

# **Regional research in Italy and the role of institutions: new industries and sustainability**

**Riccardo Cappellin**  
University of Rome "Tor Vergata"  
[cappellin@economia.uniroma2.it](mailto:cappellin@economia.uniroma2.it)  
<http://riccardocappellin.ilcannocchiale.it/>

Paper presented at the International Conference on:

## **THE MEDITERRANEAN CITIES BETWEEN LOCAL DEVELOPMENT AND INTERNATIONAL COOPERATION**

organized by  
**the Italian Regional Science Association (AISRe)**  
**and the University Parthenope, Napoli**

Naples, 15<sup>th</sup> April 2013

Regional Science research in Italy has a long tradition, as the Italian Association exists since 34 years. An issue of the review "Scienze Regionali" summarizes the evolution of regional research in Italy in eight different fields: the urban structure of national territory, the local production systems, the regional disparities, innovation and industrial development, knowledge intensive services, urban rent and agglomeration, urban physical planning, regional economic planning. This issue is freely available on <http://www.rivistasar.it/inglese/indice.asp?idvol=2&idriv=6> and <http://www.francoangeli.it/riviste/sommario.asp?anno=2009&idRivista=103>.

The AISRe congress in Torino-2011 has considered the topic: "The city in the knowledge economy" and the respective volume is available in the Franco Angeli Editor series of AISRe. The congress in Rome-2012 has considered the topic: "Institutions and governance of territorial networks" and a volume is in print ([http://www.francoangeli.it/Ricerca/Ricerca\\_collana.asp?CollanaID=1390](http://www.francoangeli.it/Ricerca/Ricerca_collana.asp?CollanaID=1390)). These congresses have seen the presentation of more than 300 papers on many different topics.

The aim of this presentation is not to compare the regional evolution in Italy with that of the various Arab countries, but rather to illustrate two theoretical concepts, which have been elaborated in the recent Italian and European literature on Regional Science: a) the model of local networks in regional development and b) the model of governance in the organization of the relationships between the local public and private actors. We aim to highlight the usefulness of these concepts also for the analysis and policies in the regions and cities of Arab countries.

## 1. An international comparison of the patterns of growth in the Arab countries

The growth of population in the Arab countries (Egypt, Tunisia, Morocco) is very high (approximately 1%) according to an international comparison with most developed countries (Italy, Germany and Japan and also United States). It is higher than in China and Brasil, while it is lower than in India. That explains why the age structure of population is characterized by young people and the percentage of older people over 65 years (4-7%) represents almost 1/4 of the percentage in the developed countries (20%). That is related to the size of unemployment of young people and to the need for a greater effort in public expenditure on education.

The above indicated Arab countries have a growth rate of GDP (approximately 4%) which is lower than China and India but it is comparable to that of Russia and Brazil, and it is much higher than that of Italy and Germany, Japan and United States.

The sectoral composition of GDP indicate a still high share of agriculture and also a rather high share of industry. On the contrary the share of services activities is very low. That is related to the low public expenditure on basic public services, such as health and education, and to the fact that many services are provided within the family relations or in the informal economy.

The demand composition of the GDP indicates a low share of public consumption. The share of private consumption is higher and that is related to a negative balance of trade. Tunisia and Morocco have an high export propensity and also an extremely high import propensity. The share of investment is similar to that of developed and BRIC countries, but in the case of Egypt it is low.

## 2. A geographical perspective of national growth

The process of national growth has different characteristics in the various areas. Italian territory is organized in 20 Regions, 110 Provinces and 8.012 Municipalities. For research purposes the National Statistical Office ([http://www3.istat.it/salastampa/comunicati/non\\_calendario/20051216\\_00/](http://www3.istat.it/salastampa/comunicati/non_calendario/20051216_00/)) subdivides the national territory in 686 labour market areas. As indicated in figures 2.2 most of areas, especially in North and Central

Italy, have a clear industrial specialization, while the major urban areas have a high sectoral diversification and other areas, especially in South Italy do not have a clear sectoral specialization. Figure 1 indicates that many areas have a tourist specialization and among them there are not only mountain or coastal areas but also urban areas.

Urban areas define corridors along the major transport routes, as indicated in figure 1, and the spatial concentration of population is very uneven in the various areas. However, almost 46% of the national population is concentrated in small municipalities with less than 10.000 inhabitants and cities with more than 250.00 inhabitants represent only 15% of population. The spatial diffusion of industrial activities is even greater than that of population and the largest municipalities represent only 11% of industrial employment.

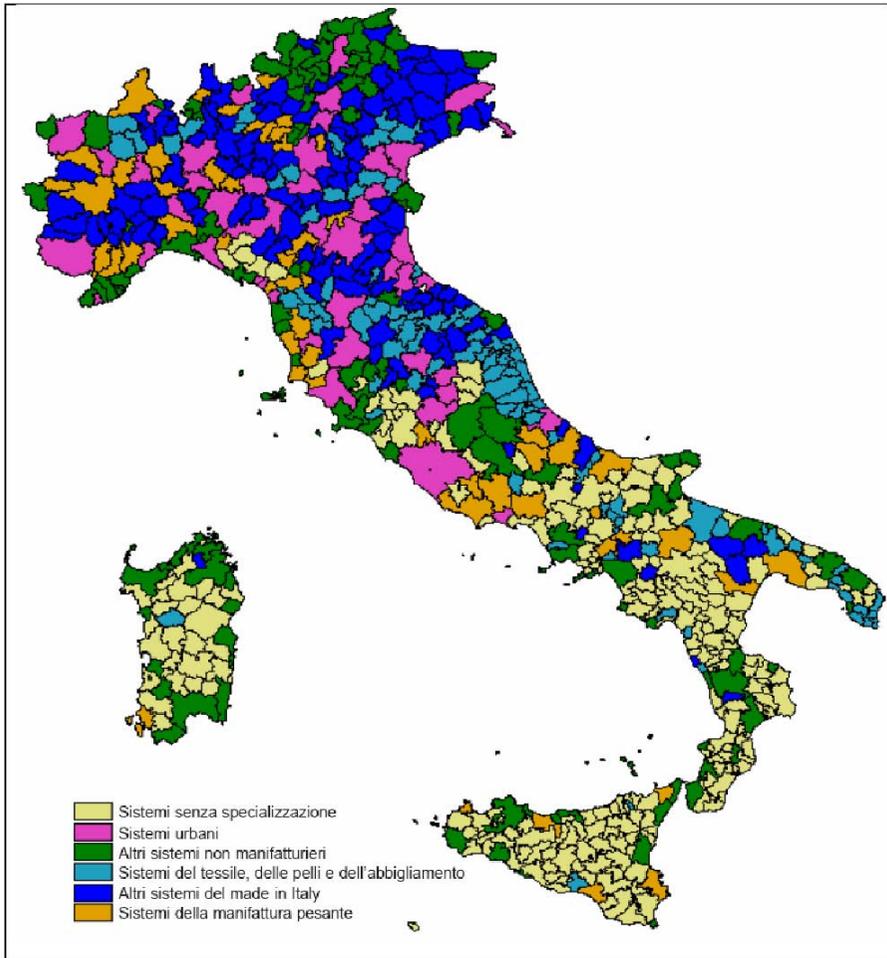
The patterns of development in the industrial, urban and rural areas of Italy and of the Arab countries: Egypt, Tunisia and Morocco, illustrates the changes in the structure of the territory during the various development phases of the national economy.

In Italy, the industrial areas or so called "industrial districts" are characterized by clusters of SMEs. Italian SMEs have evolved in the last three decades and now have decentralized productions in distant countries, are increasingly organized in financial groups and sectoral supply chains led by medium or large firms, have integrated advanced services with material manufacturing activities and have developed extensive technological cooperations with universities and also with foreign firms. Many studies on the industrial and technological transformation of these areas are published in the books of the AISRe series by Franco Angeli Editor.

