

Chapter 1 : Urbanization in Developed and Developing Countries around the World

Video created by Columbia University for the course "The Age of Sustainable Development". Professor Sachs looks into what makes a city sustainable, the patterns of urbanization, and pathways for urban resilience around the world.

The authors have declared that no competing interests exist. Conceived and designed the experiments: Received Sep 26; Accepted Jul 7. This article has been cited by other articles in PMC. Abstract The relationship between urbanization and economic growth has been perplexing. In this paper, we identify the pattern of global change and the correlation of urbanization and economic growth, using cross-sectional, panel estimation and geographic information systems GIS methods. The analysis has been carried out on a global geographical scale, while the timescale of the study spans the last 30 years. The data shows that urbanization levels have changed substantially during these three decades. Empirical findings from cross-sectional data and panel data support the general notion of close links between urbanization levels and GDP per capita. However, we also present significant evidence that there is no correlation between urbanization speed and economic growth rate at the global level. Hence, we conclude that a given country cannot obtain the expected economic benefits from accelerated urbanization, especially if it takes the form of government-led urbanization. In addition, only when all facets are taken into consideration can we fully assess the urbanization process.

Introduction If the transformation of human society since the Industrial Revolution were to be summarized in no more than three words, there would be few better alternatives than industrialization, urbanization, and globalization. These three dimensions have close relations with each other. Industrialization leads to the direct output of economic growth, which further gives impetus to a vigorous process of urbanization in both developed countries and newly industrialized ones, mainly via a specialization of labor and the unprecedented development of non-agricultural sectors. Undoubtedly, the historical facts and statistics reveal that almost all of the developed countries have a higher level of GDP per capita and also a higher level of urbanization. Numerous studies have previously found that the level of urbanization is closely correlated with the level of GDP per capita [1] , [2]. It is generally accepted that economic growth promotes the expansion of modern industries and an increase in the urban population; in turn, urbanization also promotes economic growth to some extent. Various programs of accelerated urbanization and rapid economic growth have, therefore, been embarked upon in many developing countries. Policies pursuing positive urbanization, with the goal of boosting economic growth, are widely found in the developing world [3] – [5]. World urbanization is changing quickly and the rate of change has been rising faster in the last three decades than previously, in this age of globalization. The focus of world urbanization has shifted from the developed countries to the developing world. Much of the literature on the urbanization process and the pronouncements of policy-makers have both hailed growing urbanization as a sign of progress [9] , [10]. However, the essence of this interaction is something quite different and more complex. Our understanding of cities is being transformed and, via the new disciplines of complexity science and self-organization theory [11] , [12] , we now see them as biological systems rather than as mechanical systems. Cities have a strong sense of order and pattern, and are no longer regarded as being disordered systems beneath the apparent chaos and diversity of urban spatial form [13] , [14]. Urbanization and urban concentration have a positive impact on economic growth while urban primacy has a negative impact [15] , [16]. The argument that urbanization promotes economic growth has recently been challenged by a report showing that there is no evidence that urbanization level affects economic growth rate [6]. This research highlights the importance of re-examining the relationship between urbanization and economic growth, and makes us rethink profoundly the popular ideas and practice of accelerated urbanization in developing countries. More recently, Turok and McGranahan have also argued that it is not urbanization or city size per se that induces economic growth, but rather infrastructure and institutional settings [17]. Compelling evidence is still currently lacking, however, and needs to be compiled. First, there has been a substantial change in global urbanization levels and economic development over the past 30 years. This provides a natural checkpoint for verifying whether the existing empirical data support the new view. Second, within the ambit of globalization, most countries are deeply integrated within

