

Productivity and Territorial Specialisation

Chang, Shu-Chun

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Productivity and Territorial Specialisation

Abstract

On the basis of a relatively free trade world and global economy, specialisation tends to increase the comparative advantages of a country. But in this scenario, not countries but cities are the territorial organization that play the main role. Cities concentrate the economic activity and political influential household that reflects economic changes.

The purpose of this study is to explore the principles underlie the distribution of population on a territory and the likely effect of economic development on redistributing population geographically.

Introduction

Many attempts have been made to explain the distribution of population over territory.

Recently this question has become more significant, especially for less developed countries as they experience the rapid urbanization following World War II, which is today qualitatively different from the patterns followed in developed countries (Mukkala, 2004; Taylor, 1998; Tolley and Thomas, 1987).

Urbanisation, city size, and migration have been seen only as demographic problems.

Cities are considered synonymous with poverty, pollution and so on. Governments have made various efforts to control population size in cities, however, most attempts have not taken into account what determines the distribution of population over territory. The main objective of this paper is to discuss the relationship between economic development and population distribution.

For centuries, city locations depended on the presence of natural resources (water, fertile soil, coal, etc.). Nowadays, changes in population distribution appear to be more complex. Many scholars who wrote about the genesis of urban concentration affirm that the formation of cities resulted from technological innovations in the countryside. The new technology increased agricultural production and generated a

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4 food surplus. Thus, people released from agricultural activities were able to move to
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7 cities and work in non-agricultural enterprises.¹
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13 On the other hand, Makkala (2004) and Keyfitz (1965) argue that although this
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16 process was a necessary condition for the creation of cities, it was not sufficient.
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19 Some additional kind of social organization was needed to enable people in the city to
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22 appropriate, directly or indirectly, part of the production that kept them alive.
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25 According to Keyfitz, surplus can only be extracted after it has been institutionalised
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28 through taxes, trade, and other means adopted by the state (Keyfitz, 1965). He
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31 further argues that in the early stage of cities' development, agricultural products were
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34 needed to support and finance the creation of new activities such as manufacturing.
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37 The creation of new cities and the expansion of the already existing ones was made
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40 possible by the construction of roads, the widespread use of money, and the political
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43 power of the cities over the territory.
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51 As a result of this process, city economies experienced a structural change from
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54 agricultural to non-agricultural production. That is to say, economic development
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57 implies a radical shift in the composition of national output of goods and services
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¹ National Resources Committee, 1937, cited in Keyfitz, 1965.

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4 from sectors of relatively low productivity to those with higher ones (Morris, 1994,
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7 p.16; Harris, 1990).
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13 At this point it is relevant to ask these questions: What principles underlie the
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16 distribution of population over a territory? And, what is the likely effect of economic
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19 development on redistributing population geographically?
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26 In classical political economics, it was argued that the division of the labour has an
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29 impact on the distribution of the population. Towns are defined as the places that
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32 have a greater degree of division of labour, productivity, and specialization (Chang
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35 and Caudill, 2005; Harris, 1988). However, these concepts by themselves do not
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38 explain what mechanism distributes people over territory².
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45 During the 1960s the view that dominated research on the distribution of population
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48 in developing countries suggested that migration was the result of the deterioration of
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51 living conditions in the countryside. However, it has been demonstrated that
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54 migration and urban concentration are more closely correlated with economic
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57 development rather than rural poverty. For example, Keyfitz expounds that in South
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² In many traditional activities there is a high level of division of labour, and this situation does not imply necessarily a change in population redistribution.

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4 and Southeast Asia, as in Europe ‘...the expansion of cities was a function of the
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7 demand for labour within them, rather than of a lack of opportunities in rural areas’
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10 (Keyfitz, 1965, p.285).
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17 As the national output composition changes there are transformations in the shares of
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19 labour demand by economic sectors. Since cities are the traditional sites of
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21 industrial activities, industrial expansion attracts workers and their families to urban
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23 areas. With the rise of the number of migrants to the cities there is an increase in the
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25 demand for manufactured goods and services. As a consequence, this creates a
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27 greater demand for labour (Bai and Zhang, 2005; O’Sullivan, 2000; Verma, 1986).
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32 As the output of goods and services changes, relative city sizes change. Therefore,
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34 the mechanism linking economic development and urbanization is the labour market
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41 (Taylor, 1998, pp.28-65; Harris, 1990).
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Economic development requires a continuing rise in productivity. Many authors
have argued that productivity is higher where urban agglomeration economies are
more prominent. For example, Verma (1986) explains that in Indian States during
the 1970s, productivity was related to the increase of migration into urban areas and
to the percentage of states’ urban populations. According to Verma, productivity