The urban and metropolitan areas in Italy are characterized by a post-industrial transformation. The quality of life in Italian cities is indicated by their capability to attract a great share of the tourist flows. Italy (165.2) is second only to Spain (213.3) for the total nights spent (million nights) by non residents and France (120.4) is third (source: Regional Yearbook 2102, Eurostat [http://epp.eurostat.ec.europa.eu/portal/page/portal/product\\_details/publication?p\\_product\\_code=KS-HA-12-001](http://epp.eurostat.ec.europa.eu/portal/page/portal/product_details/publication?p_product_code=KS-HA-12-001)). The economy of the largest cities is increasingly specializing into the knowledge economy or in post-industrial activities. They are characterized by an increasing decentralization of industrial activities, by a decrease of population and also by increasing social problems, as indicated in a recent book of the Torino 2011 AISRe congress published in the AISRe series by Franco Angeli Editor. On the contrary, many cities especially in the regions of Center and South Italy are not characterized by an industrial heritage and have many similarities with other Mediterranean cities in Arab speaking cities. In all cities a crucial problem is to create new jobs for the workers dismissed by the old large industrial plants which are closing and to promote a specialization in the more modern knowledge intensive private and public services and a reconversion from the traditional activities of the retail trade sector.

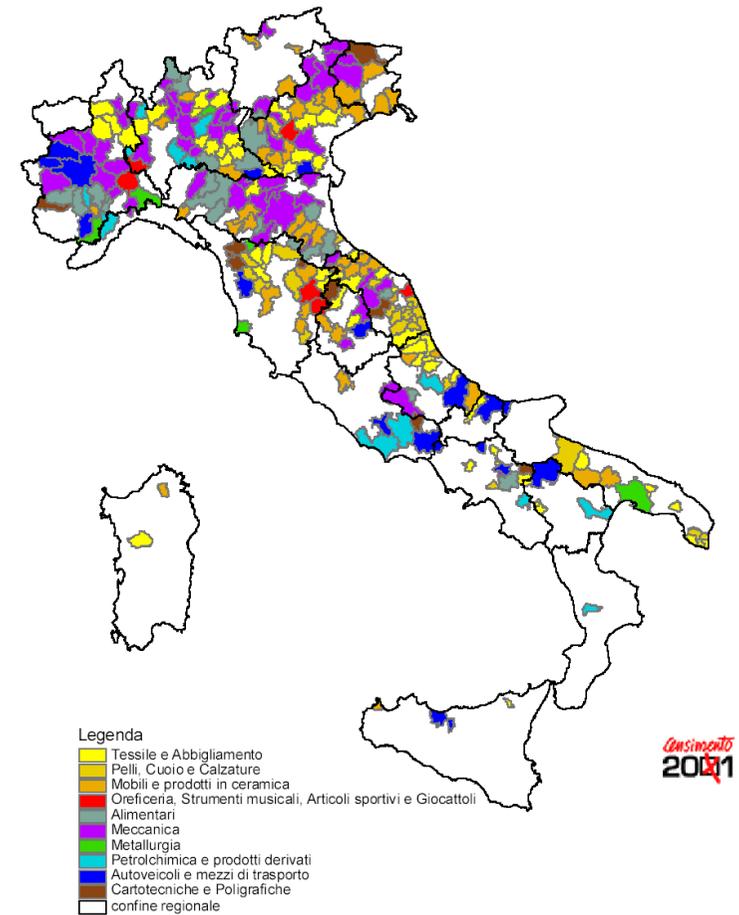
The rural and mountain areas of the Alps and the Apennines have been characterized by depopulation and emigration toward the urban areas during the 50'ties and 60'ties. Instead, they are rediscovering an autonomous economic and social development related to tourism and other modern activities during the at least the last two decades. The development in these areas and especially of the rural areas and mountain areas in Apennines and in South Italy can be rather similar to those of the interior areas in Arab countries. The transformation of the rural areas close to the urban centers and the conflicts between agricultural and residential/tourist or industrial use may also be similar. Various Italian studies on these issues are published in a recent book of the AISRe series by Franco Angeli Editor (in print).

Fig. 2.2 – Sistemi locali del lavoro per sotto-classe di specializzazione



Fonte: elaborazioni su dati Istat, 8° Censimento generale dell'industria e dei servizi

cartogramma 10: SLL 2001 – Manifatturieri per tipologia produttiva



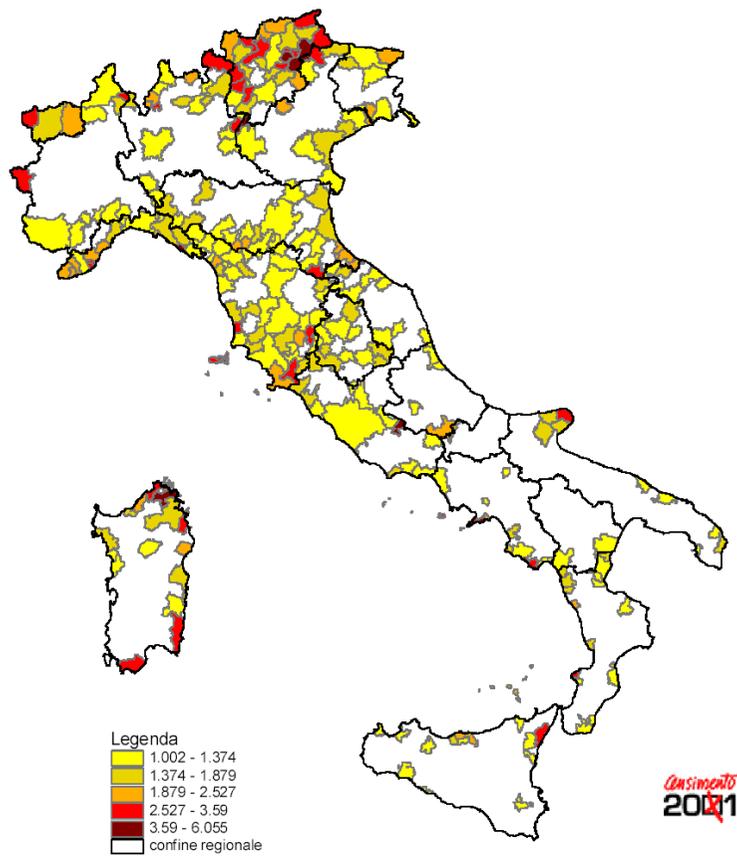
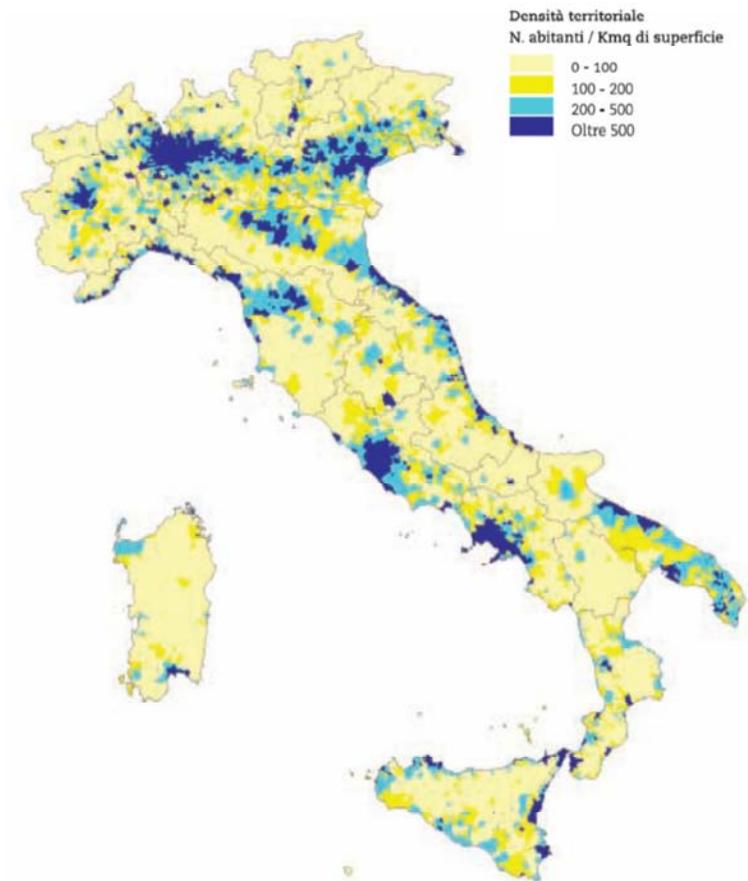