world systems. Hence, it is desirable to examine the changing global pattern as a whole. We propose to re-examine the arguments that support the view that was widespread in the past or that favor the new vision. The present study aims to address the following questions: To answer these two questions, an interdisciplinary methodology for identifying the spatio-temporal pattern is applied to explore the effects of the urbanization process on economic growth, in the context of cross-country panel data derived from the World Bank data sets. Data and Methods Urbanization began during the Industrial Revolution, and refers to the increasing number of people that live in urban areas. Urbanization is not only about a simple increase in the number of urban residents, but also involves a series change from rural to urban styles in terms of industry structure, employment, living conditions, and social public services. Economic growth is the increase in the value of goods and services produced by a country or regional economy over time. Two key indicators are selected to measure development level: The empirical data cover countries and regions of the world, with yearly observations since Data were converted to international dollars by deflating current local currency units with a Chilean GDP deflator of base year Urbanization level is the ratio of urban to total population. Urban population refers to people living in urban areas, as defined by national statistical offices. In addition, the purpose of this article is to examine the correlation difference between the level and speed of urbanization and economic growth. Thus, the speed of urbanization and the economic growth rate are computed respectively. The index of Veconomy is a measure of economic growth from “ in percentage terms, providing insight into the general direction and magnitude of growth for the overall economy in each country. It is widely accepted that GIS and associated analytical software have played a critical role in spatial pattern analysis. The spatial analyst function was used to analyze the global urbanization process and changes in the speed of urbanization and economic growth during “ Moreover, to determine whether there is a correlation difference between level and speed in the relationship of urbanization and economic growth, we used the analysis methods of cross-sectional data and panel data, respectively, to test the mutual relationship. If the urbanization level and GDP per capita have a positive relationship, and the speed of urbanization and the economic growth rate are also positive simultaneously. In this case, it provides evidence that urbanization changes of level and speed, no doubt, in the same direction with economic growth. Thus, a positive urbanization policy would undoubtedly be supported. Otherwise, the rationale for pursuing accelerated urbanization would be weakened and would need to be reconsidered. The methodology for the correlation analysis are seen in Appendix S1. Looking at the global distribution of urbanization level, it is easy to see an irreversible trend of world urbanization and remarkable growth in almost all continents during “ Figure 1. The color difference is clearer in the developing world, especially in Southeast Asia and Africa, which represent the bulk of the urbanization process and where urban population growth has occurred Figure 1. However, the overall relative level of distribution of urbanization on a national scale worldwide is basically unchanged over the time period. The developed regions, such as North America, Europe and Australia, remain at a higher level of urbanization, while the developing countries are relatively lower. Note that most developing countries in South America have a distinctly higher urbanization level than other developing countries.

Chapter 2 : Urbanization in , by continent | Statistic

The relationship between urbanization and economic growth has been perplexing. In this paper, we identify the pattern of global change and the correlation of urbanization and economic growth, using cross-sectional, panel estimation and geographic information systems (GIS) methods. The analysis has.

Urbanization in Developed and Developing Countries around the World! Urbanization is a new trend throughout the world. Over the span of nine decades since , the worlds population trebled from 2 billion to 6 billion, but the urban population increased more rapidly from 2. Prior to , the majority of urbanization occurred in developed countries. Rapid urbanization took place during the period of industrialization in Europe and North America in the 19th and early 20th centuries. Many people moved from rural to urban areas to get jobs in the rapidly expanding industries in many large towns and cities. Since , urbanization has slowed down in most of the developed countries. The present day situation is such that the biggest cities in these countries are losing population as people are moving away from the city to rural environments. This is known as counter urbanization. Counter urbanization is the movement of people out of cities, to the surrounding areas. This process has been occurring in developed countries, since There are four main reasons for counter urbanization: This has led to an increase in commuting. Also, the growth in information technology e-mail, faxes and video conferencing means more people can work from home. People now prefer to live on the outskirts of the city to be near where they work. This trend has given rise to the growth of suburbs.

Urbanization in Developing Countries: Around , most of the erstwhile colonies became independent countries. Most of these countries fall under the developing country category. These are the countries located in South America, Africa and Asia. Between and , the urban population in the developing countries doubled whereas in the same period in the developed countries it was less than half. While the developing world is still overwhelmingly rural, it already contains over one-third of the worlds urban population and some of the worlds largest cities. There are two following main causes of urbanization in these countries.

Chapter 3 : The Global Pattern of Urbanization and Economic Growth: Evidence from the Last Three Deca

52 United Nations Population Division World Urbanization Prospects: The Revision Figure Distribution of countries by level of urbanization, , , and and

