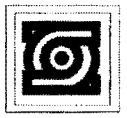

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NÚMERO 73

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MEXICO´S INDUSTRIAL STRUCTURE AND GROWTH PERFORMANCE BY STATES: A SHIFT-SHARE ANALYSIS, 1988-1993

Resumen

En este trabajo se analizan los movimientos inter-estatales recientes de la producción manufacturera en México a nivel de ramas de actividad, así como la contribución de cada rama al crecimiento manufacturero de los estados de la República Mexicana. Este patrón de cambio inter-estatal es capturado a través de la aplicación de la técnica de cambio-y-participación (shift-share), la cual además separa esos movimientos inter-estatales de la producción en un efecto de la mezcla industrial (M) y otro efecto competitivo (S).

Los resultados revelan una alta concentración espacial del cambio inter-estatal. Es decir, gran parte tanto del crecimiento como del declive relativo se concentra en unos cuantos estados. La aplicación de una tipología convencional basada en la combinación, de dirección y magnitud del cambio, de la M y de la S de los estados, clasifica dentro de cada grupo a estados con marcadas diferencias en cuanto a estructura y desarrollo de sus sectores manufactureros. No obstante, los resultados revelan que dentro de cada grupo de estados existe una relación directa entre su nivel de industrialización y el número de industrias especificas que influyen de forma determinante su crecimiento o declive relativo. Esto sugiere la conveniencia de afinar dicha tipología de acuerdo al número de industrias localmente determinantes.

Abstract

The main objective here is to provide a much greater definition of Mexico's recent inter-state shifts of manufacturing output, by 4-digit level industries, and further analyze their contribution to the manufacturing growth of the Mexican states. This pattern of change is captured through the application of the shift-share technique which also disggregates the inter-state shifts into an industrial mix effect (M) and a competitive effect (S).

The results reveal a high spatial concentration of the inter-state shifts. That is, most of the relative growth and decline is concentrated in a few states. The application of a conventional typology based on the combination of the direction and magnitude of change in the states' M and S, groups or classifies together states with marked differences in their manufacturing sectors' structure and degree of development. Nevertheless, the results reveal the existence of a direct relationship between the states' degree of industrialization and the number of specific industries driving their relative growth or decline. This suggests the convenience of refining such a typology according to the range of influential industries.

Foreword

This empirical work constitutes the third of four major parts in which a research project dealing with the determinants of the inter-state pattern of manufacturing growth in Mexico has been divided. Each of these parts has been planned to be integrated as a sequential chapter of a book. The first part consists of a comprehensive and systematic review of the survey-based and econometric work on the subject matter for Mexico, which emphasizes not only results (what do we know?) but also methodological issues (how do we know it?). It also contains an introduction to the theoretical framework at the basis of the empirical work which essentially defines the hypothesized impact of specific industry location factors (regional attributes) on the relative profitability of regions and hence their growth performance. Here, differentials in regional profitability are presumed to cause differences in regional growth. In the second part, the theoretical framework is operationalized and multiple regression analysis is applied to a model that explores the relationship between aggregated state industrial growth and different attributes that are assumed to capture the states' relative profitability. The results are systematically contrasted with those of previous studies. Thus, the rankings of location factors produced by survey-studies, often having a great dosage of subjectivity, are subjected to the data and statistical tests. These two parts are the CIDE-working papers AP57 y AP64.

The third part, developed in this document, is intended to set the basis for the analysis of the causes of inter-state growth differentials in specific industries. Such basis is precisely to define in detail and further understand the recent inter-state shifts of output of specific manufacturing industries and their relative importance for the growth performance of the different Mexican states. Thus, here the full inter-state pattern of change is captured through the application of shift-share analysis to a database consisting of value-added data for all 4-digit level manufacturing industries across all Mexican states. In addition, the use of the shift-share technique provides information on the importance of the industrial mix (specialization) and the competitive position of the states, which underlie the observed inter-state shifts of production. The last part of the planned book will consist of a theory-based empirical research dealing directly with the causes of these inter-state growth differentials and consequent shifts in specific 4-digit industries.

Introduction

During the period 1988-1993, Mexico's manufacturing output (as measured by value- added) increased by 59 percent. The aggregate growth of this sector was accompanied by a pattern of marked growth differentials across states. On one extreme, manufacturing output more than doubled in an heterogeneous group of twelve states. It comprised states traditionally characterized by quite large output shares such as Jalisco and Veracruz together with others of relatively small, underdeveloped manufacturing activity such as Zacatecas, Colima, Guerrero and Quintana Roo. The States of Jalisco and Veracruz also recorded the fourth and third largest increases in absolute output, respectively. This fast-growth group also included three of the six northern border states (Tamaulipas, Sonora, and Baja California), as well as Oaxaca, Michoacan and Aguascalientes, whose manufacturing sectors are of a moderate size.

In sharp contrast, the increase was less than one-fourth in the northern border state of Coahuila, as well as in Chiapas, Nayarit and Morelos. Moreover, in Coahuila and Chiapas the increase was less than six percent. In the three most prominent manufacturing states (the Federal District, Mexico, and Nuevo Leon) output increased by more than one-third but below average. Nevertheless, the State of Mexico and the Federal District recorded the largest and second largest absolute increases, respectively, while Nuevo Leon achieved the fifth largest increase. In short, during 1988-1993 manufacturing output shifted toward the central-west states, notably Jalisco, as well as toward some northern border states and the oil-rich states in the southeast. These shifts occurred at the expense not only of Mexico's manufacturing heartland and its immediate area of influence, but also of other northern border states, and even of some of the least industrialized.

Many rather broad definitions of the changes in the regional pattern of manufacturing growth for an economy and a territory as large and diverse as Mexico can be and have been made. However, it proves very difficult to capture the full pattern of change. While the recent inter-state shifts of output for aggregate manufacturing and even for some high profile industries such as automobiles and electronics have already been noted and documented, the output shifts of most other industries and their particular importance for the growth performance of the different Mexican states remain unexplored. Hence, it is the main objective of this study to provide a much greater definition and further understanding of the recent inter-state shifts in the Mexican manufacturing sector.[1]

[1] This empirical research constitutes an integral part of a larger study on the determinants of the regional patterns of manufacturing growth in Mexico financially supported by CONACYT. It has been preceded by the CIDE-working papers AP57 and AP64. The former comprises a comprehensive and systematic review of the survey-based and econometric work on the subject matter for the case of Mexico, whereas in the latter multiple regression analysis is applied to a model that explores the

The handling of information, however, becomes quite complicated when attempting to picture the performance of each industrial-regional structure over a time period, given the multiplicity of industries and regions. In attempting to overcome this difficulty, this study will apply a statistical technique known as *shift-share* to a database comprising manufacturing value-added data for all 4-digit level manufacturing industries across the 31 Mexican states and the Federal District. Using as a standard of reference the growth rate of the nation as a whole (both sector-wide and for each individual industry), the shift-share technique generates and conveniently sorts information on two basic components underlying the observed inter-state shifts of industrial production—i.e., industrial mix or structure and competitive position. The application of this technique also reveals the contribution of each specific industry to the conformation of the overall mix and competitive components for each state, which could serve as the basis to select, for instance, the slow-growth or declining industries of a state that could be the focus of policy intervention. Likewise, it would help to identify the state's rapid-growth industries on which further research regarding the chief determinants of their above-average performance could focus.

The rest of the paper is structured as follows. Section two contains a discussion of the rationale and mechanics of the shift-share method. The third section comprises the description of the data used. In the fourth section, I present a first part of the empirical results, which are divided into two sub-sections. The first sub-section contains the analysis of the distributional pattern of overall upward and downward net shifts among states and major inter-state tendencies, whereas the second one comprises the results from the application of a regional typology based on the direction and relative size of the shift-share components. In the fifth section, the shift-share components of selected states are disaggregated by industry in order to seek differences and similarities within each of the groups of states resulting from the mentioned typology. The sixth section is a brief exercise of how further research on the pivotal industries of a state, which have previously been identified through shift-share analysis, should be conducted.

The Shift-Share Technique

The approach of the shift-share technique is that a region may be growing faster (slower) than the national average either because it hosts a mix of nationally fast-growing (slow-growing) industries and/or because its industries overall are growing faster (slower) than their national counterparts. In order to characterize each individual industry as rapid- or slow-growing, shift-share adopts the *national growth*

relationship between ***aggregated state industrial growth*** and different state attributes that are assumed to capture the states' profitability. Both of these preceding documents focus on ascertaining the role of public policy variables. This third part is intended to set the basis for subsequent theory-based empirical research on the causes of ***regional industry-specific growth*** for selected 4-digit industries.

rate of all industries (manufacturing industries in this case) as the standard of reference. This is the basis from which to determine whether the region has a favorable or an unfavorable industrial mix. It also adopts the *national growth rate of each particular industry* as the benchmark to characterize the growth rate of the respective industries in a given region as rapid (which implies an increasing regional share) or slow (which implies a decreasing regional share). Thus, the shift-share analysis generates useful information that yields insight into the interregional differences in output growth and hence shifts of output.

Accordingly, the technique decomposes the actual growth of a given region in a particular industry into three parts: 1) a national or "expected growth" effect, (N_{ij}), 2) a competitive effect, (S_{ij}), and 3) an industrial mix effect, (M_{ij}), which are computed as follows:

$$\mathbf{N_{ij} = Q_{ij}\,(r_{on})}$$

$$\mathbf{S_{ij} = Q_{ij}\,(r_{ij} - r_{in})}$$

$$\mathbf{M_{ij} = Q_{ij}\,(r_{in} - r_{on})}$$

where Q_{ij} is the output level in industry i region j for the initial year, r_{on} is the growth rate of total (national) manufacturing output, r_{in} is the growth rate of output in industry i for the nation, and r_{ij} is the growth rate of output in industry i in region j.

The national effect presumes that the growth rate of industry i in region j duplicates the "expected" growth rate--the growth rate achieved by the whole sector at the national level. The competitive effect measures the extent to which growth in industry i region j exceeds or falls behind the growth rate achieved by the same industry at the national level, and the industrial mix effect measures the change of industry i in region j due to the region's share of that industry in the nation (the direction of that change in a given industry will be the same for all regions and it depends on whether at the national level the industry in question has been growing faster or slower than the whole sector).

The algebraic sum of the competitive effects for each of the region's industries (S_{ij}) yields the competitive component for the respective region (S_j). Similarly, the sum of the industrial mix effects for each of the region's industries (M_{ij}) amounts to the industrial mix component of that region (M_j).[2] The sum of these two components is the *net shift* (NS_j) which measures the difference between the region's actual output growth (R_j) and the output growth that it would have achieved

[2] It is important to note that even if each industry within a given region expands at the respective industry's national growth rate (i.e., it has a competitive effect neither positive nor negative), that region would have experienced a greater or lower than average expansion rate in total manufacturing because of its different industrial mix than the nation. For instance, if that region (having neither a positive nor a negative competitive effect) has a high proportion of industries growing faster than the national average for all industries, its manufacturing sector will grow faster than the national counterpart.

by duplicating the national growth rate of the economy or sector analyzed (N_j). That is, if $R_j = N_j+M_j+S_j$, and $M_j+S_j = NS_j$ then $NS_j = R_j-N_j$.

Conventionally, the competitive component suggests whether the region's relative locational advantages or competitive position (as reflected in faster or slower growth rates than the nation) have improved or deteriorated *vis à vis* the rest of the nation. The industry mix component indicates whether a region has specialized in nationally rapid- or slow-growth industries. It should be noted that the industrial mix component must be regarded as a minimum estimate of the industrial growth/decline derived from the region's specialization, as the technique fails to take into account inter-industry linkages and multiplier effects. As noted by Stilwell (1970), a region having a below-average share in national growth-industries would be expected to perform relatively poorly in industries which are important suppliers of intermediate inputs of those industries. The implied slow growth in turn will have a downward multiplier effect by restricting the growth of the regional income and hence aggregate demand. Thus, this region's industrial mix will contribute to exacerbate a negative competitive component or to partly offset a positive one. The opposite effect on the competitive component would take place in regions with an above-average share in national growth-industries.

Despite of controversy concerning the technique's conceptual and practical strengths and weaknesses, it continues to be widely used in regional policy-making and academic papers in developed countries. In the words of Ireland and Moomaw (1981) "shift-share analysis continues to be the standardization technique of choice for important analysis of regional and urban growth and development." After questioning the use of the competitive component as a direct guide to the formulation of regional policies because of its inability to explain the causes behind it, Buck (1970) concludes that shift-share "can be of considerable value if employed on an industry-by-industry basis as a descriptive tool to appraise the essential features of a region." A useful analytical review of the development of shift-share as a descriptive technique and the debate about its use in forecasting is elaborated in Richardson (1978) and Stevens and Moore (1980).

The Data

Here, the application of this technique to manufacturing output growth in Mexico uses the Mexican states as territorial units of analysis and industry data disaggregated at the 4-digit level. It is based on the period 1988-1993. Thus, the original database and information generated through the application of the technique concerns the 31 Mexican federated states plus the Federal District across 45 4-digit level industries as presented in the Mexican classification of economic activities. The selection of a period of study is restricted to the years of the industrial censuses. Here, the 1988-1993 period was chosen because the classification of industrial activities is homogeneous across these census years (which also are the two most recent ones) and therefore fully comparable. The chosen measure of manufacturing

production growth is value-added because this reflects an industry's overall growth in a more precise way than other popular measures related to employment or capital stock. These other two measures would tend to overstate production increases in labor- and capital-intensive industrial units, respectively, whereas value-added offsets to some extent measurement biases arising from the different changes in capital/labor ratios across production units. Moreover, an increase in automation of production will probably cause a decline in employment growth while leading to increases in value-added growth. Hence, a decline in employment growth does not represent necessarily a decline in output growth. The industrial classification used in this analysis is presented in Table A1, Appendix 1. The importance and growth performance of each industry during the period 1988-1993 is left to Table A2, Appendix 1.

