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POPULATION OF AMERICAN CITIES: 1950–2009

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ABSTRACT. Contrary to the industrial epoch, cities have been interpreted in the last fifty years as the places facing the greatest economic and social problems. A contrasting view has emerged only recently that takes cities as sites of economic dynamism and social vitality. The paper offers evidence on population change for 118 greatest cities of the United States of America to assess how their fortunes have changed from the 1950s to 2009. Considerable diversity of experience was revealed and seven categories of cities have been distinguished as far as their population change patterns are concerned. These categories range from the continuous growth from 1950 until today to continuous decline. The most dynamic cities are located in the Sun Belt and they are relatively small and new.

On the opposite, the biggest and old industrial centres of the Rust Belt have been losing inhabitants. In general, the pattern of population change shows close relationship with the economic situation and in particular, is connected with the structural changes in society and economy, namely the structural shifts toward more services-oriented economy, and smaller households.

Essentially the paper offers the historical outline of the population changes in the biggest American urban centres. It should be seen as an introduction necessary for the more advanced studies concerning the issues of employment, incomes, ethnic composition, and various social problems which could explain the changing fortunes of particular cities.

KEY WORDS: USA, cities, population change.

INTRODUCTION

The development of American urban system is closely connected with two general processes. Firstly, the process of colonization of the territory, which had been completed before the end of the 19th century. Secondly, the industrialization process, the main stage of which fell also in the 19th century. Manufacturing

showed to be the main cause of the appearance of the greatest concentrations of population. And it was mainly due to industrial expansion that just one hundred years ago no less than a half of the American pioneer society lived in cities. From that time the US population was enlarged 2.5 times and the urbanization coefficient reached 80%. It means that the population of American cities has grown more than 5 times. It should be noted that the urban expansion was hampered neither by the Great Economic Crisis nor by the Second World War. Only in 1950s, that is to say after the great historical disasters, when the US population was growing and its further development was expected, several American cities started to decline. Simultaneously there appeared numerous new, highly dynamic urban centres. So, the US urban system have become more differentiated and now it consists of various categories of cities with different geographical and functional characteristics, and with different tendencies as far as population changes are concerned (Berry, Horton, 1970). The aim of this study is to show main trajectories of American cities' population. The paper offers evidence on population change for 118 cities which reached the number of 200,000 inhabitants across the United States of America to assess how their fortunes have changed over the period from the 1950s through to 2009.

CITIES IN GEOGRAPHICAL PERSPECTIVE

The social and economic interpretation of cities in geographical research have been changing over time. During the first half of the 20th century the assessments typical for the industrial period prevailed. Cities were seen as the greatest concentrations of economic activities and the centres of progress, contrary to rural districts, which were conservative and devoid of industrial enterprises (Wirth, 1938). This stereotype in America was strengthened by the traditional antagonism between the agricultural and conservative South, and the modernist, liberal and industrialized North. This mode of thinking was also very strong in Europe, and particularly in the post-war Poland, where the state propaganda tried to show the traditional peasantry with its private property rights, as an obstacle on the way of the so-called social progress, the leading role in which was to be played by industrial proletariat. During this period the growing urbanization coefficients were registered with optimism, as the evidence of the so-called progress. In spite of the fact in some cities there appeared problems connected with the excessive concentration and congestion (e.g., London in 1930s). Mainly due to these problems, in the second half of the 20th century there in urban geography were quite different atmosphere. Cities were identified as the

places facing the greatest economic and social difficulties. Deindustrialization and deconcentration of jobs put strains on urban communities (Hall, 1999). Some researchers interpreted cities as remnants of industrial era when transport costs were high, supply chains were local and people preferred to live close to their workplaces. For several years cities have been identified again as sites of economic dynamism and engines of prosperity. It is explained by the circumstances of a post-industrial world of low transport costs and the people's and firms' strive after locations where property is cheaper, congestion lower, and environmental quality higher (Berry, 1973; Pascal, 1987; Garreau, 1991). Trying to explain this shift in orientation of researchers, Turok and Mykhnenko (2007) emphasized the role of cities as sources of innovation and productivity growth in advanced economy based on high order business services, logistics, research-intensive universities, and the direct cooperation and competition of firms. Cities contain the necessary social infrastructure to attract the most skilled and creative groups of population (Glaeser, Gottlieb, 2006; Cheshire, 2006; Szymańska, 2007). If in the previous period the key notions in urban geographical literature were deglomeration and crisis, nowadays they have been replaced by the 'resurgence' of cities, which after the period of decline started to grow again. This process is particularly evident in the United States, where it is explained by the general shift in the industrial structure from manufacturing to services. Services are thought to have a stronger urban orientation than manufacturing. Also there are some demographic trends that favour city locations (reduction in number of households with one breadwinner, who were bound to favour the suburbs, growing number of single adults households, couples with no children, and families with two or more people in work).

American cities were growing permanently from their very beginnings to 1950s. Then there was the period of deglomeration and crisis, during which numerous cities declined. These tendencies were changed some 15–20 years ago with the resurgence impulse (Quigley, 1998; Florida, 2004; Storper, Manville, 2006). In 1980s there were identified three groups of cities in the USA. To the first one the industrial centres of the North (Midwestern and Middle Atlantic Regions) were included, which experienced depopulation after 1950. The second group consists of regional centres of the whole territory, located along the main national communication routes. They are mostly cities established in the second half of the 19th century and their growth was steadily hampered during the second half of the 20th century. To the third group were included quickly growing cities of the South and West with the differentiated functional structure. Their main period of growth falls on the second half of 20th century and some of them were established just after the Second World War (Wilczyński, 1988). This model was

very popular among scientists and became the basis for long-term predictions. Extrapolation of trends which were registered during 1950s, 1960s, and 1970s allowed the National Planning Association to announce the forecast in 1980, according to which the greatest American city by the year 2000 was to be Los Angeles with some 8.8 mln inhabitants, and on the outskirts of New York were to appear new urban centres with population of more than 1 million each, namely Nassau-Suffolk (Long Island) and Middlesex City (New Jersey). The model of the three categories of cities in the USA showed to be insufficient, however, and the NPA predictions failed to take into account the resurgence effect. This phenomenon was also ignored in the Polish geographical literature. In 1999, that is to say, years after the resurgence process passed its apogee, there appeared interesting, mainly sociological study by A. Majer. Analyses made by the author concern, however, the depopulation in cities and the crisis, which was to be prevented by way of the changes in federal and state policy (Majer, 1999). In this situation the research projects concerning the population changes of American cities seem to be justified and necessary. Changes in population of cities are the result of intermingled demographic, economic, socio-cultural, political, and natural factors which influence people's own decisions and their spatial behaviour. Geographical studies concerning the population changes in cities could then lead to explanation and assessment of particular factors influencing the distribution of population, leading to better understanding of changes in geographical realities of particular regions.