Primate city The dominant conurbation s of a country can benefit to a greater extent from the same things cities offer, making them magnets for not just the non-urban population, but also urban and suburban population from other cities. Dominant conurbations are quite often primate cities , but do not have to be. For instance Greater Manila is rather a conurbation than a city: Economic effect[edit] As cities develop, effects can include a dramatic increase and change in costs, often pricing the local working class out of the market, including such functionaries as employees of the local municipalities. The drive for rapid urban growth and often efficiency can lead to less equitable urban development. Think tanks such as the Overseas Development Institute have proposed policies that encourage labor-intensive growth as a means of absorbing the influx of low-skilled and unskilled labor. In many cases, the rural-urban low skilled or unskilled migrant workers, attracted by economic opportunities in urban areas, cannot find a job and afford housing in cities and have to dwell in slums. Urbanization is often viewed as a negative trend, but there are positives in the reduction of expenses in commuting and transportation while improving opportunities for jobs, education, housing, and transportation. Living in cities permits individuals and families to take advantage of the opportunities of proximity and diversity. In many developing countries where economies are growing, the growth is often erratic and based on a small number of industries. For young people in these countries barriers exist such as, lack of access to financial services and business advisory services, difficulty in obtaining credit to start a business, and lack of entrepreneurial skills, in order for them to access opportunities in these industries. Investment in human capital so that young people have access to quality education and infrastructure to enable access to educational facilities is imperative to overcoming economic barriers. An urban heat island is formed when industrial and urban areas produce and retain heat. Much of the solar energy that reaches rural areas is consumed by evaporation of water from vegetation and soil. Vehicles, factories and industrial and domestic heating and cooling units release even more heat. When rain occurs in these large cities, the rain filters down the pollutants such as CO₂ and other green house gases in the air onto the ground below. Then, those chemicals are washed directly into rivers, streams and oceans, causing a decline in water quality and damaging marine ecosystems. First, the birth rate of new urban dwellers falls immediately to replacement rate, and keeps falling, reducing environmental stresses caused by population growth. Secondly, emigration from rural areas reduces destructive subsistence farming techniques, such as improperly implemented slash and burn agriculture. The mix of changing environmental conditions and the growing population of urban regions, according to UN experts, will strain basic sanitation systems and health care, and potentially cause a humanitarian and environmental disaster. The increase of food waste can raise environmental concerns such as increase production of methane gases and attraction of disease vectors. Accumulation of food waste causes increased fermentation, which increases the risk of rodent and bug migration. An increase in migration of disease vectors creates greater potential of disease spreading to humans. Depending on the various factors, such as level of urbanization, both increases or decreases in "species richness" can be seen. This means that urbanization may be detrimental to one species but also help facilitate the growth of others. In instances of housing and building devevelopment, many times vegetation is completely removed immediately in order to make it easier and less expensive for construction to occur, thereby obliterating any native species in that area. Other times, such as with birds, urbanization may allow for an increase in richness when organisms are able to adapt to the new environment. This can be seen in species that may find food while scavenging developed areas or vegetation that has been added after urbanization has occurred i. However, residents in poor urban areas such as slums and informal settlements suffer "disproportionately from disease, injury, premature death, and the combination of ill-health and poverty entrenches disadvantage over time. While urbanization is associated with improvements in public hygiene , sanitation and access to health care , it also entails changes in occupational, dietary and exercise patterns. Overall, body mass index and cholesterol levels increase sharply

with national income and the degree of urbanization. Throughout the world, as communities transition from rural to more urban societies, the number of people effected by asthma increases. The odds of reduced rates of hospitalization and death from asthmas has decreased for children and young adults in urbanized municipalities in Brazil. Similar to areas in the United States with increasing urbanization, people living in growing cities in low income countries experience high exposure to air pollution, which increases the prevalence and severity of asthma among these populations. Researchers suggest that this difference in hazard ratios is due to the higher levels of air pollution and exposure to environmental allergens found in urban areas. Furthermore, any amount of exposure to high levels of air pollution have shown long term effects on the Foxp3 region. The simplest explanation is that areas with a higher population density are surrounded by a greater availability of goods. Committing crimes in urbanized areas is also more feasible. Modernization has led to more crime as well. There is a greater awareness of the income gap between the rich and poor due to modern media. This leads to feelings of deprivation which can lead to crime. In some regions where urbanization happens in wealthier areas, a rise in property crime and a decrease in violent crime is seen. Some factors include per capita income, income inequality, and overall population size. There is also a smaller association between unemployment rate, police expenditures and crime. These areas have less social cohesion, and therefore less social control. This is evident in the geographical regions that crime occurs in. As most crime tends to cluster in city centers, the further the distance from the center of the city, the lower the occurrence of crimes are. People from one area are displaced and forced to move into an urbanized society. Here they are in a new environment with new norms and social values. This can lead to less social cohesion and more crime. Residents of rural areas and communities in the United States have higher rates of obesity and engage in less physical activity than urban residents. Mental health[edit] Urbanization factors that contribute to mental health can be thought of as factors that affect the individual and factors that affect the larger social group. At the macro, social group level, changes related to urbanization are thought to contribute to social disintegration and disorganization. These macro factors contribute to social disparities which affect individuals by creating perceived insecurity. Changes in social organization, a consequence of urbanization, are thought to lead to reduced social support, increased violence, and overcrowding. It is these factors that are thought to contribute to increased stress. It is the combination of urbanization with physical and social risk factors that contribute to mental health problems. As cities continue to expand it is important to consider and account for mental health along with other public health measures that accompany urbanization. Changing forms[edit] Different forms of urbanization can be classified depending on the style of architecture and planning methods as well as historic growth of areas. In cities of the developed world urbanization traditionally exhibited a concentration of human activities and settlements around the downtown area, the so-called in-migration. In-migration refers to migration from former colonies and similar places. The fact that many immigrants settle in impoverished city centres led to the notion of the "peripheralization of the core", which simply describes that people who used to be at the periphery of the former empires now live right in the centre. Recent developments, such as inner-city redevelopment schemes, mean that new arrivals in cities no longer necessarily settle in the centre. In some developed regions, the reverse effect, originally called counter urbanization has occurred, with cities losing population to rural areas, and is particularly common for richer families. This has been possible because of improved communications, and has been caused by factors such as the fear of crime and poor urban environments. It has contributed to the phenomenon of shrinking cities experienced by some parts of the industrialized world. When the residential area shifts outward, this is called suburbanization. A number of researchers and writers suggest that suburbanization has gone so far to form new points of concentration outside the downtown both in developed and developing countries such as India. It is called variously exurbia, edge city Garreau, , network city Batten, , or postmodern city Dear, Los Angeles is the best-known example of this type of urbanization. In the United States, this process has reversed as of , with "re-urbanization" occurring as suburban flight due to chronically high transport costs. The inability of countries to provide adequate housing for these rural migrants is related to overurbanization , a phenomenon in which the rate of urbanization grows more rapidly than the rate of economic development, leading to high unemployment and high demand for resources. Nor is it between foreign and national interests. It is between

