCB = E_r' - E_r (E' / E)$ with E_r and E_r' : 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 Proportionality 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.

$$CS = \sum_i (E_j' / E_j - E' / E) E_{rj} \quad (3)$$

Was the total active population occupied by sector and region SE_{rj} is equivalent to the total employed labor force in industry j ($E_j = E_{rj}$) and therefore, we deduce as: $CS = \sum_i (E_j' / E_j - E' / E) E_{rj}$ with

CS: the structural component. E_j and E_j' : National labor force employed in industry j at time t and t' . E and E' : National labor force at time t and t' . Finally, E_{rj} 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 :

$$CL = \sum_i (E_{rj}' - E_{rj} (E_j' / E_j)) \quad (4)$$

E_{rj} , E_{rj}' : regional labor force engaged in activity j in t and t' . E_j' , E_j : labor force activity j in t and t' . \sum_i = 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 Governorat) 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. 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

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				

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

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- ASSC	Sfax	S-ASSC	IM-ME-CTP
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 ² - 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

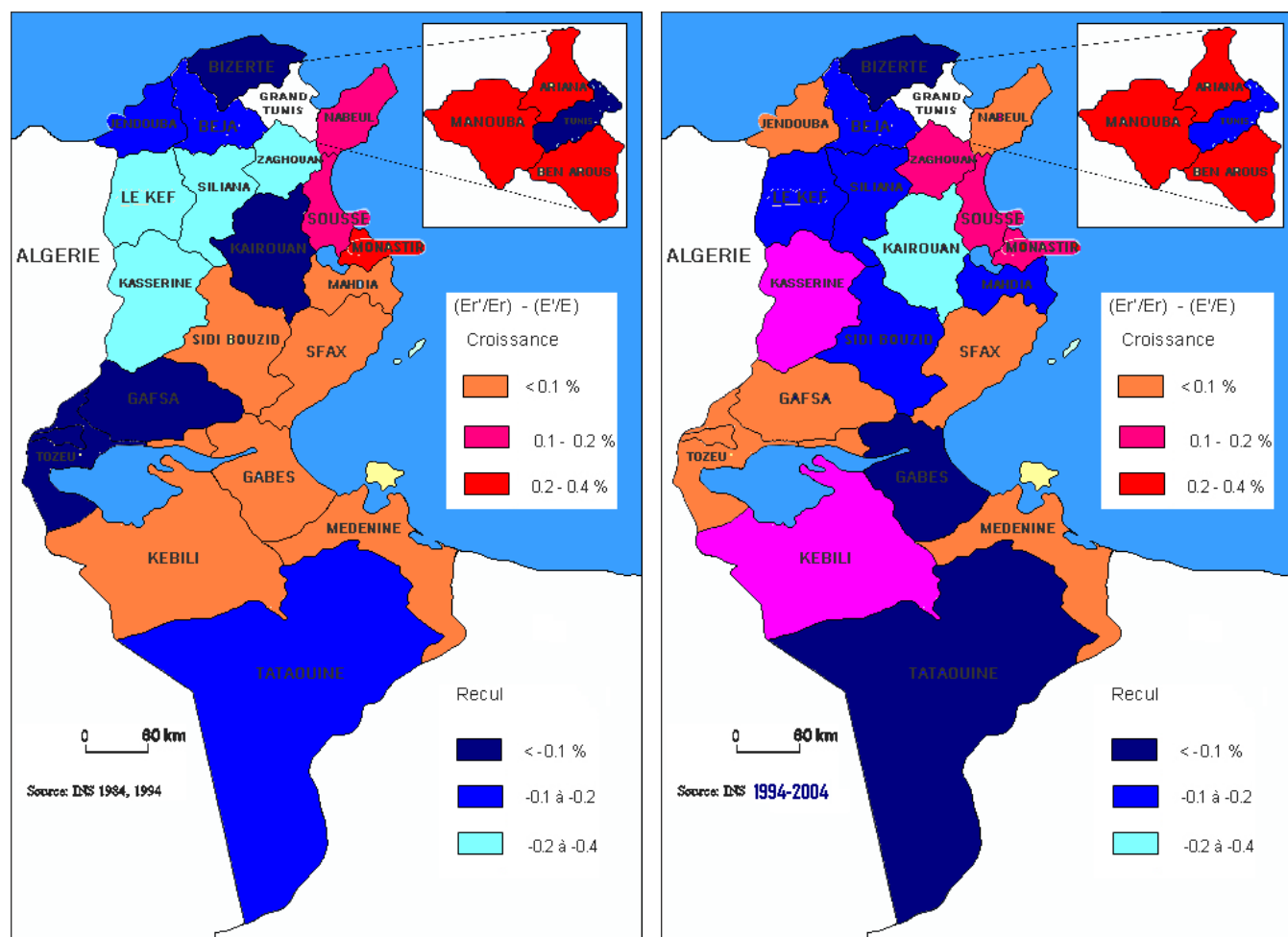
Source: Personal treatment

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

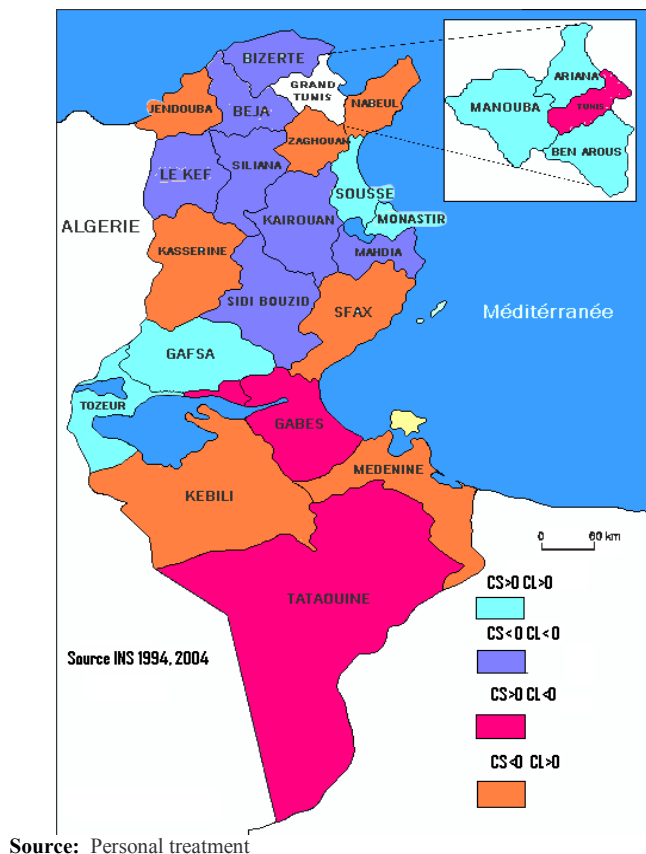
1984-1994	Ariana	Nabeul	Monastir	Ben Arous	Sousse	Kasserine	Zaghouan	Jendouba	Kebili	Sfax	Gafsa	Tozeur
1994-2004	Ariana	Nabeul	Sousse	Ben Arous	Ariana	Sousse	Monastir	Sfax	Médenine	Kebili	Tozeur	Sfax
Classement	1	2	3	4	5	6	7	8	9	10	11	12

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



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



Map 2. Typology of spaces according to the structural residual analysis

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 Jendoub, 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.

- 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

Appendix 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
Gabès	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

Appendix 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%
Gabès	-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%	-26,20%	-1,23%	-7,56%	269,23%	4,43%
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%
Gabès	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

Appendix 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

Appendix 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

Appendix 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)

Appendix 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

Appendix 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

Appendix 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

Appendix 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