As shown in Table A2, 21 of the 45 industries experienced an above-average growth rate (column 6). In terms of the shift-share analysis, these industries will contribute positive industrial mix effects in all the states, whose magnitude will depend on each state's particular share in these industries at the beginning of the period analyzed. It is also noticeable that seven of the 24 slow-growth industries actually experienced an absolute decline (Table A2, col. 3). More than one-fifth of the absolute sectoral change during 1988-1993 is accounted for by the two industries with the largest absolute increases in value-added (automotive and alcoholic and non-alcoholic beverages). If the increases of primary petrochemicals and miscellaneous food products are added, the share of these four industries in the absolute sectoral change during the period amounts to one-third (Table A2, col. 3).

The Results: Aggregated Components and Types of Regions

The distribution of the net shift among states: main features

The growth of manufacturing value-added between 1988 and 1993 as well as its disaggregation into the three components resulting from the shift-share analysis, for each of the 31 Mexican states plus the Federal District, are presented in Table 1. The net shift, which is a measure of relative change, shows the absolute amount by which each state grew in excess of or below the amount that would had been expected by duplicating the national (average) growth rate of the whole manufacturing sector—the standard of reference (Table 1, col. 6).

Table 1

Shift-Share Analysis of Real Manufacturing Value Added by State 1988-1993 [1, 2] (aggregation of 4-digit code industries)

State	*Value-added 1988*	*Change in Value-added 1988-93 (R)[3]*	*National Growth component (N)*	*Competitive component (S)*	*Industrial Mix component (M)*	*Net Shift (NS)*	*Percent Change 1988-93*
Slow-Growth States							
Coahuila	42413.17	1805.04	25062.04	-15686.34	-7570.66	-23257.00	4.26
Federal District	129236.33	55760.59	76366.04	-27464.95	6859.50	-20605.45	43.15
Nuevo Leon	64733.34	23508.05	38251.08	-5653.47	-9089.56	-14743.03	36.32
Morelos	21541.85	4905.18	12729.13	-5891.21	-1939.40	-7830.61	22.27
Guanajuato	27994.43	9107.43	16541.97	-7718.28	283.73	-7434.55	32.53
Chihuahua	24250.47	10890.00	14329.66	-3116.66	-323.00	-3439.65	44.91
Hidalgo	14138.99	4976.41	8354.76	-300.02	-3078.32	-3378.35	35.20
Mexico	124127.71	70939.05	73347.35	-6641.23	4232.93	-2408.30	57.15
Chiapas	4213.56	212.96	2489.80	-3061.28	784.43	-2276.85	5.05
San Luis Potosi	14590.16	6759.71	8621.36	606.31	-2467.96	-1861.65	46.33
Nayarit	1795.71	344.21	1061.09	-18.51	-698.37	-716.88	19.17
Queretaro	15366.62	8457.39	9080.17	-1722.28	1099.50	-622.78	55.04
Campeche	622.58	261.83	367.89	-96.29	-9.76	-106.06	42.06
Fast-Growth States							
Baja Calif. Sur	686.61	526.13	405.72	-18.77	139.18	120.41	76.33
Colima	543.35	638.79	321.07	387.51	-69.79	317.72	117.56
Tabasco	5929.12	3897.95	3503.53	-4032.28	4426.70	394.42	65.74
Quintana Roo	692.87	847.50	409.42	594.02	-155.94	438.08	122.32
Tlaxcala	5028.94	3494.37	2971.61	596.92	-74.16	522.75	69.49
Durango	5438.43	3738.74	3213.58	28.86	496.29	525.15	68.75
Puebla	21708.78	13578.25	12827.77	2305.52	-1555.04	750.47	62.55
Guerrero	1438.09	1635.90	849.77	372.95	413.18	786.13	113.76
Yucatan	5395.87	3984.81	3188.43	1058.70	-262.32	796.38	73.85
Zacatecas	646.11	1319.55	381.79	616.38	321.38	937.76	204.23
Sinaloa	4170.67	4032.49	2464.46	1391.81	176.22	1568.03	96.69
Michoacan	8354.31	9073.68	4936.58	5145.23	-1008.14	4137.10	108.46
Aguascalientes	4634.75	8021.91	2738.69	4081.65	1201.57	5283.22	173.08
Sonora	13110.29	14350.20	7746.90	4630.57	1972.73	6603.30	109.46
Baja California	12282.40	14134.04	7257.70	5313.24	1563.10	6876.34	115.08
Tamaulipas	16473.35	17699.21	9734.14	7083.21	881.87	7965.07	107.44
Oaxaca	9300.52	14345.37	5495.70	8858.98	-10.91	8848.07	154.24
Jalisco	41670.18	42902.84	24623.00	17078.34	1201.49	18279.83	102.96
Veracruz	34640.43	43947.11	20469.11	21229.46	2248.54	23478.00	127.87
	677124.90	400115.10				00.00	59.09

1) Ranked by Net Shift, *2)* Thousand new pesos 1980=100, 3) R = N + M + S, NS = M + S = R - N
Source: Author, based on Tables B1 to B15, Appendix 2, and on the tables from the other 17 states not exhibited in this document.

A striking feature is that 92 percent of the total positive net shift was concentrated in eight of the 19 rapid-growth states. Moreover, the states of Veracruz (Southeast) and Jalisco (Central-west) accounted for 47 percent of the total upward net shift (Table 1, col. 6). Similarly, two thirds of the total downward net shift was concentrated in three of the 13 slow-growth states: Coahuila (northern border), Nuevo Leon (northern border) and the Federal District (Capital region). The last two are Mexico's traditionally largest industrial areas. Ten other states also recorded a negative net shift (Table 1, col. 6). Another prominent feature is that manufacturing value-added in three of the four preeminent industrial states (i.e., the Federal District, Nuevo Leon, and Mexico) recorded negative net shifts during 1988-1993. The exception was the State of Jalisco.

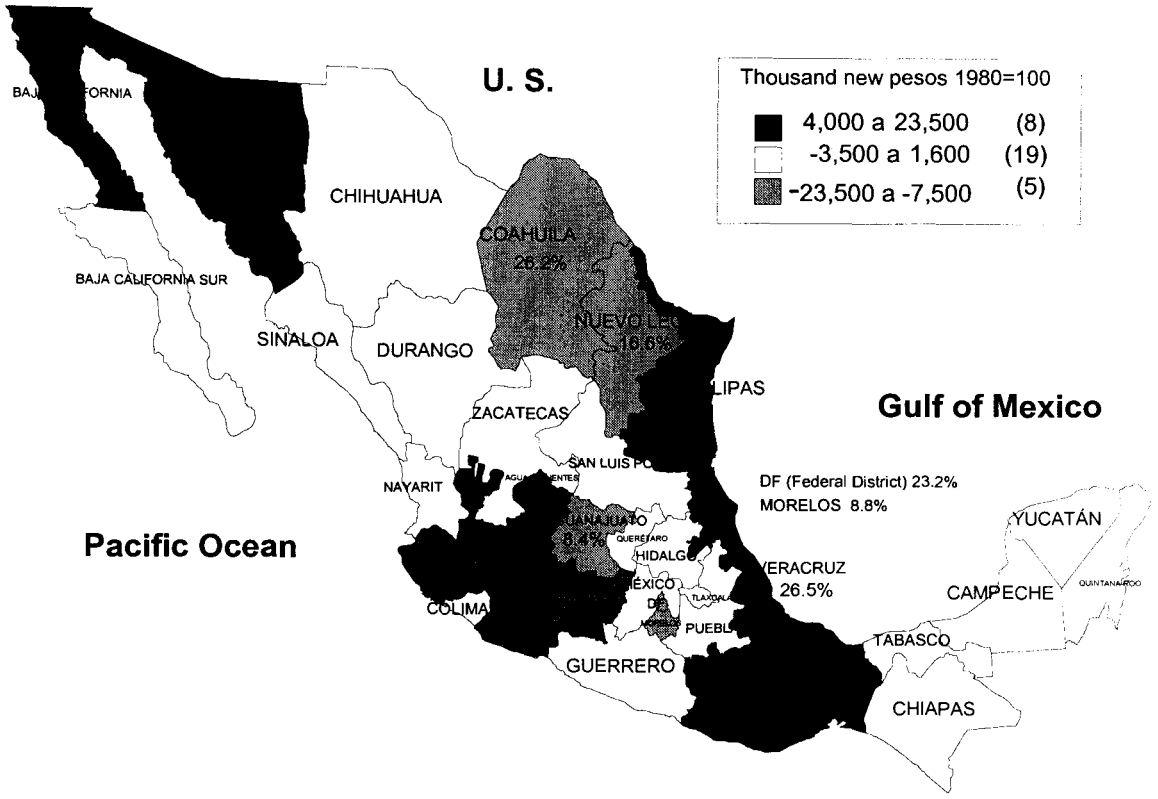
It should be noted that important shifts of production across states *within major regions* had been masked if the analysis had been made by major regions. For instance, three of the six northern states bordering the US ranked within the top-six largest positive net shifts (Tamaulipas, Baja California, and Sonora), whereas the other three experienced some of the largest negative net shifts (Coahuila, Nuevo Leon and Chihuahua). Likewise, while Jalisco achieved the second largest positive net shift, other states within the Central-west region had large negative shifts, notably Guanajuato; and, while some Central-region states had negative net shifts (Morelos, Hidalgo, and Queretaro) the rest experienced positive yet small net shifts (Puebla and Tlaxcala).

In short, the net shifts show that the tendency toward industrial deconcentration continued unambiguously during 1988-1993. As synthesized in Figure 1, output shifted significantly away from Mexico's traditional manufacturing heartland, the Federal District, and to a lesser extent from part of the heartland's immediate areas of influence. In contrast, there were important shifts towards some states in the central-west, southeast, and north regions already characterized by having important industrial sectors. Figure 1 also shows the mix performance of the northern border states—while output shifted visibly towards Tamaulipas, Baja California and Sonora, the opposite occurred in Coahuila, Nuevo León and Chihuahua. As explained in section 2, these net shifts result from summing competitive and industrial mix components, which in turn are displayed in Figures 2 and 3, respectively. In the following sub-section, these components within each state will be analyzed in order to establish a classification of regions.

A typology based on aggregated shift-share components

The application of a classification of regional growth types based on the direction of change and relative size of the two shift-share components, elaborated by Boudeville (1966) and applied by Edwards (1976), reveals the different basis of manufacturing value-added growth/decline across groups of states. (This typological framework is presented in Table 2.) For instance, six of the eight states showing the largest

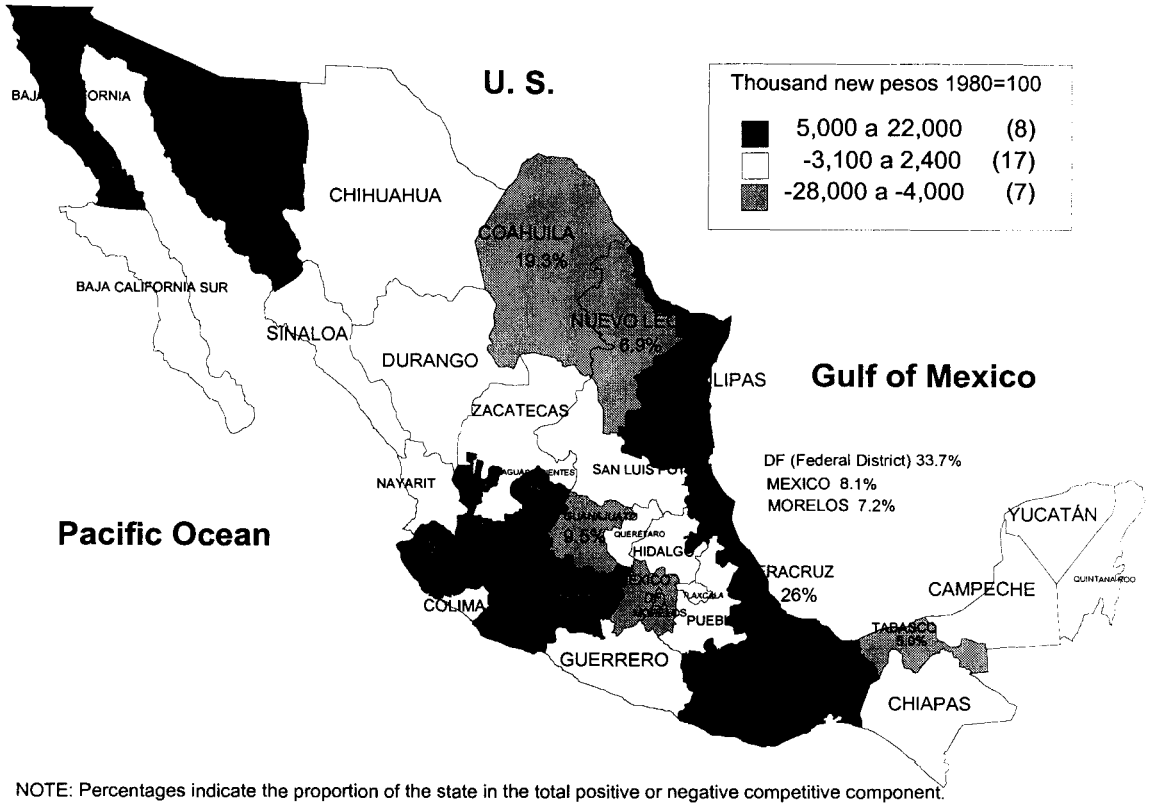
Figure 1: States With the Largest Upward and Downward Net Shifts 1988-1994
(Real Value-added)