Figura 1 La densità territoriale dei comuni italiani, 2008



Fonte: elaborazione Cittalia su dati Istat (2008)

**Tabella 2 La densità territoriale dei comuni italiani, per classe di ampiezza demografica, 2008**

Classe di ampiezza dei Comuni	Superficie territoriale Km <sup>2</sup>	Popolazione residente 2008		Densità territoriale (Ab./Km <sup>2</sup> )
		Valore assoluto	Percentuale	
0 - 1.999	83.882	3.394.918	6%	40
2.000 - 4.999	78.944	6.977.613	12%	88
5.000 - 9.999	50.451	8.468.283	14%	168
10.000 - 19.999	35.809	9.476.722	16%	265
20.000 - 59.999	32.923	13.419.578	22%	408
60.000 - 249.999	16.024	9.251.597	15%	577
> 250.000	3.303	9.056.357	15%	2.742
<b>ITALIA</b>	<b>301.336</b>	<b>60.045.068</b>	<b>100%</b>	<b>199</b>

Fonte: elaborazione Cittalia su dati Istat (2008)

**Tabella 57 Il numero degli addetti nelle unità locali nei comuni italiani, per classe demografica, 2006**

Classi di ampiezza dei Comuni	Numero di Addetti alle Unità Locali					Totale
	Industria in senso stretto	Costruzioni	Commercio	Alberghi e ristoranti	Altri servizi	
0 - 1.999	-	-	-	-	-	-
2.000 - 4.999	-	-	-	-	-	-
5.000 - 9.999	788.965	262.729	386.129	130.880	457.409	2.026.113
10.000 - 19.999	934.985	304.131	534.779	166.789	683.633	2.624.316
20.000 - 59.999	984.233	384.516	818.123	212.937	1.221.567	3.621.376
60.000 - 249.999	601.085	278.955	640.679	172.300	1.306.434	2.999.454
> 250.000	408.746	233.566	628.217	219.681	1.835.074	3.325.283
<b>ITALIA</b>	<b>3.718.015</b>	<b>1.463.897</b>	<b>3.007.928</b>	<b>902.587</b>	<b>5.504.116</b>	<b>14.596.543</b>

Fonte: elaborazione Cittalia su dati Istat-ASIA (2006)

Source: [http://www.cittalia.it/images/file/COMUNI\\_ITALIANI10\\_1.pdf](http://www.cittalia.it/images/file/COMUNI_ITALIANI10_1.pdf)

### 3. A network approach in the analysis of regional growth

Differently from a traditional geographic perspective, the literature on Regional Science indicates that the spatial structure is not the result of the impact or the localization of the national economic growth on the territory, but rather that spatial or regional factors are important factors in determining the size and patterns of national economic growth.

Thus regional and urban policies and strategies have a great importance in promoting national economic growth and the regions and cities should have a greater role in determining the national development strategy.

From a methodological perspective it is clearly a challenge to illustrate that the theories and the policy strategies which have been developed in Europe during the last fifty years are relevant not only for explaining and stimulating growth in a wide variety of European regions, from large metropolis such as London or Paris to rural areas in Portugal or Greece, but also as a reference guide for designing the development policies in the urban, industrial and rural areas of South Mediterranean countries, such as Egypt, Tunisia and Morocco.

Moreover, the analysis of new types of regions and countries and the comparison with the most similar cases in Europe lead to adapt previous theoretical approaches and to extend them into new specific fields.

**According to a traditional demand model (Keynesian and planning approach),** the economic growth is driven by the competitiveness and the expansion of the production capacity in the export sectors, the attraction of foreign investments or by the increase of the internal demand driven by an increase of public services and public investments. To this purpose the government should expand public expenditure and increase the money supply and decrease interest rates.

**According to a supply model (neoliberal approach),** the economic growth proceeds spontaneously according to the increase of productivity and government should only remove the constraints which may be represented by excessive public deficit, public debt and expenditure on interest on public debt, imbalance in the external trade and amount of foreign reserves, and contain the inflation rate and adjust the exchange rate.

**A regional and industrial model (local networks approach)** is based on a local endogenous approach, which differs from the previous aggregated approaches because it considers the economy and society as a complex system made by many actors linked by network relations.

In fact according to many contributions in Regional Science research, local development has an endogenous character or it is not only determined by the exports of local productions, the immigration of people with advanced competences or the capability to attract investments and firms from the other regions, but also by the capability to promote the full use of the local, human and productive, resources and the synergic relationships between the various sectors and the various local actors, institutions and development factors existing within a given "local production system".

According to this "model of territorial networks" (Cappellin and Wink, 2009) a local production system is made by actors, firms and institutions which interact between themselves, reciprocally adapt and learn from each other. Economic growth is linked to change and innovation. Thus it is linked to the shift of employment from the less productive sectors to the more modern sectors, to the birth of more competitive firms and to the closure of old and inefficient firms within each sector and also from the reallocation of the internal material and immaterial resources within the firms

from the less efficient processes and from the less profitable products to the more innovative processes and products.

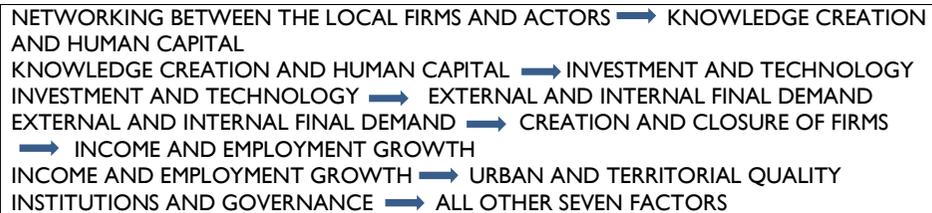
Three related conceptual tools are crucial in this “**system or local network approach**” to economic development:

- a) cognitive and institutional proximity between the actors;
- b) territory and infrastructures, as the physical support space of the economic and social system;
- c) institutions, social capital and governance of the relationships between the actors.

In particular, regional income and employment growth is determined by seven factors:

- 1) the stimulus coming from the external openness and the foreign demand as also from the changes in the internal final demand,
- 2) the growth of the production capacity linked to the use of new technologies, the innovation and the investment,
- 3) the process of knowledge creation and learning which improve the human and organizational capital in the local firms,
- 4) the process of firm turnover of the firms or the creation of new firms and the closure of old firms,
- 5) the network relations between the local firms and actors, due to flows of technological and organizational information, capital and people,
- 6) the characteristics of the regional territory and of the regional urban system, the structure of the transport networks and the urban and territorial quality,
- 7) the institutions, the social capital and the forms of governance of the relationships between the various local private and public actors.

The analysis of regional development in Europe indicate that these seven factors interact between them and lead to a continuous increase of employment, production and also of the quality of life in the area.



In fact, an increase of the network relations between the local firms leads to the development of learning processes by the workers and entrepreneurs and to the creation of new knowledge. That promotes innovation, the change of technologies and new investments in the firms.

That increases and attractiveness of the local economy and the growth of exports and the attraction of foreign capitals as also of external entrepreneurial capabilities.

Networking between the local firms and actors stimulates the growth of new firms in new productions and these firms substitute the firms which naturally close being specialized in obsolete productions.