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4 was affected by the number and the size of urban agglomerations as well as by the
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8 populations of the largest cities. Yet, while the contribution of large cities to
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11 productivity declined, it increased in medium-size cities. This means that since the
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14 1970s, large cities in India have grown at a slower pace than medium-size cities.
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20 City size and urban growth are related to scale and agglomeration economies. In
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23 order to satisfy the growth of output during economic development, it is necessary to
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26 have a labour force concentration. This in turn affects city size. On one hand, large
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29 population concentrations make it possible to have scale economies and larger
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32 markets. Harris (1990) argues that sectorally different potentials for scale economies
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35 generate and sustain different settlement sizes. In other words, scale economies
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38 determine the distribution of urban populations between settlements of different sizes,
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41 and the patterns of specialization by localities. On the other hand, concentration of
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44 economic activities generates agglomeration economies by permitting innovations in
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47 transport and communication networks that reduce the costs of access to national and
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50 international markets (Lee & Wills, 1997; William et al, 2000; Henderson, 1988).
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57 Economic development enhances territorial specialization. It is evident that in some
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60 areas economic, social, and natural conditions play an important role in producing

cheaper commodities. As a result, many less-developed countries have lost their agricultural self-sufficiency as they engaged in manufacturing export goods that allowed them to gain from international specialization. “The sharp difference in productivity between sectors and subsectors of the national differentiation (and territorial differentiation in turn enhances the growth of productivity)” (Harris, 1990, p.10).

According to Mukkaala (2004), Henderson (1988) and Tolley (1987), city size and the proportion of urbanised population are affected by demand conditions within the country, and changes in the degree of international specialization that occur during development. All cities have patterns of specialization that depend on their participation in national and international markets. Large cities are more complex than small ones. Hypothetically, a city’s pattern depends on its contribution to the national and international output. “Different population sizes of cities indicates different ‘peak sizes’ for the complex of specialization in a city’s externally traded output of goods and services” (Chang and Caudill, 2005; O’Sullivan, 2000; Henderson, 1988).

It should have become evident that there is a close relationship between a high rate of

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4 economic development and urbanisation³. However some authors point out that in
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7 addition to the level of economic development, regional localisation and individual
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10 country conditions have an impact on the level of urbanisation. For that reason, they
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13 affirm that there is no “simple association between economic development and the
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16 degree to which a country is urbanized” (Tolley and Thomas, 1987, p.4).
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22 Tolley and Thomas demonstrated that urban population growth rates have a tendency
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25 to decline with a rise of income. They predicted that the high rates of urbanization
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28 observed in developing countries would decline as their income levels rise. In
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31 regard to urban concentration, they argue that there have been significant differences
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34 between developed and developing countries. In the case of developing countries,
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37 large proportions of the population tend to be concentrated in one or few cities, while
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40 in developed countries the share of the population that lives in large cities tends to be
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43 lower.
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51 In the same direction, Harris explains that in some countries the association between
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54 economic development and urbanisation is weak. On the one hand, many
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57 developing countries with low levels of *per-capita* GNP have high urban population
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³ Urbanisation is the change in the proportions of rural and urban populations.

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4 growth rates, whereas, developed countries have low rates of urbanization. On the
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8 other hand, immigration levels are lower in developed countries, although they have
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11 high rates of economic growth, while in developing countries with low levels of
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14 economic growth, immigration levels may be high. This means that “the association
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17 of economic activity and urbanization varies with the “stage of development”(Harris,
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20 1990, p.4).

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26 According to Harris (1990), the size and distribution of land holding, household
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29 income, and colonial heritage, among other factors, seem to have an impact on
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32 population distribution. For example, during the 1980s, sub-Saharan Africa went
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35 through an economic crisis, which was manifested in a negative rate of agricultural
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38 growth, severe declines in export commodities, and a significant fall in urban incomes.
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41 Sub-Saharan Africa had rapid urbanization, but poor rates of economic growth.