NOTE: Percentages indicate the proportion of the state in the total positive or negative net shift.

upward net shifts experienced positive Ms and Ss, with the former considerably larger than the latter (Table 1, cols. 5 and 6). This suggests that the rapid growth of these states (i.e., Veracruz, Jalisco, Tamaulipas, Baja California, Sonora, and Aguascalientes) was mainly due to overall improvements in their competitive position —*reflecting an above-average state industry growth*— and to a lesser extent based on their favorable initial specialization—*above-average share in nationally fast-growth industries* (*type 2 regions*). The other two states in that group (Oaxaca and Michoacan) also experienced positive Ss but combined with negative Ms (the former far outweighing the latter). Hence, it seems that overall

Figure 2: States With the Largest Competitive Gains and Losses 1988-1994
(Real Value-added)

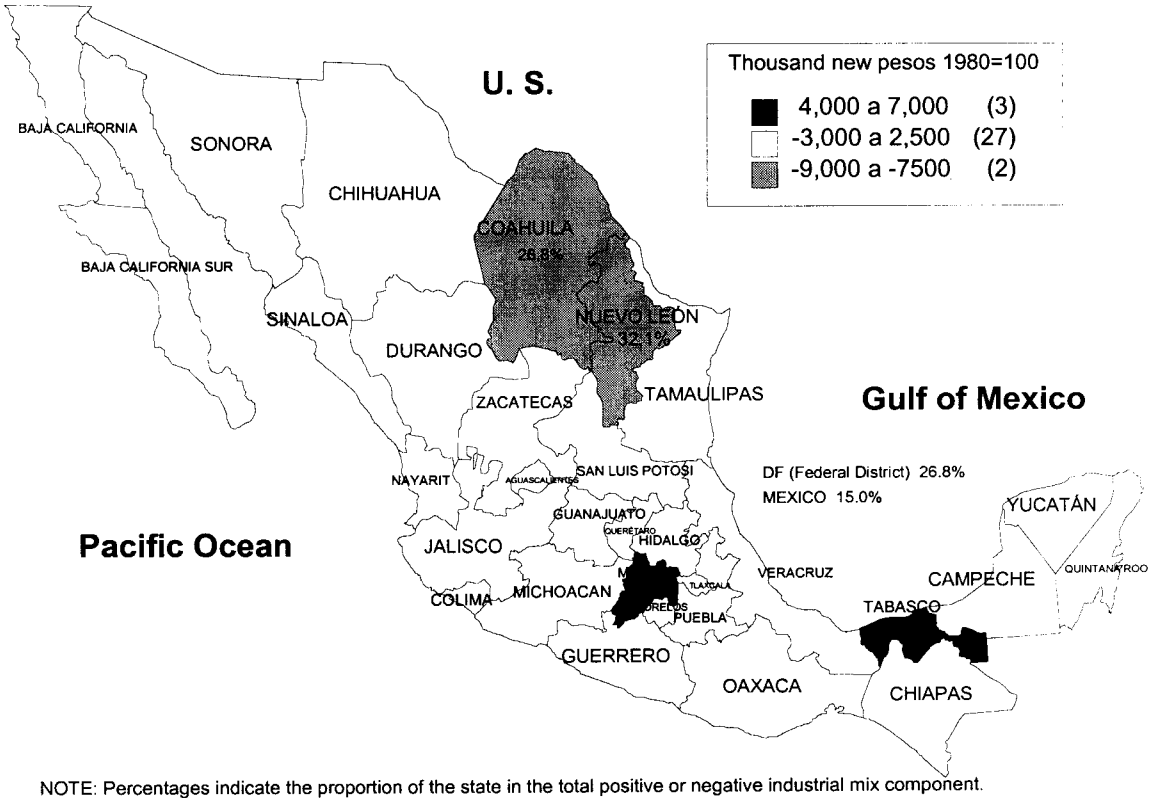


NOTE: Percentages indicate the proportion of the state in the total positive or negative competitive component.

improvements in competitive position were the sole basis for the rapid growth of these states as they had an unfavorable initial specialization (*type 4 regions*).

On the other extreme, two of the five states with the largest negative NSs recorded negative Ss outweighing by far the respective positive Ms (the Federal District and Guanajuato). The State of Mexico presents a similar pattern although its resulting negative NS was much smaller. The slow growth characterizing these states thus appears to have resulted from a deterioration of their competitive position as they had an overall favorable initial specialization (*type 6 regions*). Two other of these five slow-growth states observed negative Ss and Ms, and the former

Figure 3: States With the Largest Industrial Mix Gains and Losses1988-1994
(Real Value-added)



NOTE: Percentages indicate the proportion of the state in the total positive or negative industrial mix component.

were larger than the latter (Coahuila and Morelos). Their below-average growth thus appears to have largely derived from a deteriorating competitive position, although an unfavorable initial specialization also contributed to such outcome (*type 8 regions*).

The full classification of the Mexican states is presented in Table A3, Appendix 1. Clearly a major drawback of the application of such classification to this analysis is that it groups together states with marked differences in the structure and development of their manufacturing sectors. It becomes obvious that a disaggregation of the states' Ms and Ss *by industry* is necessary if the analysis is to provide both an accurate identification of the major contributors to industrial growth

Table 2
Boudeville's classification of region types

Type	*Competitive Component*	*Industrial Mix Component*		*Net performance*
1	S (+)	M (+)	S < M	Regions growing
2			S > M	faster than average
3	S (-)	M (+)	S < M	
4	S (+)	M (-)	S > M	
5	S (+)	M (-)	S < M	Regions growing
6	S (-)	M (+)	S > M	below average
7	S (-)	M (-)	S < M	
8			S > M	

Source: Elaborated from Edwards (1976).

and a reliable guide to focus policy intervention. This task is carried out in the following section for these states with the largest positive and negative NSs.

The Results: Industry-specific Effects and Heterogeneous Growth Across States

Industry-specific effects in fast-growth states

The six states with the largest positive NSs, and with a combination of large positive Ss and positive but much smaller Ms (*type 2 regions*), could be clearly differentiated into two sub-types according to the degree of diversification/concentration in the number of industries driving their fast growth. On one hand, the States of Jalisco, Tamaulipas, and Baja California are characterized by a fast-growth in manufacturing value-added based on a wide range of industries. On the other, the fast-growth of Veracruz, Sonora, and Aguascalientes depends upon one or two locally predominant industries.

In the *State of Jalisco*, the main net gains contributing to its positive NS came from the beverages and automotive industries, but important net gains were also achieved in cement-gypsum-plaster, paper & allied products, dairy products, animal food, and misc. food products (there were less important net gains in 23 other industries). The beverages industry experienced both competitive and industrial mix gains, with the former almost twice as large as the latter. In the case of the automotive and cement-gypsum-plaster industries, the net gains were determined by competitive gains which by far outweighed mix losses. There were net losses of

some importance in cooking oils and sugar mill products—the competitive loss was larger than the industrial mix loss in the former, whereas the opposite occurred in the latter (Table B1, Appendix 2).

The positive NS of the northern border *State of Tamaulipas* (with a manufacturing sector of a moderate size as compared with Jalisco's) was importantly influenced by electronic equipment, industrial chemicals, synthetic fibers, and other fabricated textiles, all with roughly similar net gains. Competitive gains were far more important than mix gains/losses in three of these four industries. The exception was electronic equipment whose mix gains were larger than competitive gains. A second-tier group of contributions came from petroleum refining, rubber & plastics, household appliances, apparel & knitting, and beverages (net gains were recorded in other twenty four industries). It is also noticeable that there was a visible net loss in primary petrochemicals resulting from a competitive loss more than twice as large as industrial mix gains (Table B2, Appendix 2).

The northern border *State of Baja California* had a positive NS in which the most prominent contributions derived from rubber & plastics, electronic equipment, automobiles, and misc. manufactures (including non-electronic precision tools and equipment), all with net gains of a similar size, very much like Tamaulipas. Competitive gains were far more important than mix gains/losses in three of these four industries. Electronic equipment was the exception--it recorded mix gains larger than competitive gains. There was also a well defined second-tier group of contributors comprising cooking oils, beverages, office data-processing equipment, and electric machinery & equipment (19 other industries also experienced positive balances). On the other hand, Baja California recorded moderate net losses in canned food, textile mill products, household appliances, and transport equipment (Table B3, Appendix 2).

Unlike the diversified group of growth-industries in Jalisco, Tamaulipas, and Baja California, the positive NS of the *State of Veracruz* was overwhelmingly determined by primary petrochemicals and to a lesser extent by petroleum refining (i.e., excluding these industries would have resulted in a substantial negative NS). The former achieved sizable competitive and mix gains, whereas the latter had a competitive gain far outweighing industrial mix losses. On the other hand, this state experienced visible net losses in sugar and textile mill products in both cases resulting from competitive and mix losses (Table B4, Appendix 2). Similarly, the growth of the manufacturing sector in the *States of Sonora* and *Aguascalientes* was highly concentrated in one or two large industries. The positive NS of Sonora was largely determined by beverages and automobiles (i.e., excluding these two industries would have produced a sector-wide negative shift). Competitive effects were far more important than mix effects in these two large industries (the former had a competitive gain much larger than mix gains, whereas the competitive gains of the auto-industry far outweighed an industrial mix loss). The positive NS of Aguascalientes to a large extent was due to net gains in automobiles, which in turn resulted from competitive gains. A distant second-tier group of industries with

positive balances includes beverages, misc. food products, and misc. manufactures. Conversely, there was a visible net loss in textile mill products (Tables B5 and B6, Appendix 2).

Among the states with the largest positive NSs there are two in which these were achieved through a combination of large positive Ss outweighing much smaller negative Ms, i.e., Oaxaca and Michoacan (*type 4 regions*). The positive NS of Oaxaca are due to competitive gains in petroleum refining, whereas the above-average growth of Michoacan was largely determined by competitive gains in basic iron-steel. In the latter, moderate net gains were also achieved in paper & allied products and beverages(Tables B7 and B8, Appendix 2).

In sum, the states of Jalisco, Tamaulipas and Baja California, classified as *type 2 regions*, are characterized by having a wide range of industries driving their above-average manufacturing value-added growth performance, with no clear domination by any of them. Jalisco, with a manufacturing sector considerably larger than those of the other two northern border states also displays the most diversified group of growth-industries. In contrast, Veracruz, Sonora, and Aguascalientes, also classified as *type 2 regions*, share the characteristic of having a fast growth driven by one or two large locally dominant industries.

Notwithstanding the negative Ms of Oaxaca and Michoacan, these two states, classified as *type 4 regions*, clearly resemble the pattern of Veracruz, Sonora, and Aguascalientes as their positive NSs also rely on the growth performance of one or two locally influential industries. Moreover, in Oaxaca, Michoacan, and Veracruz alike, the dominant activity (in terms of value-added growth) is based on the exploitation of their important natural resource endowments. Thus, a sub-classification of the states performing above average distinguishing between these having a diversified, mature sector and these characterized by a sector heavily influenced by the performance of a single, predominant activity could be appropriate.

Industry-specific effects in slow-growth states

The states with the largest negative NSs resulting from large negative Ss outweighing positive Ms (*type 6 regions*), including the Federal District, and the States of Mexico and Guanajuato, also can be differentiated into two sub-types. One is the sub-type comprising states with large negative NSs originating in a wide number of slow-growth industries. The other is the sub-type characterized by negative NSs largely resulting from the slow-growth performance of a single locally prominent industry.

The *Federal District* hosting the nation's largest manufacturing agglomeration (together with the State of Mexico), experienced the second largest negative NS, which originated in a wide range of industries, notably petroleum refining, electric machinery, textile mill and tobacco products. These four industries had both competitive and mix losses. Competitive losses were more sizable than mix

losses in petroleum refining and electric machinery and equipment, whereas the opposite occurred in textile mill and tobacco products. A second-tier group of industries recording negative balances in the Federal District comprised pharmaceuticals, paper & allied products, rubber & plastics, other metallic products, metallic structures, electronic equipment, and bakery products (there were19 other industries with net losses). On the other hand, it should be noted that there were very important net gains in automobiles and misc. food products—in the former, net gains resulted from competitive gains which far outweighed competitive losses, whereas the latter recorded both competitive and mix gains of a roughly similar size. Beverages, misc. chemical substances, apparel & knitting, also recorded visible but less important net gains, in most cases achieved by important mix gains partially offset by competitive losses (Table B9, Appendix 2).

The *State of Mexico* (with a manufacturing sector as large as that of the Federal District) had a negative NS amounting only to one-tenth of that in the Federal District. This negative NS originated in a wide range of industries, notably in paper & allied products, basic iron-steel, and beverages, but also in electric machinery & equipment, industrial chemicals, transport equipment, pharmaceuticals, and textile mill products, among the most visible. Paper & allied products and basic iron-steel experienced competitive and mix losses, whereas beverages had a competitive loss outweighing mix gains. On the other hand, the State of Mexico recorded very important net gains in canned food, misc. food products, other fabricated textiles, electronic equipment, and automobiles. The first four of these industries recorded both competitive and mix gains, whereas automobiles had a mix loss outweighed by the largest competitive gain (Table B10, Appendix 2).

The *State of Guanajuato*, hosting a manufacturing sector much smaller than those of the Federal District or the State of Mexico, had a much larger negative NS than the State of Mexico. This state's negative NS, unlike the Federal District and the State of Mexico, was determined by considerable competitive losses in petroleum refining (i.e., excluding that industry would have resulted in a moderately positive NS). This industry also recorded Guanajuato's largest mix loss. Other considerably less important but still notable losses were experienced in auto-parts, textile mill products, and misc. food products. As regards this state's positive balances, the most visible were achieved in poultry and meat, leather & allied products, misc. chemicals, and apparel & knitting —all these industries had both mix and competitive gains (Table B11, Appendix 2).