AGGREGATE PATTERNS OF CHANGE

The study covers all 118 cities in the United States, which during the period 1950–2009 reached the level of 200,000 inhabitants (see Fig. 1). These cities account for 20% of the total US population (62.5 mln people in 2009). This proportion was reduced from 24.1% in 1950 to 19.0% in 1990, and then started to grow slowly. There is a big diversity among the cities included in the study. There are eight cities whose population numbers are below the level of 200,000 due to the recent decline (Yonkers, Richmond, Mobile, Des Moines, Jackson, Worcester, Dayton, and the smallest Syracuse with only 137,000 inhabitants). On the other hand, there are quickly growing cities, which exist no more than 30–40 years (Moreno Valley, Spring Valley, Irvine, and Gilbert). This diversity is connected with the age of cities but also is expressed in their demographic and economic structures, as well as in their social conditions. Moreover this diversity is reflected in the directions and dynamics of population change.



Fig. 1. American cities with population exceeding 200,000 in 2009 and their recent population changes in cities included in the study (during 1990–2009)

Source: Authors' elaboration based on the U.S. Census Bureau, 2009

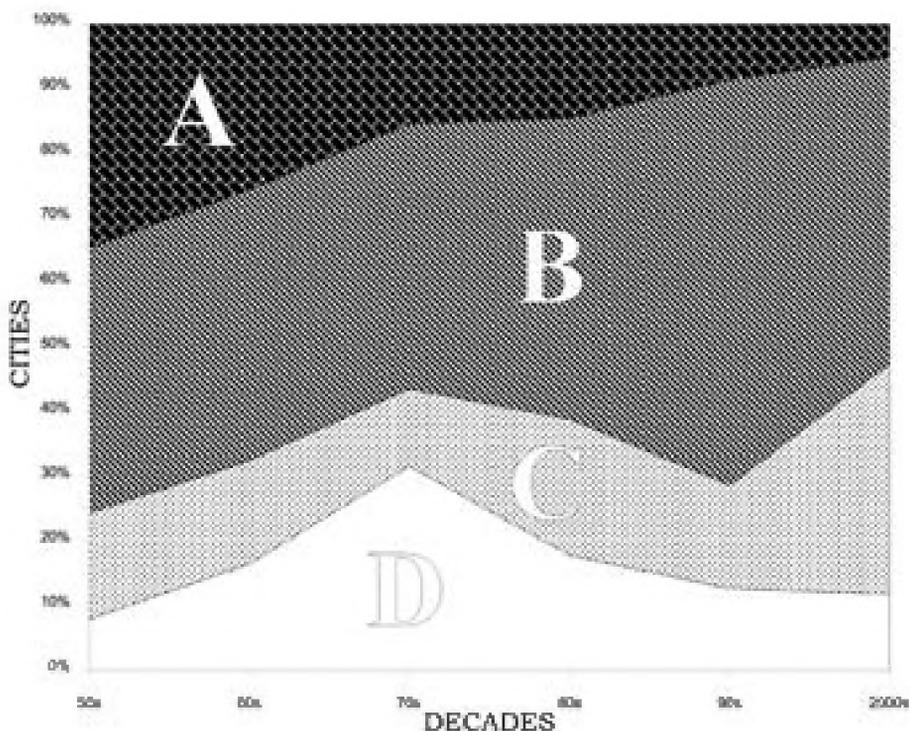


Fig. 2. Proportions of cities that were quickly growing (A), moderately growing (B), stable (C), and declining (D) in decades

Source: Authors' elaboration based on the U.S. Census Bureau, 2009

During the whole studied period the population numbers in the most of cities were rising. In the most successful decades of 1950s and 1990s more than 70% of cities experienced population growth. Among the group of growing centres, there is a considerable number of cities with the growth rate of more than 50% per decade. They consisted 35% of the total number in 1950s, but this proportion has been constantly reduced to the level of 7%. The most numerous through the whole period was the group of cities with a moderate growth rate of 5–50% per decade. In 1990s to this group belonged more than 60% of the studied cities. Some 10–20% of the cities experienced insignificant changes of population numbers (no more than 5% per decade). However, the number of such cities with relatively stable population numbers has grown strongly after the year 2000 exceeding the level of 30%. The remaining 10–15% of American cities have experienced population decline of no less than 5% per decade. During 1970s

this group accounted for more than 30% of the total number of cities. Population changes in American cities show the period of regression from the beginning of the study period until 1980s when the numbers of declining cities were rising and the numbers of growing cities were falling. Then the recovery (or resurgence) period has begun, when the number of moderately growing cities was rising at the cost of all remaining categories of cities. During the decade of 2000–2009 the numbers of cities in all categories have fallen, except the group of cities with insignificant population changes. The number of those cities was increased twofold (see Fig. 2).

Changes in population of cities are indicators of their prosperity, if they can not be explained by the natural increase. The US population growth rate has been falling from 18.5% per decade in 1950s to 8.72% in the last decade (Table 1). Changes in the population of American cities during the first two decades can be satisfactorily explained by the national demographic trend (reduction in the growth rates by 5 percentage points in both the total population and the population of cities). The turning point was the decade of 1970s, when the total population growth rate was slightly smaller than in the previous decade, however, the population of cities experienced decline in absolute terms. During the next decades the population of cities started to grow faster in comparison to the total population. It can be explained by the rising fortunes of cities and their growing importance in the national economy after 1980 (see Fig. 3, 4, 5, 6, 7, 8). The data used for the analysis are for the city proper according to the statistics offered by the United States Bureau of the Census. With few exceptions the studied cities are incorporated places. Five of them (Jackson, Jacksonville, Lexington, Louisville, and Nashville) are parts of consolidated city – county governments. Populations of other incorporated places in the county have been excluded from the population totals taken into analysis. For years that predate the establishment of a consolidated city – county government city population is shown. Another exception is Arlington, VA which is the so-called census designated place (CDP). Although not incorporated CDP's are recognized as statistical equivalents for census purposes.