rural classes and urban classes. The rural sector contains most of the poverty and most of the low-cost sources of potential advance; but the urban sector contains most of the articulateness, organization and power. So the urban classes have been able to win most of the rounds of the struggle with the countryside. According to research by the Overseas Development Institute pro-poor urbanization will require labour-intensive growth, supported by labour protection, flexible land use regulation and investments in basic services. Examples can be seen in many ancient cities; although with exploration came the collision of nations, which meant that many invaded cities took on the desired planned characteristics of their occupiers. Many ancient organic cities experienced redevelopment for military and economic purposes, new roads carved through the cities, and new parcels of land were cordoned off serving various planned purposes giving cities distinctive geometric designs. UN agencies prefer to see urban infrastructure installed before urbanization occurs. Landscape planners are responsible for landscape infrastructure public parks, sustainable urban drainage systems, greenways etc. Concepts of control of the urban expansion are considered in the American Institute of Planners. As population continues to grow and urbanize at unprecedented rates, new urbanism and smart growth techniques are implemented to create a transition into developing environmentally, economically, and socially sustainable cities. Mixed-use communities work to fight gentrification with affordable housing to promote social equity, decrease automobile dependency to lower use of fossil fuels, and promote a localized economy. By combining economic, environmental, and social sustainability, cities will become equitable, resilient, and more appealing than urban sprawl that overuses land, promotes automobile use, and segregates the population economically.

Chapter 4 : WHO | The urban environment

Estimated urban growth per hour through a combination of natural internal growth and migration in selected world cities. Source: UN World Urbanisation Prospects /LSE Cities In , the.

Share Urbanization is growing in both developed and developing countries. In the developing world, Africa has experienced the highest urban growth during the last two decades at 3. Yet, urbanization in Africa has failed to bring about inclusive growth which, in turn, has resulted in proliferation of slums, urban poverty and rising inequality. Inequality in African cities remains the second highest in the world with an average Gini coefficient of about 0. Rural-urban migration and natural population growth rates in cities are the major causes of the increasing rate of urban growth and slum proliferation in Africa. However, there are large variations in the patterns of urbanization across African regions. North Africa has a higher proportion of urban population. The relatively fewer slums in North African countries is mainly attributed to better urban development strategies, including investment in infrastructure and in upgrading urban settlements. In contrast, SSA has the lowest proportion of urban population. Most SSA cities are characterized by insufficient basic infrastructure, particularly in low-income areas. Since incomes from the informal sector are by their very nature low and intermittent, most migrants naturally seek for shelters or become tenants of slum landlords. As a consequence, many African cities have to deal not only with slum proliferation but also with increasing insecurity and crime. Weak institutions have contributed to poor urban enforcement, resulting in dysfunctional land and housing markets, which in turn has caused mushrooming of informal settlements. Furthermore, African governments have neglected the key drivers of productivity which include small and medium-size enterprises, human resource and skills development, and technological innovation. These factors are essential in advancing predominantly informal, survivalist and basic trading activities to higher value-added work. The expansion of cities is generally at the expense of destruction of forests and other natural environment or ecosystems, and increasing pollution especially air pollution with the related diseases. Policy Responses to the Expansion of Urbanization in Africa In order to address the challenges of urbanization facing many African cities, some key reforms should be pursued by governments. These include i upgrading informal settlements through the provision of integrated infrastructures and services that target the marginalized groups, including the poor, youth, women and elderly people. In addition, governments should act proactively to ensure orderly urban development by defining and implementing clear urban development strategies; ii mobilizing urban financing from local and foreign investors. These reforms should be more inclusive to ensure that all categories of citizens, regardless of their age, race, gender, ethnicity, or socio-economic conditions, have equal access to adequate housing, basic infrastructure and services and equal job opportunities.