There are also states with large negative NSs resulting from both negative competitive and negative mix components, and where the former is much larger than the latter (*type 8 regions*)—i.e., Coahuila, Chihuahua, and Morelos.

The *State of Coahuila* recorded the largest negative NS, which was primarily determined by the competitive loss in automobiles (i.e., excluding this industry would have resulted in a small positive balance) and to a lesser extent by the competitive and mix losses in basic iron & steel. On the contrary, there was a very important net gain in basic non-iron metals largely derived from a competitive gain,

as well as other positive balances of moderate importance in beverages and industrial chemicals. However, these gains were not nearly enough to offset the net loss in automobiles (Table B12, Appendix 2). Like, the pattern of Coahuila, the negative NS of the *State of Chihuahua* was unambiguously due to a competitive loss in the auto-industry. In addition, there were visible but less considerable net losses in electric machinery & equipment, and office data-processing equipment—the two industries had competitive and mix losses. On the other hand, visible net gains were experienced in beverages, other fabricated textiles, and electronic equipment, all of which recording competitive and mix gains. These gains however were not enough to compensate for the net loss in automobiles (Table B13, Appendix 2). Alike these two northern border states, the *State of Morelos* also experienced a negative NS largely influenced by sizable competitive losses in automobiles, a large and locally predominant industry. (excluding this industry would have yield a minimal positive NS). This industry also had a mix loss. In addition, there were notorious although much smaller net losses in sugar mill products, paper & allied products, and rubber & plastics. On the other hand, the largest net gains in Morelos were experienced in misc. chemicals and beverages, which however were marginal in relation to the magnitude of the net losses in the automotive industry (Table B14, Appendix 2).

Finally, a large negative NS resulting from industrial mix and competitive losses, where the former is much larger than the latter (*type 7 regions*), characterized the *State of Nuevo Leon*, seat of the nation's second largest industrial concentration (only behind the Federal District and adjacent areas of the State of Mexico). The nation's third largest negative NS, recorded in this state, originated in a wide range of industries, just as in the Federal District, remarkably in basic iron & steel and textile mill products but also in petroleum refining, industrial chemicals, cooking oils, animal food and tobacco products (16 other industries recorded less important losses). Industrial mix and competitive losses were recorded in basic iron-steel and textile mill products (the former was much larger than the latter for basic iron-steel, whereas competitive losses were moderately higher than mix losses for textile mill products). A pattern of competitive losses much larger than mix losses characterized most of the other industries mentioned. On the other hand, moderate net gains in synthetic fibers, misc. metallic products, metallic structures, machinery & equipment, and household appliances were achieved within Nuevo Leon (Table B15, Appendix).

In sum, while the below-average manufacturing growth performance of both the Federal District and the State of Mexico, the Capital region (classified as *type 6 regions)*, was a reflection of their slow growth in a wide number of industries, that of Guanajuato (classified also as a *type 6 region*) was largely due to the sluggish performance of a single dominant activity. Resembling Guanajuato's pattern, the below-average performance of the States of Coahuila, Chihuahua, and Morelos (*type 8 regions*) was driven by the slow growth of a single locally dominant industry. Hence, the states characterized by having a declining manufacturing sector could also be appropriately sub-classified into a group in which the sector's downward

trend originated in a diversity of slow-growth industries, and another in which such trend is largely driven by a single or a few industries. This sub-classification could prove more useful to focus the assistance within each state and among states.

The Use of the Technique as the Basis for Further Analysis: An example

It has become widely accepted that the main contribution of the shift-share technique to policy formulation relies on the organization of data in a way that would reveal which of the region's industries deserve to be addressed by further research on the underlying factors of their expansion/decline and hence influence on the region's overall performance.[3]

For example, the results of the previous section revealed not only that the above-average manufacturing growth of the State of Aguascalientes was largely due to the dynamic performance of the local auto-industry but also, and most important, that such performance derived from competitive gains—i.e., an expansion of the local auto-industry much faster than that of its national counterpart. Furthermore, since nationally the auto-industry grew at a slightly lower rate than the manufacturing sector as a whole during 1988-1993, Aguascalientes experienced an industrial mix loss in automobiles, however quite small (see Tables 1 and B6). Once the pivotal role of the auto-industry and the critical importance of its competitive component for Aguascalientes' manufacturing structure and growth performance are determined, further research on the factors associated with the local competitive advantages and/or the application of policy can be appropriately focused. Let us illustrate this point by presenting a brief, by no means exhaustive, exercise of what this more detailed analysis would consist of.

An extensive qualitative, anecdotal study (Salmerón 1996) reveals an important expansion, starting in 1989, of the Nissan high-tech, auto-assembly plant located in Aguascalientes City. Reportedly, the Japanese company invested US$ 1 billion to increase substantially its export-operations. This amount included the acquisition and full control of a joint-venture, Nipomex, which specializes in the production of automatic transmissions. It was projected that eight thousand export-car units would be produced monthly starting in 1992, and that two thousand additional permanent jobs would be created.

The Nissan auto-complex in Aguascalientes had started its assembly, stamping and engine production operations in the early 1980s. Reportedly, investments amounted to US$ 100 million over the 1982-1986 period, generating

[3] There is agreement that the once popular shift-share guide to policy suggesting on one hand, injections of fast-growth industries to improve the growth potential of regions where *industrial mix losses* (unfavorable specialization) have led to a below-average performance and, on the other, economic infrastructure improvements to enhance the position of a region where *competitive losses* resulted in a below-average growth, can not be mechanically applied. In fact, any of these two policies could improve the growth potential and relative position of both types of slow-growth regions.

about 1,500 permanent jobs. Reportedly the Nissan auto-complex in 1988 had five thousand-workers on its payroll (de Icaza 1998). Also about 30 plants supplying components and other inputs to the Nissan-plant have been established in both Aguascalientes and other neighboring states. Overall investment by these plants has increased at a much faster rate than that of the large automotive powerhouses. The auto-industry unambiguously became a very important engine for the region's industrial development.

The relative importance of different factors on the decision to locate an auto-plant in Northern Mexico has been ascertained through the application of econometric techniques. The results of a study by Ramírez (1995) indicate that the strongest influence in such a decision is exerted by the existence of conditions favorable to the application of just-in-time systems (e.g., supply of non-union labor, a malleable work force, and flexible contracts), followed by corporate strategies aimed at enhancing competitiveness in the U.S.-Mexico market. Traditional factors such as the stock of economic infrastructure and government fiscal and financial incentives, while important for the selection of an specific site, are not decisive for choosing the major region. Their importance is subordinated to the existence of the mentioned labor-related characteristics. Consistently, according to a study based on interviews (Shaiken 1994), medium-sized northern cities with no strong industrial tradition were chosen as potential locations, whereas the industrially preeminent northern cities were excluded, since managers were searching for workers with weak or no preconceptions about industrial organization and for compliant unions that would play only small roles on the shop-floor. Likewise, Shaiken also reports that the shift of the auto-industry toward the north was driven by changes in corporate global sourcing strategies aimed at improving the firms' ability to compete in the U.S. market.

Among the advantageous characteristics of Aguascalientes as an industrial location Salmerón (1996) emphasizes through anecdotal episodes the following: 1) the weak and passive unions together with the state government's permanent commitment to maintain a favorable labor climate by keeping non-official, combative unions from operating locally, and by intervening decidedly to solve labor disputes in a way that would minimize the costs for the state's good labor climate reputation[4]; 2) the investments in economic and social infrastructure, uninterrupted throughout several state government administrations, which reflected a shared long-term commitment to pursue Aguascalientes' industrialization; and 3) the privileged position of the state within the national highway system which facilitates serving the main national markets (i.e., population centers) as well as the U.S. market efficiently. Hence, it seems that Aguascalientes matched the main requirements mentioned in the formal studies for the establishment of a large auto-plant, which in turn has become a decisive factor for the arrival of an important

[4] The Director of the State Commission for Economic Development and Export Promotion proudly points out that the workers laboring in Aguascalientes' six industrial parks have not gone on strike for thirty years already (de Icaza 1998).

number of suppliers. The concentration of already-large amounts of automotive activity by the end of the 1980s, suggests the existence of appreciable localization economies (i.e., economies arising chiefly from a greater availability of suppliers at different levels down the productive chain and a larger pool of labor with industry-specific skills), which have conferred stability to the local auto-industry's growth prospects.

In a similar fashion, it is possible to focus the analysis on any other of Aguascalientes' fast-growth industries. Needless to say it would also be useful to carry out this type of analysis for slow-growth states, perhaps concentrating on the adverse local factors affecting the competitive position of key local industries and/or the adverse local effects of industries that are declining nationally. As a research tool, shift-share is not suited to analyze causal relationships, but it is indeed able to reveal the particular industries on which the analysis of such relationships should be focused.

Concluding Remarks

This research paper is meant to shed light on the regional changes, which occurred in the Mexican manufacturing sector during the period 1988-1993. A prominent feature is the high spatial concentration of the inter-state shifts of production. Ninety-two percent of the total positive net shift (or relative growth) was accounted for by eight of the 19 fast-growth states, notably Veracruz and Jalisco, which accounted for almost one-half. Similarly, two-thirds of the total negative shift (or relative decline) was concentrated in three of the 13 slow-growth states: the northern border states of Coahuila and Nuevo Leon, and the Federal District. Another noticeable feature is the negative net shifts of the preeminent industrial states (i.e., the Federal District, and the States of Mexico and Nuevo Leon). The only exception was Jalisco.

The source of the net shifts, in terms of the shift-share components, is not the same across states. The above-average growth in some of them has been mainly a reflection of overall improvements in competitive position, and to a lesser extent of a favorable initial specialization. This is the case in six of the eight states showing the largest positive net shifts (i.e., Veracruz, Jalisco, Tamaulipas, Baja California, Sonora and Aguascalientes). In other states, competitive position improvements seem to be the only basis of their above-average performance—as they show an overall unfavorable initial specialization. The other two states among the eight best performers (Oaxaca and Michoacan) show this pattern.

On the other extreme, a deteriorating competitive position appears to be the only source of relative decline in some states—as they show an overall favorable initial specialization. This is the case of two of the five states with the largest negative shifts (the Federal District and Guanajuato). While other two of these five slow-growth states also were affected by a deteriorating competitive position, an

unfavorable initial specialization also contributed to their below-average performance.

States with marked differences in the structure and development of their manufacturing sectors are grouped together on the basis of a classification combining their competitive position and specialization effects (i.e., direction and relative size of competitive and industrial mix components). Some insight into these perplexing within-group differences was yielded by disaggregating each state's sector-wide effects by industry. It appears that within each group (type) of states, there is a direct relationship between level of industrialization and number of industries driving their relative performance. For instance, among the type 4 regions, it became clear that while the above-average performances of Jalisco, Tamaulipas and Baja California were driven by a wide range of industries with similar contributions, those of Veracruz, Sonora, and even Aguascalientes are overwhelmingly determined by or dependent upon the performance of one or two locally dominant industries. Similarly, for the type 6 regions the below-average performance of the Federal District and State of Mexico was a reflection of their slow growth in a wide number of industries, whereas that of Guanajuato could be largely attributed to the sluggish performance of a locally prominent industry. Thus, it is appropriate to elaborate a sub-classification of region types according to the degree of diversification/concentration in the number of influential industries. Finally, it is worth emphasizing that the information produced by shift-share analysis regarding the growth performance components of each specific industry within each state indeed could be used as a guide for industrial development planning at the state level (see the brief case of the auto-industry in Aguascalientes), which however, was beyond the scope of this work.

APPENDIX 1

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Table A1

Classification of Manufacturing Industries*

Census Code	*Industry name*
3111	Poultry and meet
3112	Dairy products
3113	Canned food
3114	Cereal and other grain mills
3115	Bakery products
3116	Tortilla industry
3117	Cooking oils
3118	Sugar mill products
3119_3121	Misc. food products (including cocoa, chocolate and confectionery)
3122	Animal food (fodder)
3130	Beverages (alcoholic and non-alcoholic)
3140	Tobacco industry
3211	Textile mill products (hard fibers)
3212	Textile mill products
3213	Other fabricated textiles
3214_3220	Apparel and knitting (including leather garments)
3230_3240	Leather and allied products (excluding garments)
3311	Lumber-plywood-timber
3312_3320	Wood products (including furniture)
3410	Cellulose, paper and allied products
3420	Printing and publishing
3511	Primary petrochemicals
3512	Basic industrial chemicals (excluding petrochemicals)
3513	Synthetic fibers
3521	Pharmaceuticals
3522	Misc. chemical (substances and products)
3530	Petroleum refining
3540	Coke industry (including misc. coal and petroleum byproducts)
3550_3560	Rubber and plastics
3611_3612	Clay and pottery
3620	Glass and allied products
3691	Cement-gypsum-plaster
3710	Primary metal (iron-steel) industries
3720	Primary non-iron metal industry
3811_3814	Other metallic products (excl. machinery and equipment)
3812	Metallic structures (including furnaces and tanks)
3813	Metallic furniture
3821_3822	Machinery and equipment
3823	Office data-processing equipment
3831	Electric machinery and equipment (including those for industrial generation of electric energy)
3832	Electronic equipment (including consumer electronics)
3833	Household appliances (excl. electronic devices)
3841	Automotive industry
3842	Transport equipment (excluding automobiles)
3850_3900	Misc. manufactures (including non-electronic precision tools and equipment)

* Based on the Mexican Classification of Economic Activities.