**Table I**

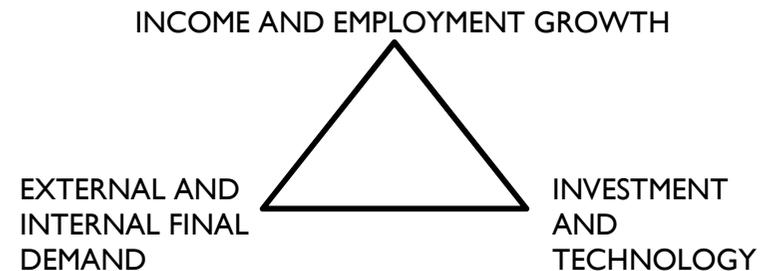
**THREE MODELS OF DEVELOPMENT**

**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**

Income and employment growth is determined by 7 factors:

- external and internal final demand,
- investment and technology,
- knowledge creation and human capital,
- creation and closure of firms,
- networking between the local firms and actors,
- urban and territorial quality,
- institutions and governance.

The economic development of the region modifies the structure of the territory, determines the sprawl of the urban centers and stimulates the improvement of the transport infrastructures, but it may also have negative effects on the natural environment and on the quality of life in the urban areas.

Finally, local policies and the governance of the relations between the local actors should not only positively intervene on the individual factors indicated above, but they should also adjust the relationships between these factors in order to activate a virtuous cycle of development.

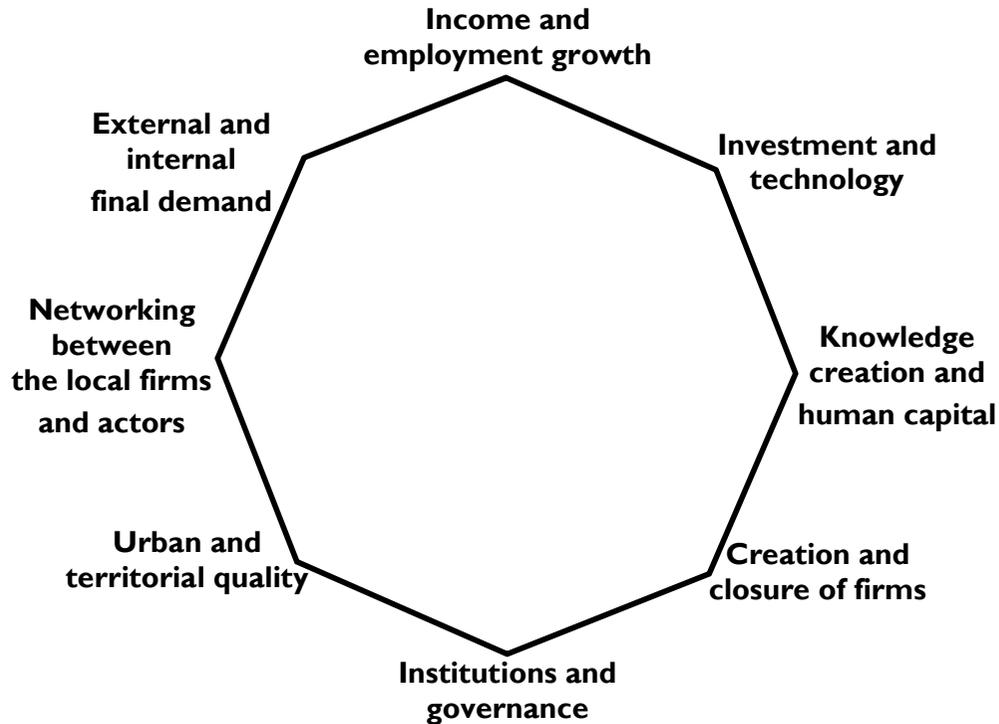


Figure 1  
The local network model of regional development  
Source: Cappellin and Wink, 2009

In particular, the first three variables in this local network model of regional development:

- a) income and employment growth,
- b) external and internal final demand,
- c) investment and technology.

are considered also in the more traditional demand model and in the supply model, which usually highlights the following relationships.

First, according to a demand perspective, investment and innovation determine international competitiveness and exports and these latter determine income and employment growth, which on their turn stimulate investments and innovation.

On the other hand, according to a supply perspective, investment and innovation increase production capacity and employment and that leads to an increase of exports in perfectly competitive markets and to the increase of foreign reserves and flows of international capitals which lead to greater investments and innovation.

While traditional theories have focused on the role of exports as the driver of regional growth, the internal demand, such as investment in housing and infrastructure or personal consumption, can also be a crucial autonomous factor of employment and GDP growth especially in large urban areas (Cappellin 2012b).

In fact, the analysis of economic growth in the Arab countries clearly indicates the importance of external and internal demand. The flows coming from outside, such as the increase of international tourism or the income remittances of emigrants in European countries have a clear importance as factors leading to local development. The exports of agricultural goods and of manufacturing products are also a driver of regional economic growth. Moreover, it is important to promote the development of many modern small and medium size firms (SMEs) capable to compete in the international markets.

However, also the importance of internal demand is increasing, as the growth of population and the growth of the average percapita income lead to an increasingly greater local market, especially in the largest cities, and to a greater demand for an wide variety of consumer goods, from soap to air conditioning, and also of modern personal services, such as entertainment, beauty, sports or health. That leads to the creation of new firms and of new jobs. In this perspective, also an increase of the demand and supply of public services, such as transport, education and health, may represent a driver of national growth, although it has to be financed by an appropriate increase of government taxes. Thus, the individual and social needs for a better quality of life may be a stimulus for the development of new productions and employment.

However, what makes the regional/industrial model different from the two aggregated model of demand driven or supply driven growth are the other five variables indicated in the figure 1: knowledge creation and human capital, creation and closure of firms, networking between the local firms and actors, urban and territorial quality, governance and institutions. These variables are especially important in the growth of the urban, industrial and rural areas in the European countries and also in the Arab countries.

<b>KNOWLEDGE CREATION AND HUMAN CAPITAL</b>	
➡	CREATION AND CLOSURE OF FIRMS
➡	INVESTMENT AND TECHNOLOGY
➡	NETWORKING BETWEEN THE LOCAL FIRMS AND ACTORS
➡	EXTERNAL AND INTERNAL FINAL DEMAND
➡	URBAN AND TERRITORIAL QUALITY

**First, the knowledge creation and the human capital** is the key factor in determining the birth of new firms and the growth of the existing firms, as also in hindering the closure of old firms.

Often the growth of firms is not limited by the constraints of financial funds for investment but by the lack of knowledge of the entrepreneurs and the workers, as that hinders the adoption of modern technology, which would insure the profitability of investments.

In that perspective, knowledge creation and the human capital play a crucial role in the transformation of the firms in the informal economy which may be considered as the incubator of modern activities. That requires a gradual learning processes and the complex combination of tacit with codified knowledge and of artistic, organizational, engineering and scientific knowledge.

Knowledge and learning are the result and also stimulate the networking between the local firms and actors in the framework of "innovation networks", as the increase of the capabilities of the external suppliers leads firms to increase the outsourcing of the non strategic activities to the former. That leads to a continuous diversification and growth of the local economy, as in the Marshall's districts (Cappellin, 2012).

Knowledge creation and learning are also important in the continuous changes of the preferences and needs of the final users and citizens and that may stimulate the growth of new firms new public services, such as health, culture, leisure services.

Finally, knowledge creation and learning are important in the management of many public services and in the design of public policies and that has a positive impact on urban and territorial quality.

**CREATION AND CLOSURE OF FIRMS**

- ➡ INCOME AND EMPLOYMENT GROWTH
- ➡ INVESTMENT AND TECHNOLOGY
- ➡ NETWORKING BETWEEN THE LOCAL FIRMS AND ACTORS

**Second, the creation and closure or turnover of firms**, is crucial in order to allow an increase of employment and a decrease of unemployment rates between the youths. The creation of new firms is occurring first of all in the informal economy and then these firms gradually move into the formal economy, as they become more efficient and adopt technological and organizational innovation.