Table 1. Average national and city population growth rates (% in decades)

	1950s	1960s	1970s	1980s	1990s	2000–2009
USA total	18.51	13.32	11.48	9.78	13.15	8.72
Cities only	12.48	7.21	–0.26	7.95	15.20	14.49

Source: Authors' calculations based on the Decennial Censuses and Population Estimates Program, U.S. Census Bureau, U.S. Department of Commerce, 2009

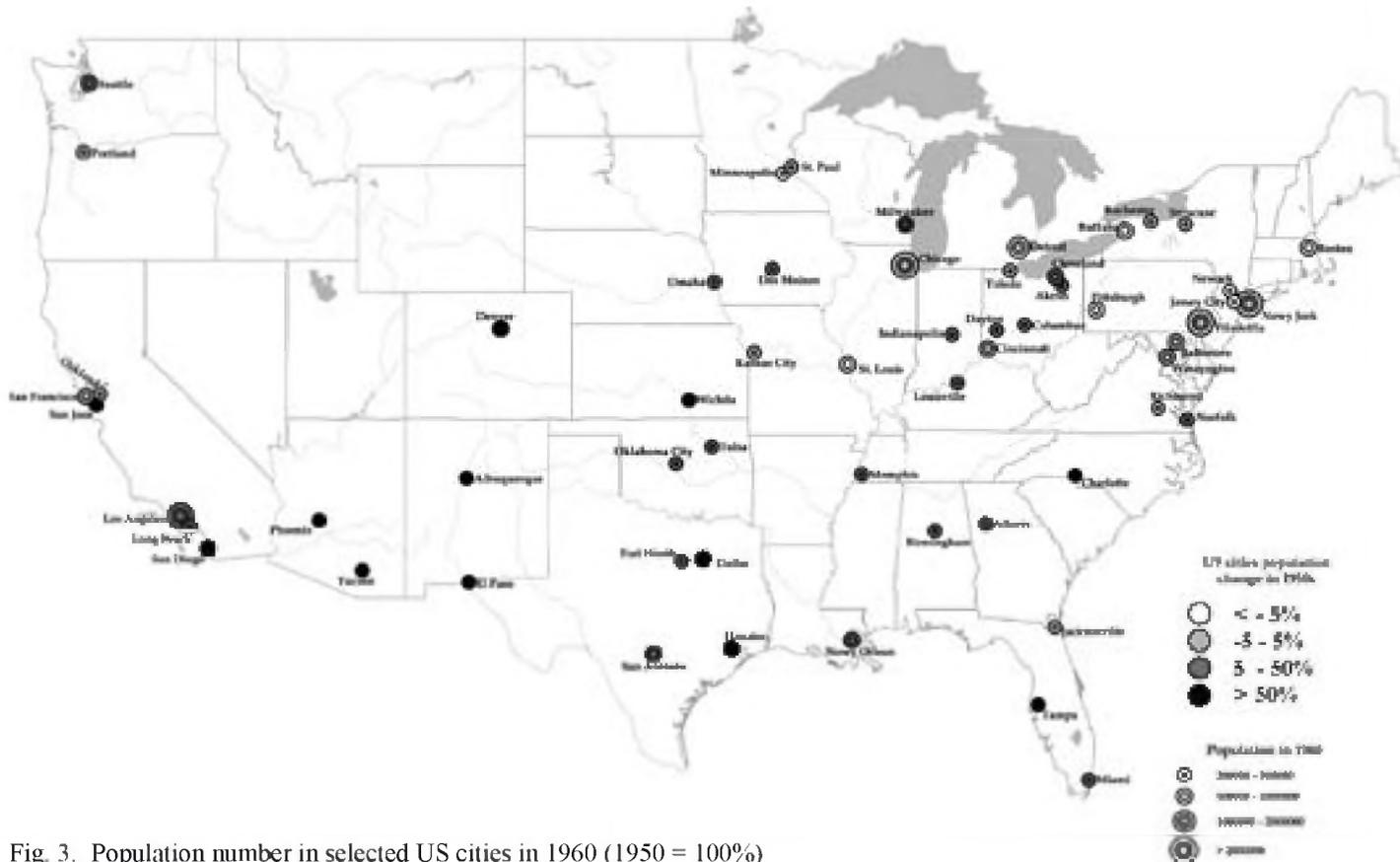


Fig. 3. Population number in selected US cities in 1960 (1950 = 100%)

Source: Authors' elaboration based on the Decennial Censuses and the Population Estimates Program, U.S. Bureau of the Census, U.S. Department of Commerce, 2009

