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Cities and Services in the Knowledge Economy

Riccardo Cappellin University of Rome "Tor Vergata" cappellin@economia.uniroma2.it Cities are now at the centre of a long term transformation of the national and international economy towards the model of the knowledge economy and new types of services, both for the firms and for the people, are concentrating within cities.

This study highlights the difference in the growth model of modern post-industrial cities, such as the large metropolitan areas, with respect to that of industrial cities, such as many smaller urban centres in developed countries.

This study analyses the changing structure of production and consumption in post-industrial cities and it highlights:

The role of internal demand vs export

The internal demand, which is mainly concentrated within cities, can be a powerful driver of national growth, both in developing and in highly developed countries, differently from smaller urban centres, where the growth of industrial exports is the driving factor of the economy, according to the typical Keynesian multiplier model.

Knowledge flows vs material flows

Cities are not only key nodes in the commercial transactions of goods but also hubs in the flows of information and in the generation of new knowledge, which plays a crucial role in determining the productivity and the growth of the national economy. The internal demand and the internal supply are tightly integrated by knowledge flows and not only by monetary flows.

Governance vs free market as a form of regulation

The concentration of population within cities indicates that cities since antique times have been the centres of political power and democracy and that social interaction within cities has important effects on the people behaviour and standard of living.

The changing characteristics of cities in a knowledge economy

The industrial city (1900-1970) was characterized by the home to work commuting, large physical structures, such as production plants and machinery and housing, the importance of the exploitation of economies of scale and of modern technologies.



Figure 2 – The industrial city is a combination of structures and not of people, such as plants, houses and transport (Sironi, 1924)

On the contrary, in a modern economy the increasing role of cities is tightly related to the increasing importance of information and knowledge and to continuous changes, such as new technologies, new productions and new organizational forms.

A first characteristic of modern cities is the high diversity of the people, firms and actors, coming from different sectors, cultures and regions and countries.



Figure 3 – The economic system, the modern regions and cities are a "puzzle" of information, knowledge, people and structures.

A second key characteristic of modern cities seems to be the increase of the flows and the need to have access to information, as indicated by:

- a) the mobility during the working time for business meetings and also during the free time for shopping and for social purposes (personal movements),
- b) the tight interactions between people needed for the creation of new knowledge both by the firms and by the individual workers (knowledge interaction)
- c) the increasing needs for socialization between the citizens (social interaction).

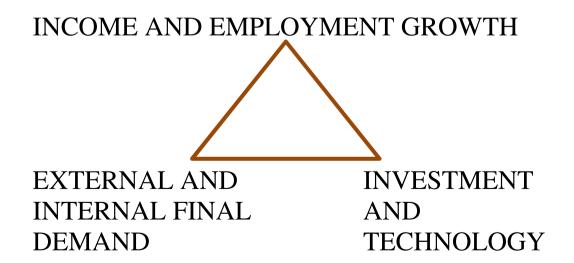
THREE MODELS OF DEVELOMENT

DEMAND DRIVEN MODEL: Keynesian and planning approach

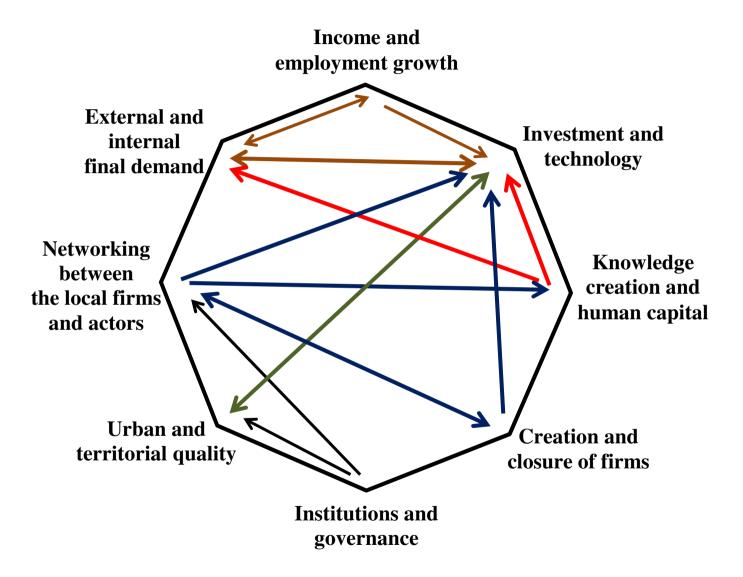
Income growth is determined by the growth in exports, imports, private and public consumption and private and public investments and economies of scale insure greater productivity and international competitiveness

SUPPLY DRIVEN MODEL: neoliberal approach

Percapita income growth is determined by productivity, employment and population growth and by external and internal financial constraints (external deficit and public deficit and "competition-flexibility and structural reforms").