The creation of new more productive firms and the closure of less productive firms is stimulating the adoption of innovation and of new technologies.

The creation of new firms is also related to the increasing outsourcing of specific production phases from existing firms, to the diversification of the production systems, and to the creation of network relationships between the firms.

**NETWORKING BETWEEN THE LOCAL FIRMS AND ACTORS**

- ➡ KNOWLEDGE CREATION AND HUMAN CAPITAL
- ➡ EXTERNAL AND INTERNAL FINAL DEMAND
- ➡ URBAN AND TERRITORIAL QUALITY
- ➡ CREATION AND CLOSURE OF FIRMS

**Third, the networking between the local firms and actors** is leading to various forms of interactive learning and creation of new knowledge, which is the prerequisite for innovation and adoption of new technologies within the firms.

The networking between the local firms and actors is related to the development of the "social capital" or the "relational capital", such as various forms of associations, and it increases the social integration and it decreases social disparities. These associations are crucial for the management of "common goods", such as water and green areas, and also for the production of specific "club goods", such as private health and education services. That is especially important as there is a continuous evolution of the social needs of the citizens and these types of goods are important in order to tackle the problems of urban poverty and unemployment.

The networking between people is also leading to changes in the final demand by the citizens and by the firms. In fact, major factors of economic and also political changes are the changes of customs by the people and especially those of young people. The changes of the way of life and the request of a greater political freedom are the result of the impact by international tourism, the emigration to European countries and the diffusion of international TV, movies, music and Internet, as also by the increasing university education among the youths and the woman.

The process of networking and the combination of market and non-market relationships allow the gradual development of new services and soft infrastructures, which were initially produced within the family or the communities and then evolve into specialized market activities.

The networking between the actors requires and stimulates the development of public services and of modern bank and credit institutions, which perform the role of soft or immaterial infrastructures in the relationships between the local actors.

**URBAN AND TERRITORIAL QUALITY**

- ➡ EXTERNAL AND INTERNAL FINAL DEMAND
- ➡ NETWORKING BETWEEN THE LOCAL FIRMS AND ACTORS
- ➡ CREATION AND CLOSURE OF FIRMS

**Fourth, an increase of urban and territorial infrastructures**, such as: energy production, ports and highways, and also housing, hospitals and schools, is leading to a greater public expenditures and this latter stimulates production and employment in the public sector and in the economy.

An increase of urban and territorial infrastructures facilitates the cohesion among actors, increases the networking between the local actors and it decreases social inequalities and improves the quality of life.

An increase of urban and territorial infrastructures decreases the agglomeration diseconomies, allows the availability of industrial areas and it facilitates the formation of new firms.

An increase of urban and territorial infrastructures can be financed by greater taxes on income and employment growth but it should also be complemented by the design of more effective taxes on the huge and increasing land rents which are accruing to the real estate sector and determine huge wealth and income disparities, but may also become a key source of infrastructure financing.

#### 4. Three different method of political coordination

Regional analysis and policies are not only about disparities in economic development and about territorial, transport and land use planning, but regional analysis and policies are also about values, traditions, political participation, institutions, public finances and self-government.

As indicated above, innovation requires flexible forms of cooperation between many different private and public, regional and international actors, such as large firms, SMEs suppliers, knowledge intensive services, higher education and research institutions, financial intermediaries, public administration and many other partners such as professional association and media. Innovation requires the combination of different competencies within a process of collective learning, as firms must cooperate to increase and diversify their knowledge base (Cappellin and Wink, 2009).

However, economic development and the process of globalization are leading both in emerging countries and in developed economies to an increasing interdependence and also to increasing disparities or disequilibria. That may create new types of conflicts between geographical areas, sectors, firms and social groups within the individual countries.

The fragmentation of a modern knowledge economy and the pervasive conflicts between various interest groups, the existence of bottlenecks, rents and income and power disparities within the society require a new form of regulation: i.e. multi-level governance, and new institutional instruments in regional, industrial and innovation policies.

Table 1: Conflicts and the governance model

THE FREE MARKET MODEL LEADS TO THE CONFLICT BETWEEN WINNER		THE GOVERNANCE MODEL POINTS OUT A THIRD WAY
Large multinational firms	Small local firms	Intermediate networked firms
High tech sectors	Low technology sectors	Medium technology sectors
Capital	Labor	Capital-labor consensus
Unbalanced development	Balanced development	Specialization and integration
Rich managers	Unemployed workers	Middle class
Corporate collusions	Individual users	Producer-consumer interaction
Large metropolis	Rural areas	Medium size cities
Skyscrapers	Desolate neighborhoods	Urban living quality
Production capacity	Environmental quality	Sustainable development
Private sector	Public sector	Public-private partnership and intermediate institutions
Free market	Planning	Governance

Source: Cappellin, 2011

As indicated in table 1, conflicts are arising between large and small firms, between new and traditional sectors, between fast developing and backward regions, between urban and rural areas, between modern/central and desolate/peripheral city neighborhoods, between owner of the land

and public authorities and construction companies and final tenants, between capital and labour, between managers and workers, between production growth and environmental sustainability, between private and public sector. As indicated by the recent evolution in the Arab countries, conflicts may be due to different ideologies, such as those between advocates of the free market and of the planning political models, or conflicts may due to different cultural identities, such as those of islamists and of more secular-minded groups or between people which want preserve traditional values and people who want a change.

In fact, similar to the transition countries in Eastern Europe from communism to capitalism, the transition in the Arab countries from an autarchic and dirigist model based on State planning to a market system and the privatization of public properties, which have been sold cheaply to people close to political clans and technocrat elites, has led to the development of a “crony capitalism” and to an increase of corruption and income and wealth disparities. That has proven to be inadequate in front of the changes of the individual expectations and needs in an increasingly international open economy and it has led to a conflict between a great part of the citizens and the traditional elites in the national administration, the military and in the business community.

Political crisis stalls the process of economic development. On the other hand, economic development is a condition for political stability. However, economic development requires a new form of governance, more suitable to a modern economy and society.

In the Arab countries, the transition to democracy implies that regional and municipal governments will be elected and empowered rather than being appointed by the national government. In a “top down” model, local and regional policies were decided according to separate sectoral lines by the national ministries, while local and regional elected institutions could better insure in the future the intersectoral interdependence between sectoral policies within the same specific territory.

As at the national level parties are separated according ideological lines, a decentralization process and the empowerment of local communities facilitates the networking between the various local actors and the gradual increase of the reciprocal trust and it decreases the ideological conflicts. In fact, within these association and organizations, such as schools, banks, chamber of commerce and trade unions, the debate is about technical issues related to the real economy and it is more simple to find a common ground at the local level where concrete problems are shared by all actors.

Thus, a decentralization process and the empowerment of local communities stimulates the process of institutional building and the development of a modern system of intermediate institutions.

Moreover, nationalism has hindered the decentralization of powers to regional and local governments due to the danger of separatist movements and the existence of border conflicts with neighboring states. Thus, the empowerment of regional and local governments may lead to the development of schemes of interregional transnational cooperation with neighboring states.

Conflicts can be managed by adopting a different model of regulation of the relationships between the economic actors, called governance, based on interaction and agreement. In general, there are three models for solving conflicts. The first model is, through authority and submission, in order to establish order or “harmony”. The second is, through an open conflict, in order to eliminate the adversary or conquer its territory, such as in the free market solution. The third model, which we may call “governance”, is to find the conditions for a tighter or new interaction.