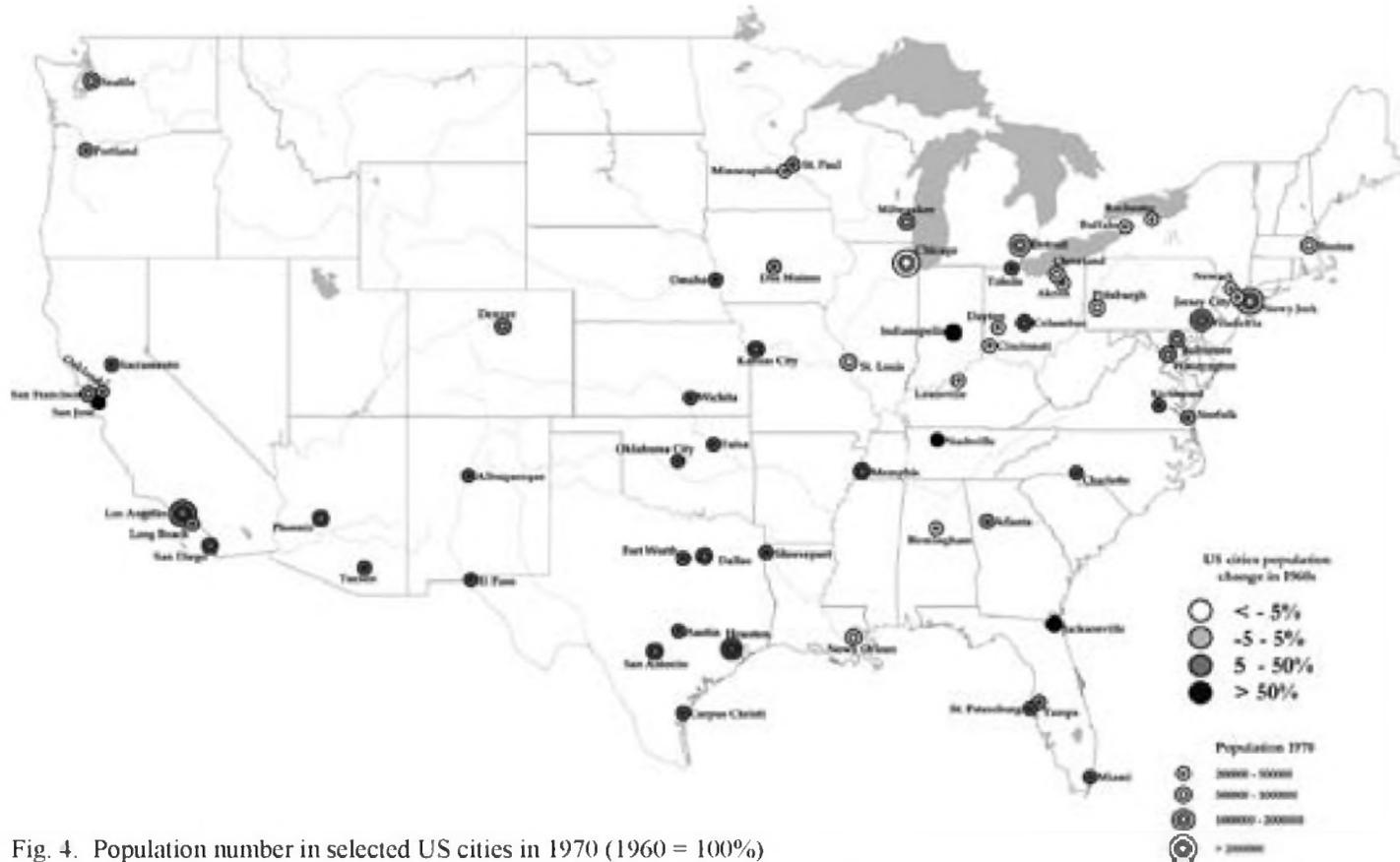


Fig. 4. Population number in selected US cities in 1970 (1960 = 100%)

Source: Authors' elaboration based on the Decennial Censuses and the Population Estimates Program, U.S. Bureau of the Census, U.S. Department of Commerce, 2009

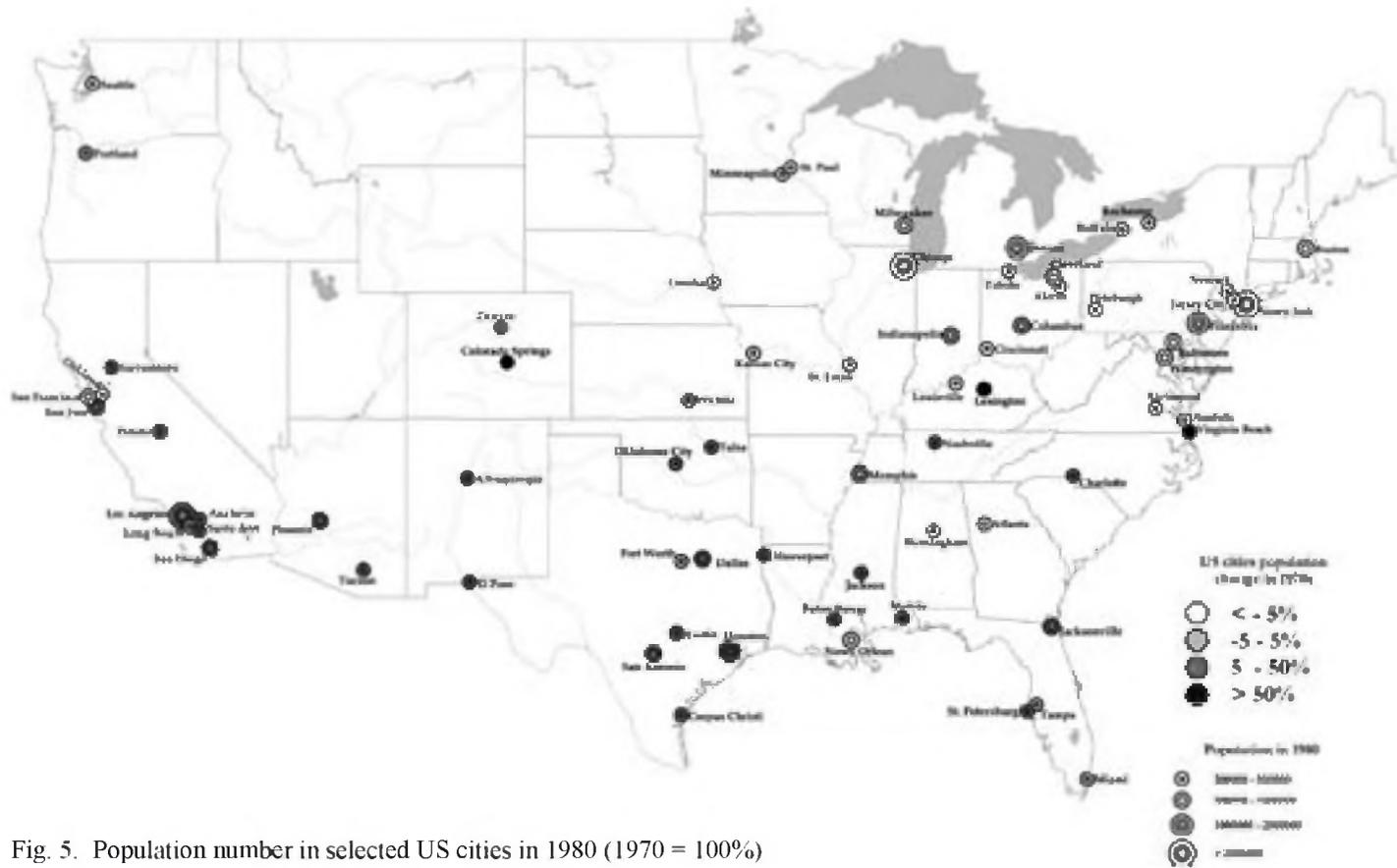


Fig. 5. Population number in selected US cities in 1980 (1970 = 100%)

Source: Authors' elaboration based on the Decennial Censuses and the Population Estimates Program, U.S. Bureau of the Census, U.S. Department of Commerce, 2009