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48 Theoretically, there is a close relationship between economic development and
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51 redistribution of the population, however, empirically, there are examples that do not
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54 support this general proposition.
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“Maquiladora”, Economic Development and Urbanisation in Northern Mexico.

The *maquiladora* industry started developing in many Northern Mexico cities in the 1960s. This activity is based on using a cheap labour force and low capital investment to produce manufactured export goods. The *maquiladora* sector imports raw material and parts⁴, without restrictions, and its output is exported (Harris, 1993 and Pradilla, 1993). Taking into consideration the concepts expounded in the preceding section, the objective of this section is to analyse, in broad terms, the relationship between economic development and urbanization in Northern Mexico.

When they began in Mexico, the government considered *maquiladoras* only as a transitional process that would alleviate the unemployment generated by the United States' suspension of the “*braceros*” programme. However, during the 1980s, as Mexico went through an economic crisis⁵, the government changed its policy and liberalized the economy, promoting export activities. Since then, the *maquiladora* industry has been seen as a strategic activity to help recovery of the Mexican economy (Pradilla, 1993).

⁴ According to INEGI, between January and October of 1991 the *maquiladora* sector along the northern border imported 99.0% of its raw materials and parts (INEGI, 1992, cited in Pradilla, 1993).

⁵ The Mexican economy was highly affected by the rise of real interest rates on loans from international banks, Mexico being the most indebted Latin America country; the drop in oil prices, the main export product of Mexico; and two million U.S. dollars were taken out of the country.

The pace of *maquiladora* growth has been dependent on international market conditions, especially those in the United States, because of its particular features and border location. For instance, between 1975-1976 many plants in the northern states were closed as the result of the economic crisis in USA. In the oil boom period *maquiladoras* experienced stagnation and lost international competitiveness. Since 1989, as a consequence of the North American economic recession, the pace of growth of the *maquiladora* sector has been slower than expected (Paradilla, 1993).

Yet, between 1975 and 1990, the *maquiladora* sector has grown in size. The number of establishments increased from 454 to 2,033 and the number of employees from 67,214 to 465,800. *Maquiladoras* created 88% of the new national industrial jobs, between 1985 and 1990, and the northern Mexico states of *Baja California Norte*, *Sonora*, *Chihuahua*, *Coahuila*, and *Nuevo Leon y Tamaulipas* accounted for 86.9 % of the total number of establishments, 90.2% of the employment, and 87.1% of the total *maquiladora* production value⁶.

The *maquiladora* sector in Mexican border cities increased significantly between

⁶ INEGI, 1992, cited in *Pradilla Cobos, Emilio*, 1993.

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4 1975 and 1989. As Table 1 shows, employment and value-add growth rates were
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7 over 7.0% and 6.5%, respectively, which exceeded the national economy growth rate
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10 of 0.9% between 1980-1988 (Garza, 1992). The *maquiladora* sector is considered
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13 very important in terms of international trade because it produces about a quarter of
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16 the value of the country's manufactured exports (Harris, 1993).
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22 As consequence of the continuous *maquiladora* industrialization process, the
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25 economic structure of the northern cities has been transformed. As Table 1 shows, in
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28 the period 1975-1989 *Cd, Juarez, Tijuana, Matamoros, Nogales, and Reynosa y*
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31 *Mexicali* had the highest concentration of employment and value add in Mexico.
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35 Economic development has also affected the size of the cities along Mexico's
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38 northern border as expansion of the *maquiladora* sector attracted workers. Between
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41 1980-1990, the population growth rates in northern cities were much higher than the
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44 growth rate at the national level, as Table 2 shows; the only exception was *Matamoros*
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47 City. *Tijuana* (7.6%) and *Ensenada* (8.0%) are the most significant examples.
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54 To conclude, it should have become evident that the case of Mexico's northern border
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57 shows a clear correlation between economic growth and urbanization. That is not to
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60 say that the *maquiladora* development is the only factor behind the rapid urbanization

in northern cities. Other determinants, such as regional location and individual city conditions that affect the level of urbanization⁷ should also be considered. Note also that the *maquiladora* industry is highly linked with international markets, therefore, the future of most of these cities depends on fluctuations in world trade markets.