The approach of governance implies a coordinated action aiming to common aims and using dedicated resources by the various partners. In synthesis, we may define governance as a model of

regulation of the relationships between the firms and the actors belonging to a network, based on interdependent adjustments decided through negotiation procedures (Cappellin and Wink, 2009). Governance refers to the non hierarchical model of governing characterized by the involvement of non state actors in the formulation, decision making and implementation of public policies (Kaiser and Prange, 2004: quoted in Cappellin, 2009). Governance concept addresses the need to manage interdependent activities of a variety of actors vertically across different territorial levels as well as horizontally across different decision-making arenas (Héritier, 2002: quoted in Cappellin, 2009).

Table 2: Forms of organization and regulation of economic relationships

	<b>Government</b>	<b>Free market</b>	<b>Governance</b>
1. Principle	Authority	Competition	Negotiation
2. Result aimed	Order	Equilibrium	Partnership
3. Information provided	Regulations	Prices	Contracts
4. Instruments of organization	Control and adaptation	Price taking	Bargaining and leadership
5. Individual motivation and behaviour	Respect of authority	Autonomy, exit or conflict	Trust and respect of agreements
6. Complexity	Hierarchy	Individualism	Interdependence
7. Factor of efficiency	Economies of scale	Perfect mobility and flexibility	Transaction costs and adjustment costs
8. Interdependence	Vertical integration	No external economies	External economies
9. Number of actors	Individual actor	Infinite number	Limited number
10. Level of integration	Maximum integration	Minimum integration	Intermediate integration
11. Field of action	Sectors	Markets	Policy networks
12. Problems addressed	Authoritarianism	Monopoly and price collusion	Conflicts of interest and lock-in effect
13. Corrections to problems	Democracy	Antitrust policy	Specialization and dynamic coordination
14. Political Ideal	Egalité	Liberté	Fraternité
15. Juridical base	Civil law	Common law	Selfregulation and subsidiarity
16. Space of relevance	Any State and Corporations	Liberal Market Economies	Coordinated Market Economies
17. Goods	Scale intensive goods	Commodities	Specialized goods
18. Factor of competitiveness	Economies of scale	Lower prices	Time advantage
19. Type of innovation	Radical innovation	Incremental innovation	Systemic innovation
20. Knowledge base	Basic research	Codified knowledge	Tacit knowledge
21. Time framework	Static	Static	Dynamic

Source: Cappellin, 2009

Free market, governance and government are three different forms of regulation of economic relationships characterized by different levels of integration. As indicated in table 2, the model of governance is based on partnership and negotiation and it represents a logically coherent model, which is distinct with respect to the traditional models of economic regulation, such as

hierarchy/planning and free market/competition. On the contrary, the planning model is based on the principle of authority. Finally, the free market model is based on the principle of competition and survival of the fittest.

In particular, a rather diversified typology of institutions play a leading role in defining a long term strategy of innovation and development within the different regions (Cappellin and Wink 2009). These institutions represent the “social capital” of these regions and play the role of immaterial infrastructures, which organize the knowledge and material flows and manage conflicts and cooperation between various firms and local actors. These “intermediate” or “bridging” institutions, capable to design and organize strategic joint actions, can be for example: specialized schools, international calls, joint industrial projects, strategic planning contracts with large firms, cooperative research projects between SMEs, regional innovative start-up funds, joint R&D projects, non governmental research institutions or foundations, regional technological parks and centres, local stakeholders coordination tables, territorial pacts with local actors, RIS - regional innovation strategies, national programs for R&D and innovation networks, territorial knowledge management, networks of research centres of excellence and regional and national networks of competence centres.

The decentralization from national State to the regions and municipalities of the responsibility to promote economic development the Arab countries can't replicate at the local level the same bureaucratic models of top-down decision making, which are prevailing in national ministries, and it is only justified when it is accompanied by a change and the adoption of a modern governance approach, as the lack of a modern governance represents an obstacle to economic development

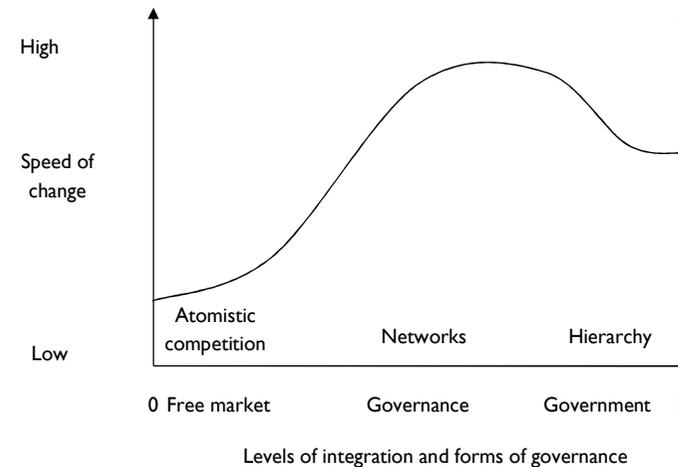


Figure 7: The relationship between greater integration and faster change

Source: Cappellin and Wink, 2009

The various actors should invest in the creation or strengthening of soft and hard infrastructures and routines linking them. That makes the relationships between firms more intense or it increases the speed of the flows between the firms. The existence of a well-developed institutional system, made by various structures and infrastructures facilitates the relationships and decrease the transaction

costs. In general, rules, procedures, organizational forms, norms, routines constitute the foundation of organizational behaviour.

Governance, partnership and intermediate institutions may promote an higher speed of change, which is crucial in leading to an higher speed of change or promoting innovation and competitiveness. They decrease the conflicts and promote cooperation, decrease the transaction costs and the adjustment costs and they thus increase the speed of change (Cappellin and Wink, 2009). As indicated in figure 7, the liberal free market approach, which implies atomistic or autonomous decisions by the individual firms and the role of the "invisible hand" of the market, represents the lowest level of integration. On the contrary, the hierarchy model, where the relationships between the actors are very tight and have to comply with the indications of a superior power, which may be the state or the managers in a large integrated company, represents the highest level of integration. Thus, the networks of firms, which are highly specialized in different specific production phases, represent an intermediate case of integration, based on a principle of negotiation, consensus and cooperation.

Networks may represent a form of organization or a governance structure, which is more effective in promoting creativity or knowledge creation, than both a pure competitive market and a hierarchical organization. Creativity, continuous change and innovation require interactive learning processes between many different actors, and the cooperation between various firms is more efficient than the two extreme situations of the isolation of the individual firms competing one with the others or of the integration of all production into a large firm, where the relationships between actors are regulated by a central authority (Cappellin and Wink, 2009).

The alternative to a free and unregulated market is not represented by state capitalism or dirigism, but rather by a modern system of governance based on:

- the specialization and division of labour between the various actors, in order to prevent conflict of interests and to insure a system of checks and balances,
- transparent public negotiations and agreements based on reciprocal recognition and trust and allowing the control by consumers and citizens,
- an active role of public institutions as a facilitators and leaders in the design of medium term projects.

The governance approach highlights a new role of public institutions, which is similar to the role of public institutions in the partnership model currently adopted by the European Regional Policy. The concept of governance it is also tightly linked to the concept of "social capital" and of "intermediate institutions" which characterize countries, such as Italy, Germany, France, which have been defined by Hall and Soskice as "coordinated market economies" (Cappellin and Wink, 2009). However, even in the Anglo-Saxon tradition of the "liberal market economies", such as United States and United Kingdom, private non profit organizations are key components of self-government at the local and regional level.

The principles of vertical subsidiarity, which delegates the power to the lowest level of decision which may be efficient, and the principle of horizontal subsidiary, which allows and even asks to the various organizations of individual people to operate autonomously in their respective field of action, should be tempered by the principle of partnership or cooperation, as all autonomous organizations should jointly manage their inevitable interdependence.

According to a network model of regional development, the role of the state and of regional policy is to stimulate the seven drivers of development, which have been indicated above, and to remove the bottlenecks which could hinder the positive inter-dependencies between thm. Moreover, the

public institutions should manage the relationships between the local actors and the potential conflicts.