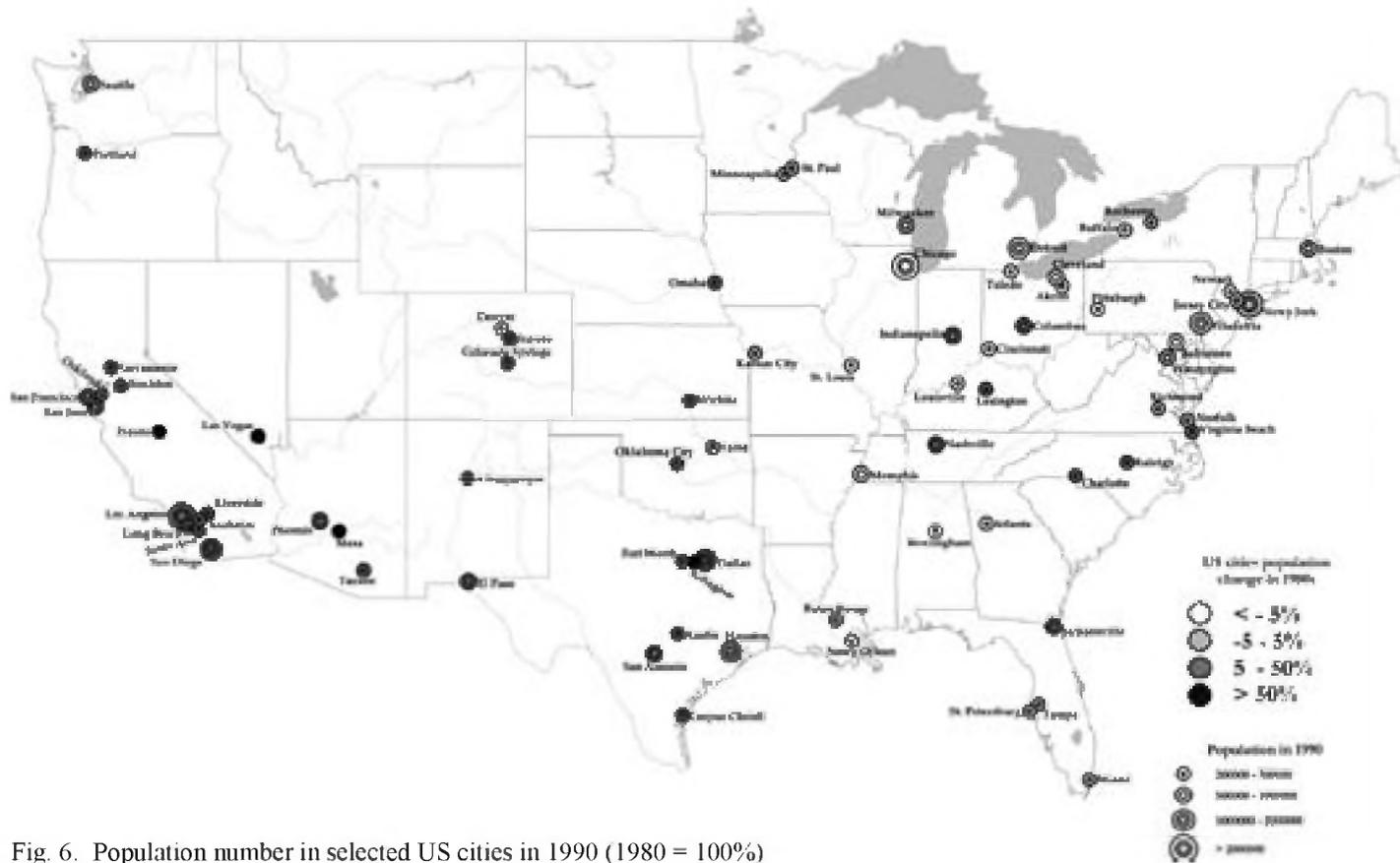


Fig. 6. Population number in selected US cities in 1990 (1980 = 100%)

Source: Authors' elaboration based on the Decennial Censuses and the Population Estimates Program, U.S. Bureau of the Census, U.S. Department of Commerce, 2009

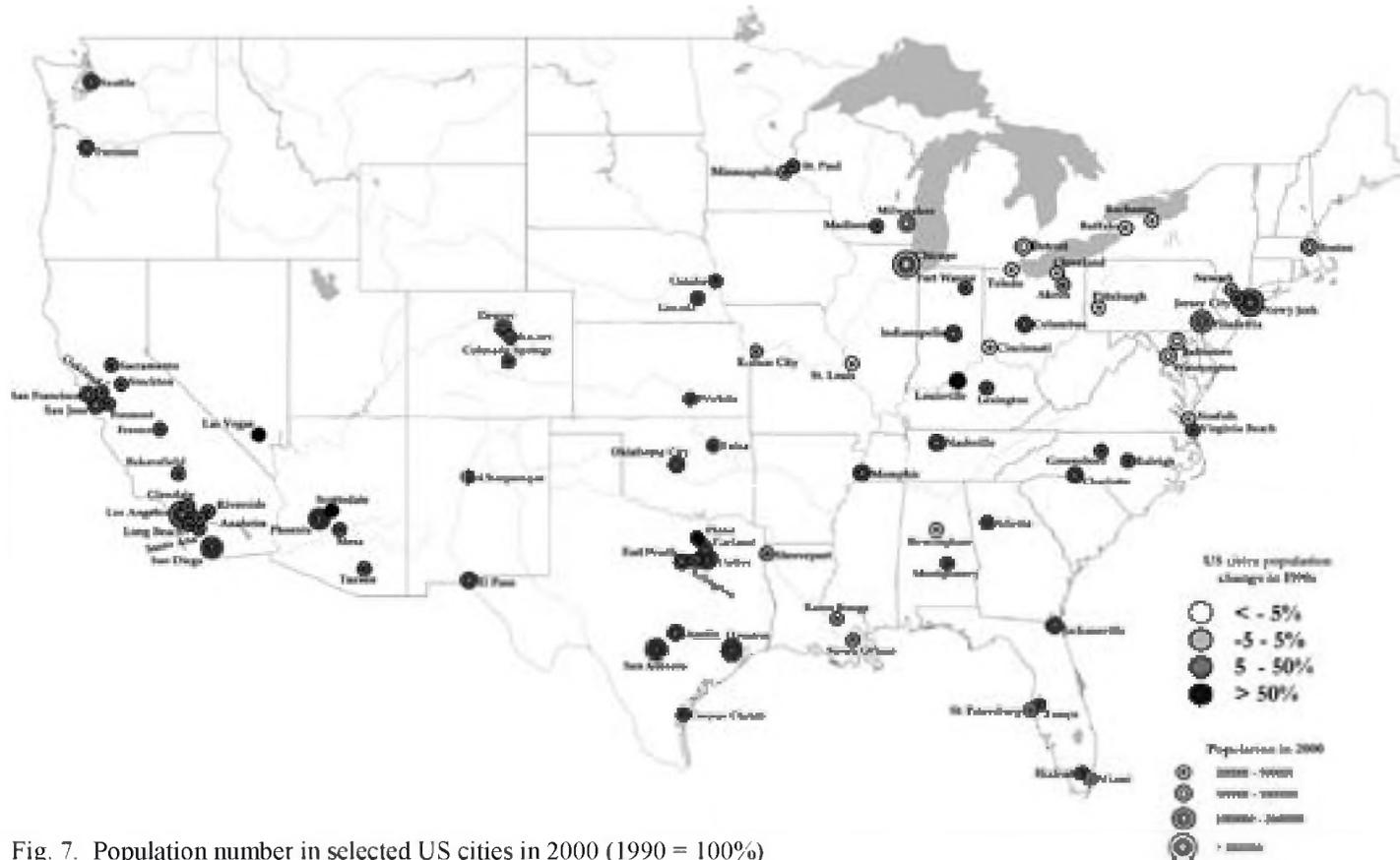


Fig. 7. Population number in selected US cities in 2000 (1990 = 100%)