Table A2

Importance and Growth Performance of 4-digit Manufacturing Industries 1988-1993[1, 2]

*Industry Census Code**	*Real Manufacturing Value-added*[2]		*Absolute Change*[2]	*Percent Share*		*Change in Share*
	1988	*1993*	*1988-93*	*1988*	*1993*	*1988-93*
3842	5513.18	2857.72	-2655.46	0.81	0.27	-0.55
3710	28554.41	26821.12	-1733.29	4.22	2.49	-1.73
3114	9657.25	8116.59	-1540.66	1.43	0.75	-0.67
3118	13016.50	11613.19	-1403.31	1.92	1.08	-0.84
3212	36665.11	36342.77	-322.34	5.41	3.37	-2.04
3211	1330.79	1025.20	-305.58	0.20	0.10	-0.10
3540	4225.02	3981.44	-243.58	0.62	0.37	-0.25
3140	12652.07	13002.41	350.34	1.87	1.21	-0.66
3823	7346.44	7740.08	393.64	1.08	0.72	-0.37
3116	4708.41	5910.30	1201.89	0.70	0.55	-0.15
3611_3612	6287.11	7507.19	1220.08	0.93	0.70	-0.23
3117	8347.02	9721.20	1374.18	1.23	0.90	-0.33
3813	1994.79	4177.75	2182.96	0.29	0.39	0.09
3311	6400.40	8737.63	2337.23	0.95	0.81	-0.13
3122	9938.05	13132.60	3194.55	1.47	1.22	-0.25
3620	11670.72	15897.27	4226.55	1.72	1.48	-0.25
3513	4901.97	9907.69	5005.72	0.72	0.92	0.20
3312_3320	6577.10	12025.46	5448.36	0.97	1.12	0.14
3230_3240	8561.03	14152.57	5591.54	1.26	1.31	0.05
3850_3900	6573.51	12208.05	5634.54	0.97	1.13	0.16
3831	26781.85	32725.48	5943.63	3.96	3.04	-0.92
3833	5139.61	11859.53	6719.92	0.76	1.10	0.34
3812	5210.06	11963.88	6753.82	0.77	1.11	0.34
3410	21349.64	28764.68	7415.04	3.15	2.67	-0.48
3521	15115.16	22667.45	7552.29	2.23	2.10	-0.13
3115	13293.39	20867.28	7573.89	1.96	1.94	-0.03
3821_3822	17689.27	26261.16	8571.89	2.61	2.44	-0.17
3113	7317.88	15910.95	8593.07	1.08	1.48	0.40
			8891.44[3]			
3111	6331.00	15629.92	9298.92	0.93	1.45	0.52
3420	12313.37	23127.72	10814.35	1.82	2.15	0.33
3112	11368.42	22382.36	11013.94	1.68	2.08	0.40
3720	9361.92	20425.74	11063.82	1.38	1.90	0.51
3691	21122.76	32571.19	11448.43	3.12	3.02	-0.10
3811_3814	17158.02	30103.39	12945.37	2.53	2.79	0.26
3512	23331.62	36348.88	13017.26	3.45	3.37	-0.07
3213	3723.52	17007.71	13284.20	0.55	1.58	1.03
3214_3220	16933.16	32340.96	15407.80	2.50	3.00	0.50
3530	33663.55	49569.25	15905.70	4.97	4.60	-0.37
3522	19962.43	36869.33	16906.90	2.95	3.42	0.47
3550_3560	27031.08	44493.51	17462.43	3.99	4.13	0.14
3832	20516.44	38174.79	17658.35	3.03	3.54	0.51
3119_3121	18607.23	40183.36	21576.13	2.75	3.73	0.98
3511	16600.63	44542.23	27941.60	2.45	4.13	1.68
3841	81677.66	123128.00	41450.34	12.06	11.43	-0.63
3130	30604.41	74442.66	43838.25	4.52	6.91	2.39
SECTOR	677124.90	1077240.00	400115.10	100.00	100.00	0.0

1) Ranked by absolute change, *2)* Thousand new pesos 1980=100, *3)* Mean of absolute change.

* The industry names are presented in Table A1, Appendix 1.

Source: Author, based on data from INEGI (1992, 1995).

Table A3

Typology of the Mexican States based on shift-share components*

States growing faster than average			
(1)	*(2)*	*(3)*	*(4)*
Durango	Veracruz	Tabasco	Oaxaca
Guerrero	Jalisco	Baja California Sur	Michoacan
	Aguascalientes		Yucatan
	Zacatecas		Quintana Roo
	Tamaulipas		Puebla
	Baja California		Tlaxcala
	Sonora		Colima
	Sinaloa		
States growing below average			
(5)	*(6)*	*(7)*	*(8)*
San Luis Potosi	Federal District	Nuevo Leon	Coahuila
	Mexico	Hidalgo	Chihuahua
	Guanajuato		Morelos
	Queretaro		
	Chiapas		

* The typological framework 15 presented in Table 2

APPENDIX 2

Table B1

Jalisco: Shift-share effects in manufacturing value-added 1988-1993[1, 2]

Industry 4-digit code	*Change in Value-added 19988-1993 (R)*[3]	*National Growth Effect (N)*	*Competitive effect (S)*	*Industrial Mix Effect (M)*	*Net Effect (NS)*
3130	7796.48	1482.59	4202.50	2111.39	6313.89
3841	3944.41	291.85	3693.76	-41.20	3652.56
3691	2694.31	543.31	2195.97	-44.97	2151.00
3112	2628.18	697.88	1483.96	446.33	1930.30
3513	2176.95	691.87	981.30	503.78	1485.08
3122	1899.75	606.16	1570.00	-276.41	1293.59
3410	1467.86	297.50	1292.99	-122.64	1170.35
3119_3121	3590.44	2498.14	-1311.78	2404.08	1092.30
3522	1786.05	706.08	774.03	305.94	1079.97
3550_3560	2980.50	1969.28	827.55	183.67	1011.22
3521	1128.47	367.76	817.50	-56.79	760.71
3812	806.95	206.72	353.45	246.78	600.23
3312_3320	944.54	378.69	413.65	152.19	565.84
3620	626.77	94.11	569.09	-36.43	532.66
3821_3822	702.29	302.26	454.42	-54.39	400.03
3111	584.47	188.02	117.12	279.33	396.45
3710	507.29	123.50	519.97	-136.19	383.79
3214_3220	874.52	586.83	-29.14	316.82	287.68
3832	996.97	720.22	-52.08	328.83	276.75
3850_3900	335.26	138.57	134.25	62.44	196.69
3720	219.07	45.00	129.07	45.00	174.07
3114	333.42	171.31	379.68	-217.56	162.11
3813	242.62	85.34	84.58	72.70	157.28
3212	625.30	477.17	632.40	-484.27	148.14
3113	129.00	10.13	108.88	10.00	118.88
3540	190.42	92.76	199.47	-101.81	97.66
3833	95.49	21.11	48.79	25.60	74.39
3211	75.62	4.30	77.29	-5.97	71.32
3311	203.37	136.74	118.86	-52.24	66.63
3140	926.42	906.15	883.96	-863.69	20.27
3511	0.00	0.00	0.00	0.00	0.00
3530	0.00	0.00	0.00	0.00	0.00
3831	290.42	319.90	170.28	-199.76	-29.48
3115	775.23	818.17	-13.65	-29.29	-42.94
3230_3240	1037.30	1092.66	-170.44	115.08	-55.36
3213	34.10	105.03	-600.03	529.10	-70.93
3611_3612	31.61	135.65	-12.94	-91.10	-104.04
3420	160.57	349.16	-358.39	169.80	-188.59
3842	-1.49	198.26	160.12	-359.87	-199.76
3116	25.83	249.18	-81.81	-141.54	-223.35
3512	101.11	571.09	-438.11	-31.87	-469.98
3811_3814	612.21	1435.62	-1220.82	397.42	-823.41
3118	-381.16	1082.57	-183.64	-1280.08	-1463.73
3117	-864.84	1261.71	-1216.36	-910.18	-2126.55
3823	-431.24	2162.66	-627.35	-1966.55	-2593.90

1) Ranked by net Shift; *2)* Thousand new pesos 1980=100; *3)* R=N+M+S, NS=M+S=R-N.

Source: Author, based on data from (INEGI 1992, 1995).

Table B2

Tamaulipas: Shift-share effects in manufacturing value-added 1988-1993[1, 2]

Industry 4-digit code	*Change in Value-added 19988-1993 (R)*[3]	*National Growth Effect (N)*	*Competitive effect (S)*	*Industrial Mix Effect (M)*	*Net Effect (NS)*
3832	2847.89	1656.02	435.78	756.10	1191.87
3512	2674.48	1507.28	1251.32	-84.12	1167.20
3213	1145.15	0.50	1142.13	2.52	1144.65
3513	1007.77	0.00	1007.77	0.00	1007.77
3530	2155.05	1378.44	1052.84	-276.23	776.62
3214_3220	651.71	64.63	552.20	34.89	587.09
3550_3560	842.39	258.97	559.27	24.15	583.42
3833	618.08	36.38	537.58	44.12	581.69
3130	1013.91	439.38	-51.21	625.74	574.53
3850_3900	497.67	62.89	406.44	28.34	434.78
3117	326.99	17.55	322.10	-12.66	309.43
3420	348.98	126.07	161.61	61.31	222.92
3410	238.76	18.96	227.62	-7.82	219.80
3118	492.93	275.10	543.12	-325.29	217.83
3831	706.47	490.20	522.37	-306.09	216.28
3811_3814	167.54	29.87	129.41	8.27	137.68
3812	182.14	59.28	52.09	70.77	122.86
3691	174.46	66.71	113.27	-5.52	107.75
3841	1062.40	960.69	237.33	-135.62	101.71
3842	112.05	19.54	127.98	-35.48	92.50
3312_3320	103.70	22.14	72.66	8.90	81.56
3720	80.42	0.76	78.91	0.76	79.67
3122	102.57	27.67	87.51	-12.62	74.90
3823	102.92	41.01	99.20	-37.29	61.91
3620	68.76	22.17	55.17	-8.58	46.59
3311	58.88	22.40	45.04	-8.56	36.48
3522	50.68	17.87	25.07	7.74	32.81
3111	52.99	20.28	2.58	30.13	32.71
3114	407.48	379.46	509.93	-481.91	28.02
3710	29.69	10.10	30.73	-11.14	19.59
3540	23.59	10.74	24.64	-11.78	12.86
3813	11.10	1.61	8.12	1.37	9.49
3230_3240	89.78	80.69	0.59	8.50	9.09
3140	0.00	0.00	0.00	0.00	0.00
3521	-0.75	0.65	-1.30	-0.10	-1.40
3115	48.93	82.81	-30.92	-2.96	-33.89
3113	33.00	76.24	-118.51	75.27	-43.24
3611_3612	-20.10	27.20	-29.03	-18.27	-47.30
3116	19.78	94.43	-21.01	-53.64	-74.65
3112	1.82	91.69	-148.51	58.64	-89.87
3211	-100.91	71.54	-73.11	-99.35	-172.46
3119_3121	-73.14	121.52	-311.61	116.95	-194.66
3212	-140.88	89.95	-139.54	-91.29	-230.83
3821_3822	165.70	402.98	-164.77	-72.51	-237.28
3511	-683.62	549.77	-2249.62	1016.23	-1233.39

1) Ranked by net Shift; *2)* Thousand new pesos 1980=100; *3)* R=N+M+S, NS=M+S=R-N.

Source: Author, based on data from (INEGI 1992, 1995).

Table B3

Baja Califonia: Shift-share effects in manufacturing value-added 1988-1993[1, 2]

Industry 4-digit code	*Change in Value-added 19988-1993 (R)*[3]	*National Growth Effect (N)*	*Competitive effect (S)*	*Industrial Mix Effect (M)*	*Net Effect (NS)*
3550_3560	1545.77	308.95	1208.01	28.81	1236.82
3850_3900	1309.37	82.65	1189.47	37.24	1226.71
3832	2510.63	1477.28	358.85	674.49	1033.34
3841	1235.40	221.57	1045.10	-31.28	1013.83
3130	1314.62	552.84	-25.53	787.31	761.78
3823	665.88	115.43	655.41	-104.96	550.45
3831	868.09	369.48	729.32	-230.72	498.61
3117	512.05	34.89	502.33	-25.17	477.16
3312_3320	613.68	263.58	244.17	105.93	350.10
3230_3240	331.09	2.43	328.41	0.26	328.67
3213	294.26	24.10	148.76	121.40	270.16
3720	253.81	4.81	244.18	4.81	249.00
3119_3121	284.13	59.08	168.19	56.86	225.05
3813	176.24	6.75	163.75	5.75	169.50
3512	195.06	70.86	128.16	-3.95	124.20
3111	164.61	46.39	49.30	68.92	118.22
3710	114.44	2.58	114.70	-2.85	111.85
3311	147.23	66.32	106.24	-25.34	80.91
3812	115.90	38.55	31.33	46.02	77.35
3115	199.08	126.27	77.34	-4.52	72.82
3112	157.56	87.76	13.67	56.13	69.80
3410	193.89	127.52	118.94	-52.57	66.37
3811_3814	525.92	465.68	-68.68	128.91	60.24
3420	136.47	76.68	22.50	37.29	59.79
3116	91.55	36.19	75.92	-20.55	55.37
3540	66.20	16.40	67.80	-18.00	49.80
3611_3612	69.98	21.34	62.97	-14.33	48.65
3522	52.11	25.17	16.03	10.91	26.94
3118	0.00	0.00	0.00	0.00	0.00
3140	0.00	0.00	0.00	0.00	0.00
3211	0.00	0.00	0.00	0.00	0.00
3511	0.00	0.00	0.00	0.00	0.00
3513	0.00	0.00	0.00	0.00	0.00
3530	0.00	0.00	0.00	0.00	0.00
3122	50.34	50.35	22.95	-22.96	-0.01
3214_3220	156.36	182.22	-124.23	98.38	-25.85
3114	-1.64	52.88	12.64	-67.16	-54.52
3521	-34.00	26.34	-56.28	-4.07	-60.34
3620	65.11	206.67	-61.55	-80.01	-141.56
3821_3822	74.57	320.67	-188.40	-57.70	-246.10
3691	198.55	467.88	-230.61	-38.72	-269.33
3113	171.31	475.63	-773.87	469.55	-304.32
3842	-179.16	271.14	41.85	-492.15	-450.30
3833	-196.90	269.59	-793.42	326.93	-466.49
3212	-315.51	202.77	-312.49	-205.79	-518.28

1) Ranked by net Shift; *2)* Thousand new pesos 1980=100; *3)* R=N+M+S, NS=M+S=R-N.