Chapter 5 : Urbanization - Wikipedia

tinuing urbanization and overall growth of the world's population is projected to add billion people to the urban population by , with nearly 90 per cent of the increase concentrated in Asia and Africa.

Even while population growth rates in Asia, for instance, are falling dramatically, the region will see an absolute increase of nearly a billion people over the next three decades – growth concentrated mostly in urban areas 2. In Africa, the urbanization process also is occurring apace. For example, in the United Republic of Tanzania, the population of Dar es Salaam is doubling every 12 years 3. Rapid, unplanned and unsustainable patterns of urban development are making developing cities focal points for many emerging environment and health hazards. As urban populations grow, the quality of the urban environment, will play an increasingly important role in public health with respect to issues ranging from solid waste disposal, provision of safe water and sanitation, and injury prevention, to the interface between urban poverty, environment and health. These health and environment linkages cut across a range of policy sectors and thus are often overlooked in policymaking. They are a focus of this Priority Risks section on the urban environment. Environment and health linkages Urban air pollution – of which a significant proportion is generated by vehicles, as well as industry and energy production – is estimated to kill some 1. Today, many developing world cities face very severe levels of urban air pollution – higher than developed world counterparts 6, 7. Link to new study on burden of disease from urban air pollution Road traffic accidents contribute a further 1. Degradation of the built urban and rural environment – particularly for pedestrians and cyclists – has been cited as a key risk factor 4, 5, 8, 9. Current patterns of urbanization and motorization also are associated with more sedentary lifestyles, diminished space and opportunities for physical activity, and a consequent surge in related non-communicable diseases 10, 11. Physical inactivity is estimated to be responsible for some 3. Cost-effective strategies to address such linkages do exist. Reducing transport pollution emissions, and their health impacts, through the use of cleaner fuels and vehicle technologies has been an issue addressed in the African context, and elsewhere. These experiences will be described in more detail in a forthcoming policy brief and directory of resources. References World urbanization prospects: Health Effects Institute, April The environmental impact of cities. June , 8 2 5. Panel on Urban Population Dynamics. Demographic Change and its Implications in the Developing World.. The world health report – reducing risks, promoting healthy life. Geneva, World Health Organization, Kenworthy J, Laube F. Urban transport patterns in a global sample of cities and their linkages to transport infrastructures, land use, economics and environment. World Transport Policy and Practice, , 8 3: Health effects of outdoor air pollution in developing countries of Asia: Boston, Health Effects Institute, Peden M et al. World report on road traffic injury prevention. British Medical Journal, , The world health report – shaping the future. Physical activity, environmental issues. Geneva, World Health Organization accessed 4 October, Transport, environment and health. The world health report - reducing risks, promoting healthy life.

Chapter 6 : World Urbanization Prospects - Population Division - United Nations

The relationship between urbanization and economic growth has been perplexing. In this paper, we identify the pattern of global change and the correlation of urbanization and economic growth.

Chapter 7 : Urbanization in the United States - Wikipedia

World populations are increasingly moving from rural to urban centers, making for larger cities with greater population density than ever before. This is a global phenomenon across the spectrum of developed and developing economies.

Chapter 8 : Urbanization in Africa - African Development Bank

DOWNLOAD PDF 9. WORLD PATTERN OF URBANIZATION

Urbanization is the most dramatic form of land use change that has profoundly influenced environmental and socioeconomic conditions around the world. To assess these impacts and promote urban sustainability, a better understanding of urbanization patterns is needed. Recent studies have suggested.

Chapter 9 : Cities in numbers: how patterns of urban growth change the world | Cities | The Guardian

This web site presents the main findings of the Revision of World Urbanization Prospects which are consistent with the size of the total population of each country as estimated or projected in the Revision of World Population Prospects (United Nations,).