Source: Authors' elaboration based on the Decennial Censuses and the Population Estimates Program, U.S. Bureau of the Census, U.S. Department of Commerce, 2009

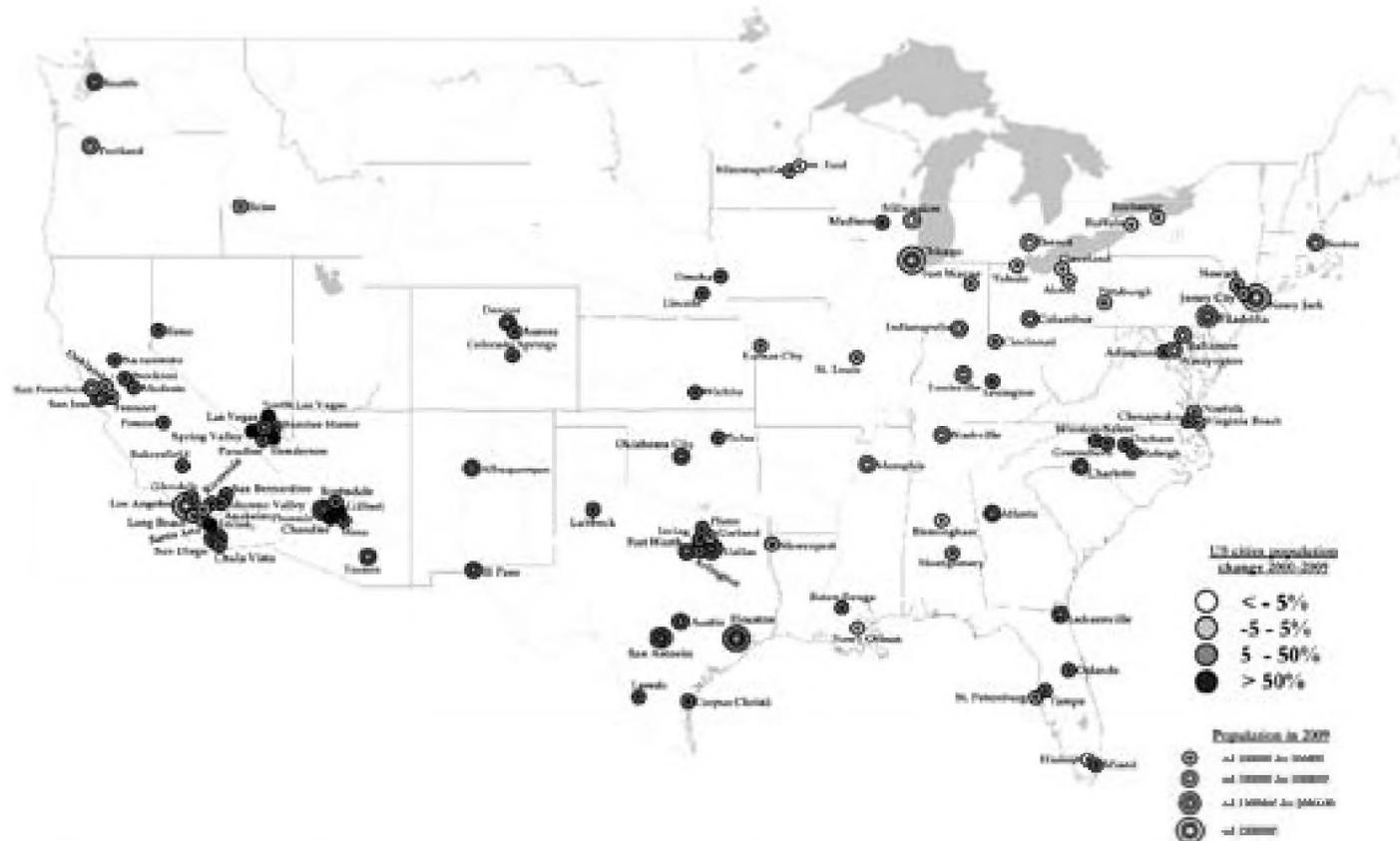


Fig. 8. Population number in selected US cities in 2009 (2000 = 100%)

Source: Authors' elaboration based on the Decennial Censuses and the Population Estimates Program, U.S. Bureau of the Census, U.S. Department of Commerce, 2009

DIFFERENT TRAJECTORIES OF CITIES

The aggregate pattern of change constitutes the context and conceptual basis for exploring the extent of diversity among cities and examining their different trajectories. On the basis of population changes in cities in successive decades, the seven most common trajectories of change were distinguished and all cities were divided into seven categories (Fig. 9). The categories are mutually

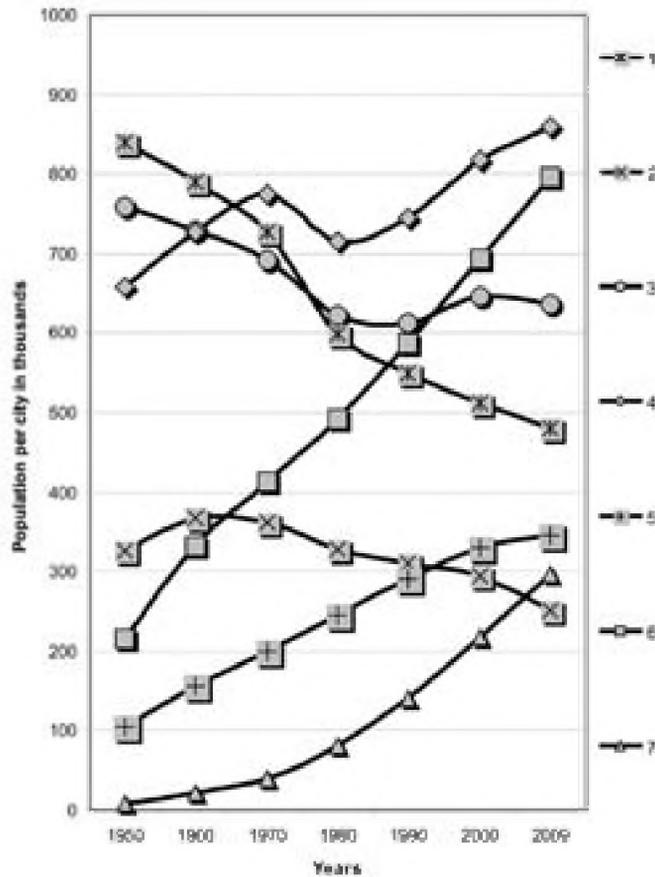


Fig. 9. Trajectories of population change in seven categories of American cities by decades