Moreover, the role of the State is different in a planning model, in a free market and in a governance model. The role of state in a planning model is to dictate specific solutions or policies to the private actors and to supply public goods or manage state owned companies. Second, the role of the State in a freemarket model is that to define and enforce the property rights and to insure the competition between the private actors. Finally, the role of the State in a network or governance model is to exercise a good leadership or to steer the other actors.

In a governance model the State should perform different roles in the different temporal phases of a policy. First, it should enlarge the temporal perspective of the actors and promote the idea of a project. It should then identify the relevant actors (stakeholders) with complementary competences. Then, it should coordinate these actors and insure a circulation of correct information. Finally, it should define a division of labor between them, it should facilitate the access to the capital market for the financing of the projects, solve the conflicts between the stakeholders and other various actors and promote a reciprocal thrust and respect of the agreements.

Governance is an approach to the industrial policy which is more suitable in order to steer or manage a modern capitalist system and the knowledge and innovation networks which characterize this latter.

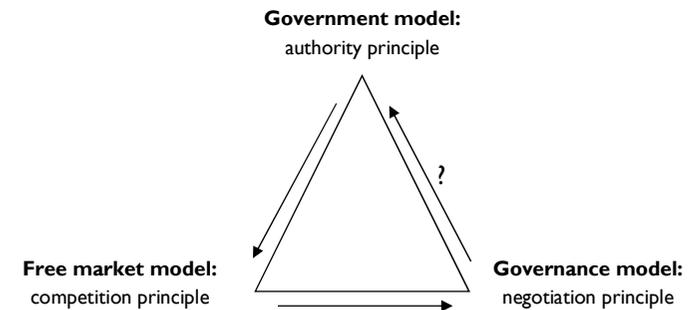


Figure 8: The evolution of the models of regulation

Source: Cappellin, 2011

The emphasis within the individual countries may evolve from one form to another form of regulation of economic relations, as indicated in Figure 8. In fact, after the '70ties the hierarchical planning model in the European countries has been abandoned in favour of a competitive model, inspired by neo-liberal ideologies. Then, after the 90'ties, the increasing complexity of the society and the transition to the model of the "knowledge economy" has led to the a tighter interaction between the various collective stakeholders, and that has made more appropriate the governance model. Now, the world economic crisis, the need for supra-national coordination of monetary, trade and environment policies and the need of alliances between firms and governments in the development of new technologies and of health and other social services seems to call for a greater role of the national governments.

## 5. Conclusions

The aim of this paper is to illustrate two theoretical concepts, which have been elaborated in the recent Italian and European literature on Regional Science: a) the model of local networks in regional development and b) the model of governance in the organization of the relationships between the local public and private actors, and to highlight the usefulness of these concepts also for the analysis and policies in the regions and cities of Arab countries.

The structure of the territory changes during the various development phases of the national economy and urban areas, industrial clusters and of rural/tourist areas are undergoing similar challenges in the regions of the Mediterranean basin.

The paper illustrates the differences between the demand driven model of the Keynesian and planning approach, the supply driven model of the neoliberal approach and the regional and industrial model of the territorial networks approach. This latter differs from the previous aggregated approaches because it considers the economy and society as a complex system made by many actors linked by network relations. In fact, according to the “model of territorial networks” (Cappellin and Wink, 2009) a local production system is made by actors, firms and institutions which interact between themselves, reciprocally adapt and learn from each other.

Three related conceptual tools are crucial in this model: a) cognitive and institutional proximity between the actors; b) territory and infrastructures, as the physical support space of the economic and social system; c) institutions, social capital and governance of the relationships between the actors.

In particular, regional income and employment growth is determined by seven factors: external and internal final demand, investment and technology, knowledge creation and human capital, creation and closure of firms, networking between the local firms and actors, urban and territorial quality, institutions and governance. The analysis of regional development in Europe indicates that these seven factors interact between them and lead to a continuous increase of employment, production and also of the quality of life in the area. The same variables are relevant to explain the development patterns of urban, industrial and rural areas in the Arab countries, while the relationships between these variables may be different in each type of region. Clearly, the analysis of new types of regions and countries and the comparison with the most similar cases in Europe will lead to adapt previous theoretical approaches and to extend them into new specific fields.

Economic development and the process of globalization are leading both in emerging countries and in developed economies to an increasing interdependence and also to increasing disparities or disequilibria. That may create new types of conflicts between geographical areas, sectors, firms and social groups within the individual countries.

Free market, governance and government are three different forms of regulation of economic relationships characterized by different levels of integration. Governance, partnership and intermediate institutions may promote an higher speed of change, which is crucial in leading to an higher speed of change or promoting innovation and competitiveness. The role of the State is different in a planning model, in a free market and in a governance model.

The transition to democracy in the Arab countries implies that regional and municipal governments will be elected and empowered rather than being appointed by the national government. In particular, a decentralization process and the empowerment of local communities stimulates the process of institutional building and the development of a modern system of intermediate

institutions. While in a “top down” model, local and regional policies were decided according to separate sectoral lines by the national ministries, while local and regional elected institutions could better insure in the future the intersectoral interdependence between sectoral policies within the same specific territory.

However, the decentralization from state to the regions and municipalities of the responsibility to promote economic development should not replicate at the local level the same bureaucratic models of top-down decision making, which are prevailing in national ministries, and it is only justified when it accompanied by a change and the adoption of a modern governance approach, as the lack of a modern governance represents an obstacle to economic development

## 6. References

<http://riccardocappellin.ilcannocchiale.it/>

Cappellin, R. and Wink, R. (2009), *International Knowledge and Innovation Networks: Knowledge Creation and Innovation in Medium Technology Clusters*. Edward Elgar Publishing, Cheltenham.

[http://books.google.it/books?id=1BpcJGekx18C&printsec=frontcover&source=gbs\\_navlinks\\_s#v=onepage&q=&f=false](http://books.google.it/books?id=1BpcJGekx18C&printsec=frontcover&source=gbs_navlinks_s#v=onepage&q=&f=false)

Cappellin, R. (2010c), The governance of regional knowledge networks, *Scienze Regionali*, 9, 3, 5-42.

[https://e6ed58b-a-62cb3a1a-s-sites.googlegroups.com/site/riccardocappellin/home/SR2010-03CappellinIKnowledgenetworks.pdf?attachauth=ANoY7cq7Hy-NZUhdhbxRq8jEqaEEF0bM873eOUdLeMAAvoVBb\\_hVaGHxzo89Ch6Osq\\_igKxFeWtUKgO80RzzEjiniGH59wI43wlCdxngZFDimr6RbG5ZeOmmNc24MQqbSNzE\\_wRyqQPTiLbDIBUg282LAXdKdWc\\_hcoQLdyFvKve311\\_QzFrL2E883pIKqW\\_djyCG2IzxspsI5wax5iv\\_gboxRD3gzj2XaUkLjoYDlem\\_n pB-Th\\_6jZWqAQqFOR2ktuQIMZ8fBh&attredirects=0](https://e6ed58b-a-62cb3a1a-s-sites.googlegroups.com/site/riccardocappellin/home/SR2010-03CappellinIKnowledgenetworks.pdf?attachauth=ANoY7cq7Hy-NZUhdhbxRq8jEqaEEF0bM873eOUdLeMAAvoVBb_hVaGHxzo89Ch6Osq_igKxFeWtUKgO80RzzEjiniGH59wI43wlCdxngZFDimr6RbG5ZeOmmNc24MQqbSNzE_wRyqQPTiLbDIBUg282LAXdKdWc_hcoQLdyFvKve311_QzFrL2E883pIKqW_djyCG2IzxspsI5wax5iv_gboxRD3gzj2XaUkLjoYDlem_n pB-Th_6jZWqAQqFOR2ktuQIMZ8fBh&attredirects=0)

Cappellin, R. (2011), The governance of conflicts and partnerships in knowledge and innovation networks, in M. Chatterji, D. Gopal and S. Singh (eds.), *Governance, development and conflict*, Emerald Group Publishing Lmt, Bingley UK, ISBN 978-0-85724-895-4; 1572-8323 (Series), 31-70.