REGIONAL-INDUSTRIAL MODEL: local networks approach

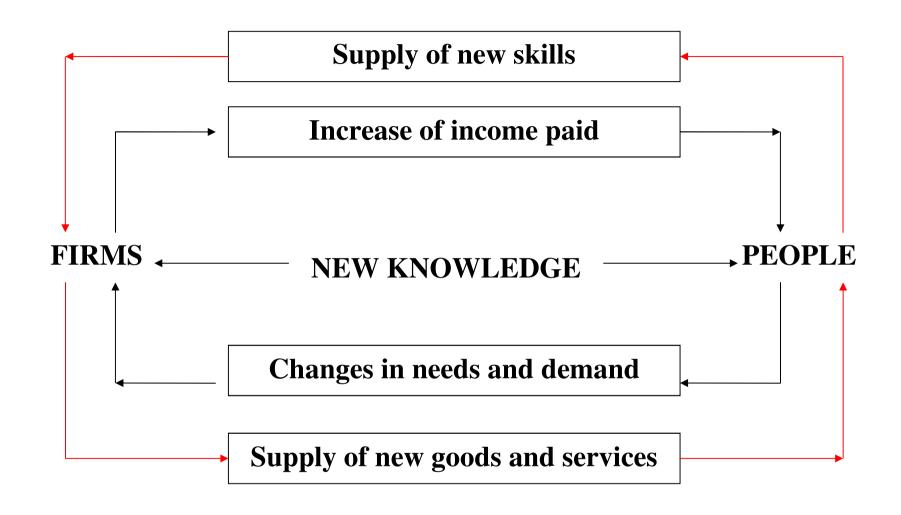


The role of consumption within the city economy and the endogenous process of development in cities

The traditional economic approach relates the growth of a city economy to the growth of large industrial firms and the exports of industrial products, such as in the case of automobile productions in Torino, Detroit or Paris.

On the contrary, cities are not only a centre of production and of working places, due to the spatial concentration of many firms, but also places of consumption and more generally the living environment of their citizens, since most of the national population lives in cities.

The explicit reference to the demand implies to consider a new dimension of the knowledge economy. Knowledge does not affect only the structure of the "production function" of the firms but also the "utility function" of the people. In fact, the knowledge economy is characterized by the development of new needs and life styles leading to the development of the demand of new products and services.



The process of urban growth and the creation of new needs and new skills

The process of differentiation of consumption and production

The model

First, a greater knowledge has an impact on the demand and the supply of labour in the **labour market**. Firms exploit the new individual competencies of the workers and combine them in order to adopt the new production technologies needed in the production of new goods or services as also in order to increase the productivity in the traditional productions.

Second, a greater knowledge has also an impact on the demand and supply in the **markets of goods and services**. It leads to the development of new needs by the people and to an increase of the demand for more sophisticated and innovative goods and services.

Thus, the process of development in urban areas is based on the one hand on the increasing differentiation of the local consumption and the growth of new needs by the households and by the firms and, on the other hand, on the continuous reconversion of the firm and of the labor force from traditional services to more modern services.

This model illustrates an "endogenous model" of economic growth in large modern cities, according to which new services develop because of a process of increasing differentiation of the needs of the users and of reconversion of the specialized human capabilities within the firms towards new service productions.

This model demonstrates that the urban growth can be determined by **the development of the internal demand** rather than by the demand of the external markets and it highlights that the new motor or the drivers of the economy in a modern city are the emerging needs of the citizens, **rather than the exports**.

Opportunities for policy action in a modern urban economy

The growth of the aggregate demand in the actual phase of development of European countries depends on **the satisfaction of collective needs by groups of consumers and citizens**, since these needs have an increasing importance while the demand of products for individual needs, such as automobiles, has become saturated.

In a policy perspective, this study **has indicated various investment fields** which correspond to the satisfaction of the new emerging production needs of the firms and to the **new living standards of the people**.

A possible conclusion is that **investment decisions in modern cities increasingly have** a **collective nature** and individual producers cannot satisfy new emerging needs, but they **require a collective, although not always government, provision**.

Public policies should aim to create "new markets" or "lead markets" by defining common standards and procedures, which allow aggregating the demand of the individual users and transforming implicit needs into an explicit economic demand.

On the domand side, the different individual needs should be standardized in some respect through a regulation system of the production and use of these goods and services. The definition of common standards and the adoption of procedures, protocols and fiscal measures would allow the interaction, competition and collaboration between various actors and to transform implicit needs into an explicit economic demand, enhancing the creation of new markets and then of new firms.

On the supply side, the exploitation of the new opportunities in the internal market requires the ex-ante coordination by a specific public or collective actor, which should anticipate the large investment required.

Most of these investment can be **based on public-private cooperation** and imply a different role of the public and the private organization in the **design**, **building and operation phase**.

Instruments

The public sector can finance R&D expenditure on **large strategic innovative projects**. In particular, it should focus public aid on the networks of complementary firms, organized through selected "**competence centers**" or **consortia or clusters**.

It could create a Metropolitan or **Regional Bank for Development** for financing innovative projects, in collaboration with major local banks and insurance companies, in order to facilitate the access by innovative projects to the national and international capital markets and hopefully in the future to the "**projects bonds**" of European Institutions.

Conclusions

Policies aiming to promote private and public investment should enhance a continuous renewal of the activities and firms within the urban economy, aiming to satisfy the new emerging needs of their citizens.

However, the creation of new markets requires a co-ordination at the local level.

Cities and regions are more close to people and to firms and can more efficiently than national governments aggregate the local needs and the capabilities of people and firms and stimulate private consumptions and investments.

That strategy can't be implemented without a greater role of cities and regions and can't be left only to national governments.