Conclusions

To understand the territorial distribution of population and to improve national productivity, the role each city plays in the national and international economy must be considered. Nowadays, cities are the key factors in economic development and the globalization process since they concentrate the labour force, economic activities, and infrastructure⁸, which are important in elevating productivity and being competitive in international markets.

Cities such as *maquiladora* are marked by territorial specialization. This specialization indicates the strengths and weaknesses of the city and its manufacturing

⁷ For instance, the northern cities of the Mexico attracts people from both countries that want to cross the border (legally or illegally) for several reasons: tourism, business, trade, services and so on.

⁸ For instance, business and professional services, financial resources, transports, market information, all kind of consumers, and so on.

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4 and service industries. In order to promote local economic growth, local authorities
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7 have to analyse the patterns that follow such activities. Their dynamics and
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10 evolution will depend strongly on the policies implemented by the city government.
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16 Economic development enhances productivity and territorial specialization, which
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19 underlie the distribution of population. Among the factors that must be considered
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22 are first, concentration of the labour force and productivity and specialization levels,
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25 second, the effects of national and international markets on the distribution of
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28 population, these should include openness in a city's trading system, third, the
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31 national and regional conditions that determine the pattern of development and
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34 urbanization; and fourth, noting that the relationship between economic development
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37 and population distribution is not an historical process, it occurs only under specific
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**Table 1: Maquiladora Sector: Employment and Value Add
by Northern Border Cities, 1975-1989**

<i>Ciudades</i>	1975	<i>Personal Ocupado</i> 1989	T.C. %	1975	<i>Valor agregado*</i> 1989	T.C. %
<i>Ensenada, B.C.N.</i>	314	1 556	12.1	12.6	45.6	9.6
<i>Mexicali, B.C.N.</i>	6 324	21 374	9.1	363.4	1 228.8	9.1
<i>Tecate, B.C.N.</i>	803	4 640	13.3	44.1	236.0	12.7
<i>Tijuana, B.C.N.</i>	7 844	58 029	15.4	472.4	2 774.3	13.5
<i>Cd. Acuna, Cuah.</i>	1 900	13 173	14.8	52.9	407.3	15.7
<i>P.Negras, Coah.</i>	2 561	8 051	8.5	90.7	254.2	7.6
<i>Cd. Juarez, Chih.</i>	19 775	124 386	14.0	1 048.9	6 047.5	13.3
<i>Agua Prieta, Son.</i>	2 636	6 806	7.0	98.9	255.7	7.0
<i>Nogales, Son.</i>	6 794	22 635	9.0	390.5	955.6	6.6
<i>Cd. Reynosa, Tamps.</i>	1 255	23 938	23.4	53.4	1 215.2	25.0
<i>Matamoros, Tamps.</i>	9 778	38 132	10.2	400.7	2 024.2	12.3
<i>Nvo. Laredo, Tamps.</i>	1 928	14 747	15.6	69.8	770.1	18.7
<i>Total en la frontera</i>	61 912	339 319	12.9	3 098.3	16 307.3	12.6

Source: INEGI, *Estadísticas de la Industria Maquiladora de Exportación*, 1975-1986, Aguascalientes Mexico, 1983 and INEGI, *Avance de Información económica. Industria Maquiladora de Exportación*, 1987, 1988, 1989, Mexico, cited in Pradilla (1993).

**Table 2: Population growth rate of the main border cities with maquiladora
activity, 1970-1980, 1980-1990**

	1970-1980	1980-1990
Mexico	3.3	2.2
<i>Ensenada</i>	4.40	8.00
<i>Mexicali</i>	2.40	5.40
<i>Tecate</i>	5.20	7.60
<i>Tijuana</i>	4.30	5.20
<i>Cd. Acuna</i>	2.50	3.30
<i>Piedras Negras</i>	1.90	3.40
<i>Cd. Juarez</i>	2.60	3.50
<i>Agua Prieta</i>	3.20	2.70
<i>Nogales</i>	2.00	4.60
<i>Cd. Reynosa</i>	2.80	4.40
<i>Matamoros</i>	3.00	0.40
<i>Nuevo Laredo</i>	3.40	3.30

Source: CONAPO, *Demografía de la Frontera Norte* cited in Pradilla, 1993

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