Explanation: 1 – continuous decline; 2 – long-term decline; 3 – resurgence; 4 – disturbed growth; 5 – slow growth; 6 – moderate growth; 7 – fast growth

Source: Authors' calculations based on the Decennial Censuses and the Population Estimates Program, U.S. Census Bureau, U.S. Department of Commerce, 2009

exclusive and are distinguished by the direction and rate of change between different points in time. The trajectories range from continuous decline over the last 60 years to continuous growth. They are as follows: a) continuous decline (12 big industrial centres of the Rust Belt); b) long-term decline from 1960 or 1970 (9 old centres east of Mississippi); c) decline followed by the resurgence effect after 1980 or 1990 (10 dispersed cities); d) growth disturbed by crisis in 1970s, or also in 1980s (18 dispersed cities); e) continuous slow growth and stabilization (24 cities of South and West); f) continuous growth (23 cities of South and West); g) continuous fast growth (17 relatively small and young cities west of Louisiana).

The vast majority of the 118 cities followed one of the seven trajectories. Only 5 cities were excluded from the classification due to changes in the administrative boundaries during the study period, namely Jackson, Jacksonville, Lexington, Louisville, and Nashville (Fig. 10). They are now parts of the consolidated city – county governments and population data for the proper city are not available. Fig. 9 and 10 confirm considerable diversity of experience among cities. The most common profile, followed by 40 cities, is continuous growth (32%). When 24 growing cities with the slowing tendency are added, there appears the group of 60 cities, that is to say 51%. All these cities are located in the regions of the South and West.

Another large group have had the long-term downturn since 1950s or 1960s. These are 21 cities located east of Mississippi, and mainly on the borders of industrial Heartland. The remaining cities followed more complicated and volatile patterns of change. The important observation is that regional distinctions seem to matter. There appears the big difference between cities in the eastern part (belonging to the first two categories) and the cities of the Sun Belt (included mostly in the last three categories). Moreover, an analysis of the Fig. 3–10 allows us to formulate the suggestion according to which the city size has been an important factor influencing the growth rates of cities. It shows to be evident that larger cities have tended to grow more slowly than the smaller ones. In their study concerning European cities, Turok and Mykhnenko argue that this is because of congestion and high property prices (2007). Moreover, it is easier for a small city to reach a level, e.g., a one per cent per year expansion than for a large city because its perimeter is proportionately larger in relation to its built-up area. Such explanation seems to be reasonable also for American cities since there is the strong negative relationship between city size and growth rate for the period 1990–2009 (Fig. 11). This is in contrast with some new urban theories which suggest that big cities are now better placed than smaller settlements because of the larger scale of opportunities, amenities, infrastructure, and skills available to firms and people (Buck et al., 2005). There has appeared a shift in American

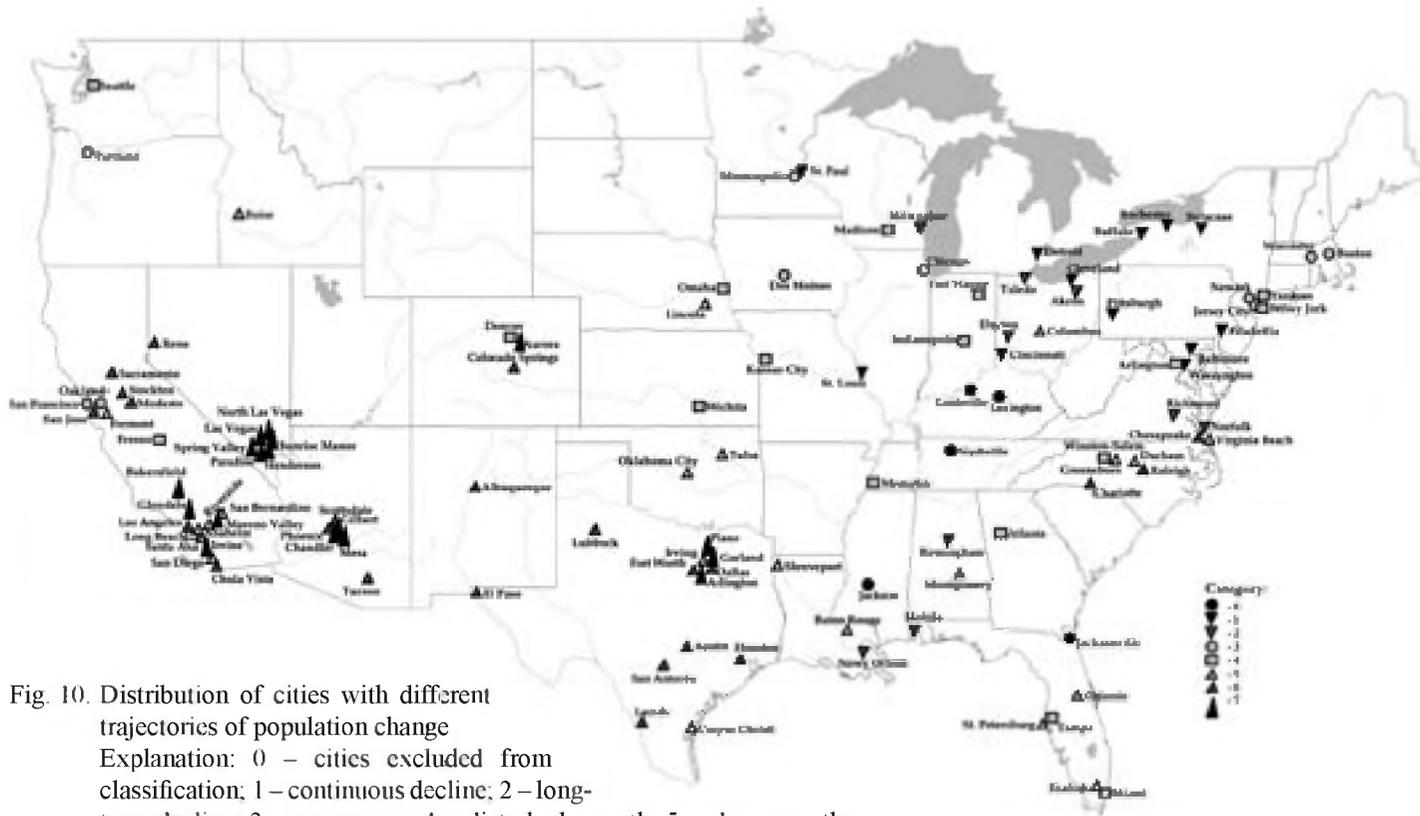


Fig. 10. Distribution of cities with different trajectories of population change
 Explanation: 0 – cities excluded from classification; 1 – continuous decline; 2 – long-term decline; 3 – resurgence; 4 – disturbed growth; 5 – slow growth; 6 – moderate growth; 7 – fast growth