<https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbmxyaWNjYXJkb2NhcHBibGxpbnxneDoIMGQwZTk4MDkINTMIZDU3>

Cappellin, R. (2012), Knowledge Creation and Innovation in Medium Technology Clusters, Bo C., Chatterji M., Chaoyan, H. (eds.), in *Cooperation for a Peaceful and Sustainable World Part I* (Contributions to Conflict Management, Peace Economics and Development, Volume 20), Emerald Group Publishing Limited, 185-216

<https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbmxyaWNjYXJkb2NhcHBibGxpbnxneDoIMGQwZTk4MDkINTMIZDU3>

Cappellin, R. (2012), Growth in post-industrial cities: an endogenous model, in Cappellin, R., Ferlaino, F and Rizzi, P. (eds.), *La città nell'economia della conoscenza*, Milano, Franco Angeli, 29-49.

<https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbmxyaWNjYXJkb2NhcHBibGxpbnxneDo0ZDkzOTlkZGZmOTNkZDI2>

## Abstract

The aim of this paper is to illustrate two theoretical concepts, which have been elaborated in the recent Italian and European literature on Regional Science: a) the model of local networks in regional development and b) the model of governance in the organization of the relationships between the local public and private actors, and to highlight the usefulness of these concepts also for the analysis and policies in the regions and cities of Arab countries. The paper illustrates the differences between the demand driven model of the Keynesian and planning approach, the supply driven model of the neoliberal approach and the regional and industrial model of the territorial networks approach. Free market, governance and government are three different forms of regulation of economic relationships characterized by different levels of integration. Governance, partnership and intermediate institutions may promote an higher speed of change, which is crucial in leading to an higher speed of change or promoting innovation and competitiveness. The role of the State is different in a planning model, in a free market and in a governance model.

## MAIN STATISTICS

Country or area	Year	Population	%	Gross Domestic Product in \$ at constant 2005 prices	%	Per capita GDP	%
Brazil	2000	174.425.387		768.855.134.605		4.408	
Brazil	2011	196.655.014	12,74	1.126.413.127.228	46,51	5.728	29,94
China, People's Republic of	2000	1.246.840.065		1.433.850.227.179		1.150	
China, People's Republic of	2011	1.324.353.324	6,22	4.236.964.349.757	195,50	3.199	178,20
Egypt	2000	67.648.419		78.834.392.557		1.165	
Egypt	2011	82.536.770	22,01	129.707.365.977	64,53	1.572	34,85
Germany	2000	82.349.027		2.685.202.556.832		32.608	
Germany	2011	82.162.512	0,23	3.048.688.305.228	13,54	37.106	13,79
India	2000	1.053.898.107		598.072.956.922		567	
India	2011	1.241.491.960	17,80	1.322.664.803.933	121,15	1.065	87,74
Italy	2000	56.986.329		1.700.991.026.355		29.849	
Italy	2011	60.788.694	6,67	1.773.108.759.119	4,24	29.168	2,28
Japan	2000	125.720.310		4.308.092.386.300		34.267	
Japan	2011	126.497.241	0,62	4.604.149.942.413	6,87	36.397	6,22
Morocco	2000	28.793.236		46.685.973.753		1.621	
Morocco	2011	32.272.974	12,09	78.646.382.305	68,46	2.437	50,29
Russian Federation	2000	146.757.517		567.392.347.908		3.866	
Russian Federation	2011	142.835.555	2,67	947.198.321.355	66,94	6.631	71,52
Tunisia	2000	9.456.117		26.039.867.657		2.754	
Tunisia	2011	10.594.057	12,03	39.828.939.631	52,95	3.760	36,52
United States	2000	282.496.310		11.158.100.000.000		39.498	
United States	2011	313.085.380	10,83	13.225.900.000.000	18,53	42.244	6,95

Source: <http://unstats.un.org/unsd/snaama/selbasicFast.asp>

Country or area	Year	Currency	Agriculture, hunting, forestry, fishing (ISIC A-B)	Mining, Manufacturing, Utilities (ISIC C-E)	Manufacturing (ISIC D)	Construction (ISIC F)	Wholesale, retail trade, restaurants and hotels (ISIC G-H)	Transport, storage and communication (ISIC I)	Other Activities (ISIC J-P)
Brazil	2000	US\$	6	22	17	6	18	8	40
Brazil	2011	US\$	5	22	15	6	21	8	38
China, People's Republic of	2000	US\$	15	40		6	10	6	22
China, People's Republic of	2011	US\$	10	40	32	7	11	5	27
Egypt	2000	US\$	14	29	18	5	17	9	27
Egypt	2011	US\$	15	33	17	5	15	9	24
Germany	2000	US\$	1	25	22	5	14	6	48
Germany	2011	US\$	1	26	23	5	13	6	48
India	2000	US\$	23	21	16	6	14	8	28
India	2011	US\$	17	18	14	8	18	7	31
Italy	2000	US\$	3	23	20	5	18	8	43
Italy	2011	US\$	2	19	16	6	17	8	48
Japan	2000	US\$	2	24	22	7	14	7	47
Japan	2011	US\$	1	21	19	6	16	8	48
Morocco	2000	US\$	14	23	17	5	16	7	36
Morocco	2011	US\$	15	22	15	6	13	7	37
Russian Federation	2000	US\$	7	33	22	7	24	9	21
Russian Federation	2011	US\$	4	30	16	7	20	9	30
Tunisia	2000	US\$	11	25	18	5	15	12	32
Tunisia	2011	US\$	8	27	18	5	14	13	33
United States	2000	US\$	1	18	15	5	16	6	54
United States	2011	US\$	1	16	13	4	14	6	59

Source: <http://unstats.un.org/unsd/snaama/selbasicFast.asp>

Country or area	Year	Currency	Final consumption expenditure	Household consumption expenditure	General government final consumption expenditure	Gross capital formation	Gross fixed capital formation	Changes in inventories	Exports of goods and services	Imports of goods and services
Brazil	2000	US\$	84	64	19	18	17	1	10	12
Brazil	2011	US\$	81	60	21	20	19	0	12	13
China, People's Republic of	2000	US\$	62	46	16	35	34	1	23	21
China, People's Republic of	2011	US\$	48	35	13	49	46	3	31	27
Egypt	2000	US\$	88	77	11	18	17	1	19	25
Egypt	2011	US\$	87	76	11	17	17	0	21	24
Germany	2000	US\$	77	58	19	22	22	1	33	33
Germany	2011	US\$	77	57	19	18	18	0	50	45
India	2000	US\$	76	64	13	24	23	1	13	14
India	2011	US\$	68	56	12	36	32	3	25	30
Italy	2000	US\$	78	60	18	21	21	0	27	26
Italy	2011	US\$	82	61	20	20	20	0	29	30
Japan	2000	US\$	73	57	17	25	25	0	11	9
Japan	2011	US\$	81	60	21	20	21	-1	15	16
Morocco	2000	US\$	80	61	18	26	26	0	28	33
Morocco	2011	US\$	77	59	18	35	31	4	34	47
Russian Federation	2000	US\$	62	46	15	19	17	2	44	24
Russian Federation	2011	US\$	68	50	18	25	21	4	31	22
Tunisia	2000	US\$	77	61	17	26	25	1	40	43
Tunisia	2011	US\$	83	65	18	24	22	2	49	56
United States	2000	US\$	83	69	14	21	20	1	11	15
United States	2011	US\$	89	72	17	15	15	0	14	18

Source: <http://unstats.un.org/unsd/snaama/selbasicFast.asp>