Source: Author, based on data from (INEGI 1992, 1995).

Table B4

Veracruz: Shift-share effects in manufacturing value-added 1988-1993[1, 2]

Industry 4-digit code	*Change in Value-added 19988-1993* *(R)*[3]	*National Growth Effect* *(N)*	*Competitive effect* *(S)*	*Industrial Mix Effect* *(M)*	*Net Effect* *(NS)*
3511	26951.64	4715.54	13519.58	8716.52	22236.10
3530	9672.90	2026.70	8052.33	-406.13	7646.20
3130	4378.01	1001.74	1949.68	1426.59	3376.27
3112	1821.43	276.25	1368.50	176.68	1545.18
3111	870.85	28.37	800.32	42.16	842.48
3521	398.77	0.53	398.32	-0.08	398.24
3512	2180.72	1816.30	465.80	-101.37	364.43
3710	1577.71	1274.29	1708.61	-1405.20	303.42
3550_3560	211.91	29.89	179.23	2.79	182.02
3513	178.27	0.00	178.27	0.00	178.27
3119_3121	277.74	104.23	73.21	100.30	173.51
3420	230.69	92.81	92.75	45.13	137.88
3522	130.04	22.15	98.29	9.60	107.88
3214_3220	95.01	35.09	40.97	18.95	59.92
3540	46.53	0.06	46.53	-0.06	46.47
3812	186.02	150.84	-144.88	180.06	35.19
3841	40.75	13.70	28.98	-1.93	27.05
3213	27.97	6.21	-9.51	31.27	21.76
3230_3240	46.12	34.37	8.13	3.62	11.75
3831	7.76	2.51	6.82	-1.57	5.25
3211	11.62	7.82	14.66	-10.86	3.80
3850_3900	5.12	3.11	0.61	1.40	2.01
3813	3.73	2.49	-0.89	2.13	1.23
3823	0.00	0.00	0.00	0.00	0.00
3833	-0.26	0.15	-0.60	0.19	-0.42
3832	1.12	2.33	-2.27	1.06	-1.21
3311	20.34	29.99	1.81	-11.46	-9.65
3611_3612	-8.39	20.95	-15.27	-14.07	-29.34
3312_3320	17.28	57.73	-63.66	23.20	-40.45
3821_3822	146.35	221.36	-35.18	-39.83	-75.01
3140	-40.79	34.42	-42.40	-32.81	-75.21
3116	44.24	171.67	-29.92	-97.51	-127.43
3113	-69.72	107.31	-282.98	105.94	-177.04
3620	37.57	240.20	-109.64	-92.99	-202.63
3811_3814	-95.51	133.19	-265.57	36.87	-228.70
3122	-96.71	183.84	-196.72	-83.83	-280.55
3115	114.61	451.98	-321.19	-16.18	-337.37
3842	-312.85	247.89	-110.79	-449.96	-560.74
3117	-348.27	248.31	-417.45	-179.13	-596.58
3691	-301.37	618.27	-868.46	-51.17	-919.64
3410	-459.33	527.36	-769.30	-217.39	-986.70
3114	-397.55	642.77	-224.01	-816.30	-1040.31
3720	-797.95	411.91	-1621.77	411.90	-1209.87
3212	-1710.15	1375.31	-1689.69	-1395.77	-3085.46
3118	-1146.86	3097.15	-581.79	-3662.22	-4244.01

1) Ranked by net Shift; *2)* Thousand new pesos 1980=100; *3)* R=N+M+S, NS=M+S=R-N.

Source: Author, based on data from (INEGI 1992, 1995).

Table B5

Sonora: Shift-share effects in manufacturing value-added 1988-1993[1, 2]

Industry 4-digit code	*Change in Value-added 19988-1993 (R)*[3]	*National Growth Effect (N)*	*Competitive effect (S)*	*Industrial Mix Effect (M)*	*Net Effect (NS)*
3130	4460.56	450.11	3369.44	641.01	4010.45
3841	4002.12	577.42	3506.21	-81.51	3424.69
3823	955.82	62.60	950.14	-56.92	893.22
3213	660.96	178.23	-415.14	897.87	482.73
3122	531.55	102.40	475.85	-46.70	429.15
3811_3814	393.53	10.23	380.48	2.83	383.31
3832	750.03	421.37	136.27	192.39	328.65
3119_3121	355.88	63.74	230.79	61.34	292.14
3420	286.92	44.37	220.97	21.58	242.55
3410	337.41	112.63	271.20	-46.43	224.77
3230_3240	216.94	37.61	175.38	3.96	179.34
3550_3560	194.70	50.74	139.22	4.73	143.95
3312_3320	199.56	61.66	113.11	24.78	137.90
3691	633.52	496.59	178.03	-41.10	136.93
3522	98.63	5.81	90.30	2.52	92.82
3512	133.86	42.38	93.84	-2.37	91.47
3812	89.01	33.76	14.96	40.30	55.25
3112	95.99	52.74	9.53	33.73	43.26
3115	288.51	248.48	48.92	-8.90	40.02
3116	71.73	37.19	55.66	-21.12	34.53
3521	43.12	8.88	35.61	-1.37	34.24
3620	20.12	0.96	19.53	-0.37	19.16
3540	15.04	0.27	15.07	-0.30	14.77
3211	11.84	0.00	11.84	0.00	11.84
3118	0.00	0.00	0.00	0.00	0.00
3140	0.00	0.00	0.00	0.00	0.00
3511	0.00	0.00	0.00	0.00	0.00
3513	0.00	0.00	0.00	0.00	0.00
3530	0.00	0.00	0.00	0.00	0.00
3833	2.66	3.07	-4.13	3.72	-0.41
3611_3612	9.17	11.61	5.36	-7.80	-2.44
3111	211.92	214.78	-321.96	319.10	-2.86
3720	1301.31	1321.29	-1341.24	1321.26	-19.98
3710	-35.22	20.82	-33.08	-22.96	-56.03
3311	-37.82	63.51	-77.07	-24.26	-101.33
3821_3822	56.24	191.55	-100.84	-34.47	-135.31
3850_3900	5.64	164.48	-232.96	74.11	-158.84
3813	-93.84	79.99	-241.98	68.15	-173.83
3214_3220	-9.90	191.53	-304.83	103.40	-201.43
3113	14.22	388.13	-757.08	383.17	-373.91
3831	-13.83	412.13	-168.62	-257.35	-425.96
3842	-263.35	180.88	-115.90	-328.33	-444.23
3114	-192.49	292.01	-113.65	-370.85	-484.50
3212	-364.03	247.76	-360.35	-251.45	-611.80
3117	-1087.81	863.17	-1328.30	-622.68	-1950.98

1) Ranked by net Shift; 2) Thousand new pesos 1980=100; *3)* R=N+M+S, NS=M+S=R-N.

Source: Author, based on data from (INEGI 1992, 1995).

Table B6

Aguascalientes: Shift-share effects in manufacturing value-added 1988-1993[1, 2]

Industry 4-digit code	*Change in Value-added 19988-1993 (R)*[3]	*National Growth Effect (N)*	*Competitive effect (S)*	*Industrial Mix Effect (M)*	*Net Effect (NS)*
3841	5194.48	479.15	4782.97	-67.64	4715.33
3850_3900	482.71	87.06	356.43	39.23	395.66
3130	348.77	64.87	191.53	92.38	283.91
3119_3121	248.55	5.66	237.43	5.45	242.88
3113	220.26	31.23	158.21	30.83	189.04
3823	172.54	0.00	172.54	0.00	172.54
3550_3560	164.59	15.72	147.41	1.47	148.87
3821_3822	122.15	40.71	88.76	-7.33	81.44
3812	99.06	23.70	47.06	28.29	75.35
3214_3220	356.45	281.89	-77.63	152.19	74.56
3111	122.06	69.44	-50.54	103.16	52.63
3420	94.47	43.20	30.26	21.01	51.27
3691	79.52	29.28	52.66	-2.42	50.24
3811_3814	109.82	59.78	33.49	16.55	50.04
3117	45.02	0.00	45.02	0.00	45.02
3611_3612	51.43	7.78	48.87	-5.23	43.65
3311	29.46	5.08	26.32	-1.94	24.38
3312_3320	40.59	22.53	9.00	9.06	18.06
3115	33.43	21.29	12.90	-0.76	12.14
3230_3240	21.31	9.47	10.84	1.00	11.84
3540	9.99	0.12	10.00	-0.13	9.87
3522	9.08	0.58	8.24	0.25	8.49
3410	9.06	0.83	8.57	-0.34	8.23
3833	5.72	0.16	5.37	0.19	5.56
3211	4.17	0.07	4.20	-0.09	4.10
3620	2.58	0.16	2.48	-0.06	2.42
3710	11.28	9.16	12.22	-10.10	2.12
3720	2.02	0.07	1.88	0.07	1.95
3118	0.00	0.00	0.00	0.00	0.00
3140	0.00	0.00	0.00	0.00	0.00
3511	0.00	0.00	0.00	0.00	0.00
3513	0.00	0.00	0.00	0.00	0.00
3530	0.00	0.00	0.00	0.00	0.00
3842	0.18	0.34	0.46	-0.62	-0.16
3831	15.08	16.05	9.06	-10.02	-0.96
3114	-1.68	2.52	-1.00	-3.20	-4.21
3521	-2.26	2.46	-4.35	-0.38	-4.73
3116	11.79	24.50	1.20	-13.91	-12.71
3512	-4.26	14.02	-17.49	-0.78	-18.28
3122	10.60	77.15	-31.37	-35.18	-66.55
3213	131.92	204.02	-1099.85	1027.76	-72.10
3112	154.73	294.00	-327.29	188.03	-139.27
3813	-94.51	68.75	-221.83	58.57	-163.26
3832	-28.16	219.48	-347.85	100.21	-247.64
3212	-262.08	506.41	-254.54	-513.95	-768.49

1) Ranked by net Shift; *2)* Thousand new pesos 1980=100; *3)* R=N+M+S, NS=M+S=R-N.

Source: Author, based on data from (INEGI 1992, 1995).

Table B7

Oaxaca: Shift-share effects in manufacturing value-added 1988-1993[1, 2]

Industry 4-digit code	*Change in Value-added 19988-1993 (R)*[3]	*National Growth Effect (N)*	*Competitive effect (S)*	*Industrial Mix Effect (M)*	*Net Effect (NS)*
3530	11654.74	3349.74	8976.26	-671.26	8305.00
3130	1586.15	744.12	-217.70	1059.72	842.02
3691	691.87	254.23	458.68	-21.04	437.64
3550_3560	284.96	29.36	252.86	2.74	255.60
3841	154.60	14.68	141.99	-2.07	139.91
3420	61.47	9.77	46.95	4.75	51.70
3522	22.57	0.42	21.97	0.18	22.15
3821_3822	22.60	1.69	21.22	-0.30	20.92
3214_3220	31.18	10.32	15.29	5.57	20.86
3312_3320	32.22	17.92	7.10	7.20	14.30
3230_3240	17.23	4.81	11.92	0.51	12.42
3812	28.01	16.81	-8.87	20.07	11.20
3212	13.66	2.48	13.70	-2.51	11.18
3122	12.70	2.05	11.59	-0.93	10.65
3117	7.85	0.88	7.61	-0.63	6.97
3213	12.06	5.45	-20.84	27.45	6.61
3811_3814	6.35	0.83	5.28	0.23	5.51
3833	5.35	0.00	5.35	0.00	5.35
3211	0.98	0.17	1.05	-0.23	0.82
3620	0.50	0.01	0.49	0.00	0.49
3140	0.00	0.00	0.00	0.00	0.00
3511	0.00	0.00	0.00	0.00	0.00
3513	0.00	0.00	0.00	0.00	0.00
3540	1.08	0.00	0.00	0.00	0.00
3720	0.00	0.00	0.00	0.00	0.00
3813	0.53	0.00	0.00	0.00	0.00
3823	0.00	0.00	0.00	0.00	0.00
3710	-0.03	0.02	-0.03	-0.02	-0.05
3831	0.05	0.31	-0.07	-0.19	-0.26
3842	-0.17	0.26	0.05	-0.47	-0.43
3832	-0.34	0.20	-0.64	0.09	-0.55
3850_3900	4.14	8.02	-7.49	3.61	-3.88
3115	30.55	36.08	-4.24	-1.29	-5.53
3611_3612	3.60	9.21	0.57	-6.18	-5.61
3116	42.78	52.83	19.95	-30.01	-10.06
3521	-6.77	5.37	-11.31	-0.83	-12.14
3113	5.22	23.25	-40.98	22.95	-18.03
3119_3121	-5.56	25.73	-56.05	24.76	-31.29
3512	-23.75	14.34	-37.29	-0.80	-38.09
3112	-14.79	31.40	-66.28	20.08	-46.19
3111	36.26	97.98	-207.29	145.57	-61.72
3311	91.07	246.13	-61.04	-94.02	-155.06
3114	-95.55	73.64	-75.67	-93.52	-169.19
3410	-135.30	63.73	-172.76	-26.27	-199.03
3118	-234.68	341.47	-172.38	-403.77	-576.15

1) Ranked by net Shift; *2)* Thousand new pesos 1980=100; *3)* R=N+M+S, NS=M+S=R-N.