Source: Authors' calculations based on the Decennial Censuses and the Population Estimates Program, U.S. Census Bureau, U.S. Department of Commerce, 2009

POPULATION OF AMERICAN CITIES: 1950–2009

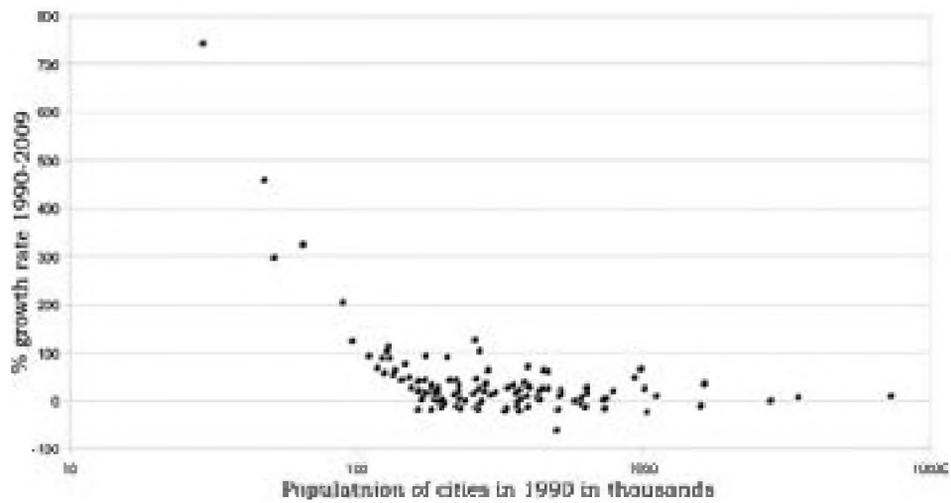


Fig. 11. Relationship between city size and growth rate, 1990–2009

Source: Authors' elaboration based on Decennial Censuses and the Population Estimates Program, U.S. Census Bureau, U.S. Department of Commerce, 2009



Fig. 12. Abandoned housing estate in Detroit

Source: <http://www.justmeans.com/Open-Season-for-Social-Enterprises-a-New-Future-for-Detroit/10597.html>

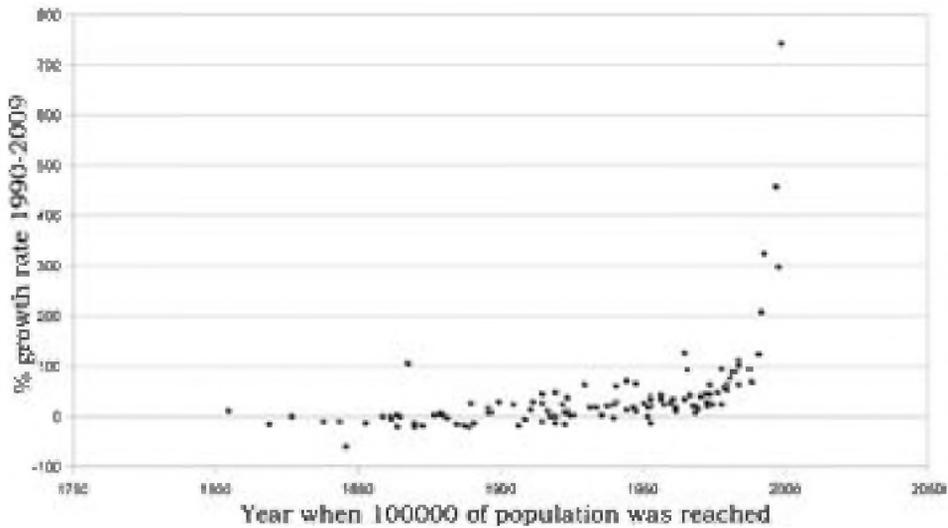


Fig. 13. Relationship between the time when cities reached population 100,000 and their current growth rates

Source: Authors' elaboration based on Decennial Censuses and the Population Estimates Program, U.S. Census Bureau, U.S. Department of Commerce, 2009

social consciousness and no longer the big is taken simultaneously as the best. Numerous parts of American big cities are being demolished and people seem to be inclined to accept the idea that 'Demolition means progress' (see Fig. 12). Differences between the East and the West suggest also that the important factor influencing the population change in cities can be their age. Declining cities are not only bigger than the growing ones, but they are simultaneously older (see Fig. 13). Growth of older cities is often hampered by the decline of former dominant industries and by physical constraints on land availability. The abundance of free land in newly established cities of the West, like Irvine, shows to be a stronger attraction for investors than the incentives from the sides of such cities like Detroit or Buffalo, which try to change the stereotype of the Rust Belt cities by making them small and green.

CONCLUSIONS

American cities showed to be extremely sensitive to the general economic prosperity. The most important turning point in their recent history was the energetic crisis in 1970s. This decade most of them reduced their growth rates and one third of them experienced even the absolute decline.

Recent positive change in the fortunes of American cities should be interpreted as a reflection of the structural shift that is occurring towards a more services-oriented economy and smaller households.

Important differences between the old industrial North and Midwest on the one hand, and the West and South on the other show that the distinction of the Rust Belt and Sun Belt is still valid. Numerous cities of Rust Belt have lost significant numbers of inhabitants and their decline is going to be stopped. Simultaneously, the growth rates of the Sun Belt cities are gradually reduced and there appear no newly established, highly dynamic mushroom-cities. This leads to the more stable situation in which both excessively fast growth and radical decline disappear.

Stabilization process is accompanied by cultural change, particularly in the Rust Belt. Shrinking cities, depopulation, and lately demolition of vast industrial and housing estates are the landscape equivalent of the radical shift in the sphere of social consciousness. The traditional American stereotype, according to which the positive meaning was assigned only to phenomena that were growing or increasing, seems to be approaching to its end. The new slogans according to which the small can also be good, demolition can mean progress, and green is beautiful, begin to gain space in the social consciousness of the expansive American society.

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