Source: Author, based on data from (INEGI 1992, 1995).

Table B8

Michoacan: Shift-share effects in manufacturing value-added 1988-1993[1, 2]

Industry 4-digit code	*Change in Value-added 19988-1993 (R)*[3]	*National Growth Effect (N)*	*Competitive effect (S)*	*Industrial Mix Effect (M)*	*Net Effect (NS)*
3710	4441.69	1353.85	4580.77	-1492.93	3087.84
3130	1146.79	282.40	462.21	402.17	864.38
3410	1168.73	312.56	985.01	-128.84	856.17
3512	834.68	241.69	606.48	-13.49	592.99
3550_3560	593.73	127.32	454.53	11.87	466.40
3212	203.61	10.22	203.76	-10.37	193.39
3122	211.66	33.34	193.53	-15.20	178.32
3540	119.54	0.58	119.60	-0.63	118.97
3112	135.46	37.52	73.95	23.99	97.94
3522	109.88	16.20	86.67	7.02	93.68
3850_3900	81.64	20.01	52.61	9.02	61.63
3812	101.39	40.73	12.04	48.62	60.66
3115	117.99	61.65	58.55	-2.21	56.34
3831	102.01	45.70	84.84	-28.53	56.31
3117	68.08	13.29	64.38	-9.59	54.79
3620	50.48	0.41	50.23	-0.16	50.07
3811_3814	52.32	7.89	42.24	2.18	44.43
3214_3220	64.30	32.37	14.44	17.48	31.92
3312_3320	171.71	141.35	-26.44	56.81	30.37
3113	184.02	157.87	-129.71	155.86	26.15
3813	30.60	6.13	19.26	5.22	24.48
3230_3240	54.30	35.66	14.88	3.76	18.64
3119_3121	70.01	54.50	-36.94	52.45	15.51
3213	16.93	1.68	6.79	8.46	15.25
3420	66.44	52.28	-11.26	25.42	14.17
3832	12.98	1.96	10.12	0.90	11.02
3511	0.00	0.00	0.00	0.00	0.00
3530	0.00	0.00	0.00	0.00	0.00
3823	0.00	0.00	0.00	0.00	0.00
3842	-0.67	0.40	-0.35	-0.72	-1.06
3720	-3.74	4.57	-12.87	4.57	-8.31
3611_3612	11.57	27.00	2.70	-18.14	-15.44
3833	-7.29	8.55	-26.21	10.37	-15.84
3841	0.74	18.24	-14.92	-2.57	-17.49
3521	7.50	26.33	-14.76	-4.07	-18.83
3114	35.76	72.79	55.41	-92.44	-37.03
3140	-28.99	25.33	-30.18	-24.14	-54.32
3211	-28.05	38.86	-12.95	-53.96	-66.91
3691	5.55	78.66	-66.60	-6.51	-73.11
3116	-31.26	147.98	-95.19	-84.05	-179.24
3118	40.18	289.12	92.93	-341.87	-248.94
3821_3822	-99.34	143.05	-216.65	-25.74	-422.39
3311	-178.44	366.73	-405.07	-140.09	-545.16
3111	-304.03	270.85	-977.27	402.39	-574.88
3513	-556.77	329.00	-1125.33	239.56	-885.77

1) Ranked by net Shift; *2)* Thousand new pesos 1980=100; *3)* R=N+M+S, NS=M+S=R-N.

Source: Author, based on data from (INEGI 1992, 1995).

Table B9

Federal District: Shift-share effects in manufacturing value-added 1988-1993[1, 2]

Industry 4-digit code	*Change in Value-added 19988-1993 (R)*[3]	*National Growth Effect (N)*	*Competitive effect (S)*	*Industrial Mix Effect (M)*	*Net Effect (NS)*
3841	15893.44	2655.94	13612.43	-374.93	13237.50
3119_3121	9489.80	3315.94	2982.77	3191.09	6173.86
3522	8717.48	5933.49	213.05	2570.94	2783.99
3130	5759.23	3278.70	-2188.73	4669.25	2480.52
3214_3220	5484.99	3714.88	-235.48	2005.59	1770.11
3420	5732.48	4159.20	-449.36	2022.64	1573.28
3112	2346.08	1421.72	15.09	909.27	924.36
3113	682.77	210.05	265.35	207.37	472.72
3111	577.26	246.28	-34.91	365.89	330.98
3512	1017.78	710.58	346.86	-39.66	307.21
3513	310.95	4.24	303.62	3.09	306.71
3311	229.93	102.47	166.60	-39.15	127.46
3211	58.52	14.50	64.16	-20.13	44.03
3118	0.00	0.00	0.00	0.00	0.00
3511	0.00	0.00	0.00	0.00	0.00
3813	607.75	621.82	-543.85	529.77	-14.08
3850_3900	1279.33	1399.30	-750.48	630.51	-119.96
3821_3822	1734.61	1892.01	183.03	-340.43	-157.40
3833	352.36	521.00	-800.44	631.80	-168.64
3213	122.67	384.75	-2200.33	1938.24	-262.09
3230_3240	237.45	512.97	-329.55	54.03	-275.52
3691	214.90	536.28	-277.00	-44.39	-321.39
3116	85.42	433.90	-102.02	-246.46	-348.48
3117	-286.73	234.11	-351.95	-168.88	-520.84
3842	-192.26	397.21	131.52	-720.98	-589.47
3720	681.90	1313.57	-1945.20	1313.53	-631.67
3620	292.27	987.04	-312.66	-382.11	-694.76
3312_3320	506.68	1237.31	-1227.89	497.27	-730.62
3122	-151.17	690.16	-526.62	-314.72	-841.34
3611_3612	-612.02	488.48	-772.44	-328.06	-1100.50
3114	-497.24	779.35	-286.83	-989.77	-1276.59
3823	-853.07	596.56	-907.17	-542.47	-1449.63
3812	-419.82	1046.01	-2714.52	1248.69	-1465.82
3710	-758.98	795.64	-677.25	-877.37	-1554.62
3832	382.43	2014.40	-2551.69	919.72	-1631.97
3115	1114.77	2889.62	-1671.40	-103.45	-1774.85
3811_3814	1275.66	3105.88	-2690.00	859.79	-1830.22
3540	-839.40	1120.93	-730.03	-1230.30	-1960.33
3550_3560	2204.19	4570.90	-2793.01	426.31	-2366.71
3410	-86.28	2892.15	-1786.20	-1192.23	-2978.43
3521	2089.77	5917.88	-2914.22	-913.89	-3828.11
3140	-1538.78	2559.00	-1658.70	-2439.08	-4097.78
3212	-370.80	3972.75	-311.69	-4031.86	-4343.55
3831	-1605.82	3431.24	-2894.51	-2142.55	-5037.06
3530	-5509.92	3255.83	-8113.31	-652.44	-8765.75

1) Ranked by net Shift; *2)* Thousand new pesos 1980=100; *3)* R=N+M+S, NS=M+S=R-N.

Source: Author, based on data from (INEGI 1992, 1995).

Table B10

Mexico: Shift-share effects in manufacturing value-added 1988-1993[1, 2]

Industry 4-digit code	*Change in Value-added 19988-1993* *(R)*[3]	*National Growth Effect* *(N)*	*Competitive effect* *(S)*	*Industrial Mix Effect* *(M)*	*Net Effect* *(NS)*
3213	7256.06	425.60	4686.43	2144.03	6830.46
3841	15003.91	9735.99	6642.31	-1374.39	5267.92
3113	3746.04	773.52	2208.89	763.64	2972.52
3119_3121	4387.39	1721.94	1008.35	1657.10	2665.45
3832	5212.45	3480.55	142.77	1589.13	1731.90
3811_3814	3208.41	2111.18	512.79	584.43	1097.22
3115	1428.88	464.25	981.25	-16.62	964.63
3812	1125.88	378.17	296.25	451.45	747.70
3720	1678.55	977.70	-276.81	977.67	700.86
3117	1539.04	927.49	1280.64	-669.08	611.56
3691	2793.37	2189.81	784.80	-181.24	603.56
3114	884.39	298.83	965.07	-379.51	585.56
3521	2289.34	1733.24	823.77	-267.66	556.11
3214_3220	2074.31	1736.19	-599.22	937.33	338.12
3813	389.79	115.80	175.34	98.65	273.99
3420	961.12	776.04	-192.31	377.39	185.08
3312_3320	781.52	603.23	-64.14	242.43	178.29
3118	0.00	0.00	0.00	0.00	0.00
3511	0.00	0.00	0.00	0.00	0.00
3530	0.00	0.00	0.00	0.00	0.00
3140	180.24	259.10	168.09	-246.95	-78.86
3116	265.40	409.29	88.59	-232.48	-143.88
3540	232.86	382.90	270.22	-420.26	-150.04
3122	613.51	890.93	128.85	-406.27	-277.43
3211	-120.09	166.94	-55.21	-231.82	-287.03
3611_3612	107.48	519.59	-63.16	-348.95	-412.11
3823	6.70	419.16	-31.31	-381.15	-412.47
3311	-89.44	337.49	-298.00	-128.93	-426.93
3111	545.03	997.91	-1935.46	1482.57	-452.88
3620	1781.18	2269.53	390.24	-878.59	-488.35
3850_3900	548.67	1076.45	-1012.82	485.04	-527.78
3513	307.79	869.63	-1195.07	633.22	-561.85
3112	885.45	1462.89	-1513.05	935.61	-577.45
3550_3560	4039.19	4635.29	-1028.41	432.31	-596.10
3230_3240	-150.47	579.60	-791.11	61.05	-730.07
3833	48.89	857.59	-1848.69	1039.98	-808.71
3212	3623.89	4611.54	3692.50	-4680.15	-987.65
3522	2385.32	3384.90	-2466.23	1466.65	-999.58
3821_3822	1049.69	2107.32	-678.46	-379.17	-1057.63
3842	-821.92	635.85	-303.63	-1154.15	-1457.77
3512	2045.75	3733.16	-1479.06	-208.35	-1687.41
3831	661.91	2738.32	-366.53	-1709.88	-2076.41
3130	1281.47	4510.32	-9652.08	6423.22	-3228.85
3710	-2241.04	1957.17	-2039.98	-2158.22	-4198.21
3410	-1008.85	5084.93	-3997.62	-2096.16	-6093.78

1) Ranked by net Shift; *2)* Thousand new pesos 1980=100; *3)* R=N+M+S, NS=M+S=R-N.

Source: Author, based on data from (INEGI 1992, 1995).

Table B14

Morelos: Shift-share effects in manufacturing value-added 1988-1993[1, 2]

Industry 4-digit code	*Change in Value-added 19988-1993 (R)*[3]	*National Growth Effect (N)*	*Competitive effect (S)*	*Industrial Mix Effect (M)*	*Net Effect (NS)*
3522	1047.11	359.34	532.07	155.70	687.77
3130	675.72	177.65	245.08	252.99	498.07
3512	668.54	433.97	258.79	-24.22	234.57
3821_3822	267.18	80.42	201.23	-14.47	186.76
3521	439.67	280.57	202.42	-43.33	159.10
3119_3121	166.34	14.31	138.27	13.77	152.04
3811_3814	158.40	20.24	132.56	5.60	138.16
3230_3240	110.44	19.70	88.67	2.07	90.75
3850_3900	146.24	68.28	47.18	30.77	77.95
3312_3320	76.06	6.83	66.48	2.75	69.23
3213	64.82	4.46	37.86	22.49	60.35
3111	50.41	2.41	44.43	3.58	48.00
3812	58.25	16.72	21.58	19.96	41.53
3115	68.09	27.61	41.46	-0.99	40.47
3420	66.46	34.39	15.35	16.72	32.07
3112	23.86	3.42	18.26	2.18	20.45
3311	9.24	1.86	8.09	-0.71	7.38
3611_3612	44.28	38.38	31.68	-25.77	5.91
3823	4.00	0.00	4.00	0.00	4.00
3113	3.09	0.06	2.96	0.06	3.02
3813	3.97	1.07	1.99	0.91	2.90
3620	2.88	0.00	2.88	0.00	2.88
3117	0.00	0.00	0.00	0.00	0.00
3140	0.00	0.00	0.00	0.00	0.00
3511	0.00	0.00	0.00	0.00	0.00
3513	6.67	0.00	0.00	0.00	0.00
3530	0.00	0.00	0.00	0.00	0.00
3720	0.00	0.00	0.00	0.00	0.00
3842	0.00	0.00	0.00	0.00	0.00
3211	-0.06	0.08	-0.03	-0.11	-0.14
3710	-0.67	0.40	-0.63	-0.44	-1.07
3122	44.41	46.88	18.91	-21.38	-2.47
3214_3220	174.80	178.03	-99.35	96.12	-3.24
3833	-2.88	1.70	-6.65	2.07	-4.59
3540	-3.86	2.28	-3.64	-2.50	-6.14
3831	35.64	41.86	19.92	-26.14	-6.22
3116	36.18	57.76	11.23	-32.81	-21.58
3114	-33.16	57.53	-17.63	-73.06	-90.69
3691	83.35	207.29	-106.79	-17.16	-123.95
3212	191.42	421.93	197.69	-428.21	-230.52
3832	-129.36	143.85	-338.89	65.68	-273.21
3410	-228.06	209.41	-351.14	-86.33	-437.47
3550_3560	31.29	522.58	-540.02	48.74	-491.28
3118	-418.14	555.78	-316.74	-657.19	-973.93
3841	962.60	8690.07	-6500.72	-1226.74	-7727.47

1) Ranked by net Shift; *2)* Thousand new pesos 1980=100; *3)* R=N+M+S, NS=M+S=R-N.

Source: Author, based on data from (INEGI 1992, 1995).

Table B11

Guanajuato: Shift-share effects in manufacturing value-added 1988-1993[1, 2]

Industry 4-digit code	*Change in Value-added 19988-1993 (R)*[3]	*National Growth Effect (N)*	*Competitive effect (S)*	*Industrial Mix Effect (M)*	*Net Effect (NS)*
3111	1903.88	136.14	1565.49	202.25	1767.75
3230_3240	3166.01	2206.61	726.99	232.41	959.40
3522	733.48	57.74	650.72	25.02	675.74
3214_3220	688.35	165.60	433.34	89.40	522.75
3521	418.29	70.13	358.99	-10.83	348.16
3420	343.26	60.63	253.15	29.49	282.63
3115	694.74	413.55	296.00	-14.80	281.19
3811_3814	337.75	126.44	176.30	35.00	211.31
3410	290.08	93.05	235.39	-38.36	197.03
3831	230.26	104.40	191.05	-65.19	125.86
3130	492.19	400.34	-478.28	570.13	91.85
3620	90.68	2.01	89.44	-0.78	88.66
3611_3612	159.61	79.03	133.65	-53.08	80.58
3720	207.93	134.28	-60.63	134.28	73.65
3812	170.37	104.33	-58.51	124.55	66.04
3821_3822	322.98	257.25	112.02	-46.29	65.73
3213	67.16	6.50	27.92	32.73	60.66
3312_3320	109.86	50.10	39.62	20.14	59.76
3512	915.63	863.55	100.28	-48.20	52.08
3117	51.26	1.81	50.75	-1.31	49.45
3813	36.44	3.61	29.75	3.08	32.83
3311	42.34	12.03	34.91	-4.59	30.32
3823	25.14	0.69	25.07	-0.63	24.45
3842	7.92	0.79	8.57	-1.44	7.12
3211	7.13	1.59	7.75	-2.21	5.54
3118	0.00	0.00	0.00	0.00	0.00
3140	0.00	0.00	0.00	0.00	0.00
3511	0.00	0.00	0.00	0.00	0.00
3850_3900	6.47	14.42	-14.45	6.50	-7.95
3691	275.83	288.11	11.57	-23.85	-12.27
3833	395.05	407.53	-506.68	494.20	-12.48
3710	0.28	43.79	4.78	-48.28	-43.50
3550_3560	486.24	537.56	-101.46	50.14	-51.33
3116	54.83	120.08	2.95	-68.21	-65.25
3540	-35.73	69.15	-28.99	-75.89	-104.88
3832	-80.43	47.84	-150.11	21.84	-128.27
3114	12.76	178.26	60.89	-226.39	-165.50
3112	137.95	352.28	-439.64	225.31	-214.33
3513	-139.49	82.43	-281.94	60.02	-221.92
3122	257.00	506.20	-18.37	-230.83	-249.21
3113	211.10	591.75	-964.84	584.19	-380.65
3119_3121	-209.72	205.63	-613.25	197.89	-415.36
3212	-158.29	490.56	-150.99	-497.86	-648.85
3841	-475.31	976.90	-1314.30	-137.91	-1452.21
3530	-3143.86	6277.24	-8163.19	-1257.91	-9421.10

1) Ranked by net Shift; *2)* Thousand new pesos 1980=100; *3)* R=N+M+S, NS=M+S=R-N.

Source: Author, based on data from (INEGI 1992, 1995).

Table B12

Coahuila: Shift-share effects in manufacturing value-added 1988-1993[1, 2]

Industry 4-digit code	*Change in Value-added 19988-1993 (R)*[3]	*National Growth Effect (N)*	*Competitive effect (S)*	*Industrial Mix Effect (M)*	*Net Effect (NS)*
3720	7036.14	5.02	7026.10	5.02	7031.12
3130	2137.51	385.41	1203.23	548.87	1752.10
3512	1439.31	48.72	1393.30	-2.72	1390.58
3119_3121	1254.23	455.23	360.92	438.09	799.01
3831	933.52	162.81	872.38	-101.66	770.72
3213	636.77	8.08	588.01	40.69	628.69
3550_3560	702.19	119.96	571.04	11.19	582.23
3812	644.74	147.10	322.04	175.60	497.64
3112	440.83	69.44	326.97	44.41	371.39
3811_3814	703.62	336.91	273.44	93.27	366.70
3214_3220	606.86	283.14	170.86	152.86	323.72
3540	296.83	83.19	304.95	-91.31	213.64
3111	232.41	30.47	156.68	45.26	201.94
3410	191.41	1.32	190.64	-0.54	190.09
3832	350.79	183.00	84.23	83.55	167.78
3312_3320	173.47	65.51	81.63	26.33	107.96
3813	106.21	10.42	86.91	8.88	95.79
3311	104.71	20.27	92.19	-7.74	84.44
3691	771.33	732.20	99.73	-60.60	39.13
3113	29.69	0.80	28.10	0.79	28.89
3850_3900	77.69	49.68	5.63	22.38	28.01
3230_3240	51.95	39.07	8.76	4.11	12.88
3842	1.92	-0.02	1.90	0.04	1.94
3118	0.00	0.00	0.00	0.00	0.00
3140	0.00	0.00	0.00	0.00	0.00
3511	0.00	0.00	0.00	0.00	0.00
3513	0.00	0.00	0.00	0.00	0.00
3530	0.00	0.00	0.00	0.00	0.00
3420	136.09	138.42	-69.65	67.32	-2.33
3117	34.87	40.33	23.63	-29.09	-5.46
3115	54.43	60.69	-4.08	-2.17	-6.26
3823	-9.53	5.63	-10.04	-5.12	-15.16
3116	29.57	53.75	6.36	-30.53	-24.18
3620	-30.65	29.91	-48.98	-11.58	-60.56
3522	38.90	130.61	-148.30	56.59	-91.71
3821_3822	189.86	291.86	-49.49	-52.51	-102.00
3122	-41.61	65.84	-77.42	-30.02	-107.44
3211	-68.30	64.94	-43.06	-90.18	-133.25
3521	-206.08	219.17	-391.41	-33.85	-425.25
3833	-218.29	237.48	-743.76	287.99	-455.77
3611_3612	169.43	891.49	-123.35	-598.71	-722.06
3114	-505.68	404.68	-396.43	-513.93	-910.36
3212	-747.94	865.50	-735.06	-878.38	-1613.44
3710	-4238.77	4738.67	-3751.99	-5225.45	-8977.44
3841	-11705.39	13585.35	-23372.95	-1917.79	-25290.74

1) Ranked by net Shift; *2)* Thousand new pesos 1980=100; *3)* R=N+M+S, NS=M+S=R-N.

Source: Author, based on data from (INEGI 1992, 1995).

Table B13

Chihuahua: Shift-share effects in manufacturing value-added 1988-1993[1, 2]

Industry 4-digit code	*Change in Value-added 19988-1993 (R)*[3]	*National Growth Effect (N)*	*Competitive effect (S)*	*Industrial Mix Effect (M)*	*Net Effect (NS)*
3213	2233.90	346.64	141.04	1746.23	1887.26
3130	1959.09	271.98	1299.77	387.34	1687.10
3832	2957.52	1424.46	882.70	650.37	1533.07
3833	868.35	124.77	592.27	151.30	743.58
3311	996.46	531.69	667.88	-203.11	464.77
3111	628.84	186.13	166.17	276.54	442.71
3550_3560	497.78	72.06	419.00	6.72	425.72
3811_3814	465.96	50.24	401.81	13.91	415.72
3812	431.00	58.16	303.42	69.43	372.84
3512	359.41	94.52	270.16	-5.28	264.89
3813	184.76	7.07	171.66	6.03	177.68
3821_3822	375.52	198.58	212.67	-35.73	176.94
3720	330.65	175.75	-20.85	175.75	154.90
3842	145.15	2.02	146.80	-3.67	143.13
3113	110.88	7.60	95.78	7.50	103.28
3620	106.78	11.10	99.98	-4.30	95.68
3119_3121	86.67	32.53	22.83	31.31	54.14
3691	433.10	385.96	79.08	-31.95	47.14
3522	49.13	4.56	42.60	1.97	44.57
3511	-10.69	-54.32	144.03	-100.40	43.63
3312_3320	343.58	300.10	-77.13	120.61	43.48
3112	348.70	341.02	-210.42	218.10	7.68
3211	3.88	0.00	3.88	0.00	3.88
3540	11.42	7.96	12.20	-8.73	3.46
3117	0.06	0.00	0.06	0.00	0.06
3118	0.00	0.00	0.00	0.00	0.00
3140	0.00	0.00	0.00	0.00	0.00
3513	0.00	0.00	0.00	0.00	0.00
3530	0.00	0.00	0.00	0.00	0.00
3230_3240	62.59	65.92	-10.26	6.94	-3.32
3710	-3.20	1.89	-3.00	-2.08	-5.09
3521	-1.84	8.02	-8.62	-1.24	-9.86
3115	254.47	268.97	-4.87	-9.63	-14.50
3116	32.06	70.95	1.41	-40.30	-38.89
3420	86.40	230.77	-256.59	112.22	-144.37
3611_3612	139.34	294.08	42.76	-197.50	-154.74
3114	-60.09	153.07	-18.76	-194.40	-213.16
3122	-161.45	238.83	-291.37	-108.91	-400.28
3850_3900	-83.64	376.59	-629.92	169.69	-460.23
3212	-324.80	227.60	-321.42	-230.99	-552.40
3214_3220	-236.84	416.65	-878.43	224.94	-653.49
3410	-273.71	401.98	-509.98	-165.71	-675.69
3823	-644.40	719.12	-709.61	-653.91	-1363.52
3831	1210.89	3758.40	-200.67	-2346.85	-2547.51
3841	-3023.65	2516.26	-5184.70	-355.21	-5539.91

1) Ranked by net Shift; *2)* Thousand new pesos 1980=100; *3)* R=N+M+S, NS=M+S=R-N.

Source: Author, based on data from (INEGI 1992, 1995).

Table B15

Nuevo Leon: Shift-share effects in manufacturing value-added 1988-1993[1, 2]

Industry 4-digit code	*Change in Value-added 19988-1993 (R)*[3]	*National Growth Effect (N)*	*Competitive effect (S)*	*Industrial Mix Effect (M)*	*Net Effect (NS)*
3811_3814	3502.12	1687.48	1347.50	467.14	1814.64
3513	1767.49	1.03	1765.71	0.75	1766.46
3812	1643.73	424.87	711.66	507.20	1218.86
3833	1431.61	293.88	781.35	356.38	1137.73
3841	2439.38	1566.03	1094.42	-221.07	873.35
3130	2141.83	1398.98	-1249.47	1992.32	742.85
3832	722.83	99.02	578.61	45.21	623.81
3821_3822	2890.48	2299.99	1004.33	-413.84	590.49
3550_3560	1680.28	1168.54	402.76	108.98	511.74
3214_3220	878.10	425.08	223.54	229.49	453.03
3111	992.43	584.59	-460.66	868.51	407.85
3720	470.94	178.55	113.85	178.54	292.40
3813	331.50	109.97	127.84	93.69	221.53
3823	266.32	47.74	261.99	-43.41	218.58
3410	1576.90	1372.96	769.91	-565.97	203.94
3312_3320	338.71	231.43	14.27	93.01	107.28
3112	324.61	222.66	-40.46	142.41	101.95
3420	633.73	535.95	-162.86	260.64	97.78
3119_3121	308.40	269.19	-219.85	259.06	39.20
3213	227.66	197.05	-962.03	992.65	30.62
3311	63.84	44.78	36.16	-17.11	19.05
3511	0.00	0.00	0.00	0.00	0.00
3118	-0.85	0.50	-0.76	-0.59	-1.35
3230_3240	127.49	150.45	-38.81	15.85	-22.96
3850_3900	122.01	150.81	-96.76	67.96	-28.81
3211	-9.51	21.61	-1.11	-30.01	-31.12
3116	49.41	83.09	13.52	-47.19	-33.67
3842	-13.46	48.16	25.79	-87.41	-61.61
3114	223.28	303.50	305.22	-385.44	-80.22
3113	13.15	141.98	-268.99	140.17	-128.82
3522	599.44	753.84	-481.02	326.63	-154.39
3521	-43.69	123.81	-148.39	-19.12	-167.51
3831	2058.99	2420.15	1150.05	-1511.20	-361.16
3115	289.95	918.92	-596.07	-32.90	-628.97
3611_3612	163.17	830.36	-109.53	-557.66	-667.19
3691	777.24	1542.69	-637.77	-127.68	-765.45
3620	1519.15	2368.74	67.41	-917.00	-849.58
3140	797.16	1898.89	708.18	-1809.91	-1101.73
3540	-721.45	573.95	-665.45	-629.95	-1295.40
3512	377.42	1823.67	-1344.47	-101.78	-1446.25
3117	-662.95	805.57	-887.39	-581.13	-1468.52
3122	-1542.84	1200.38	-2195.84	-547.38	-2743.22
3530	-477.54	2267.04	-2290.29	-454.30	-2744.58
3212	-2944.69	2431.32	-2908.51	-2467.49	-5376.01
3710	-1825.76	4231.87	-1391.03	-4666.59	-6057.63

1) Ranked by net Shift; *2)* Thousand new pesos 1980=100; *3)* R=N+M+S, NS=M+S=R-N.

Source: Author, based on data from (INEGI 1992, 1995).