Local industrial development in Algeria

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Key words
Industry, industrial strategy, regional development, clusters,

Abstract

Regional development was first supported in the framework of the planned economy in the 1970s, first with local development programs or plans for local equipment focused on creating jobs, industry promotion, rural development and development of Saharan regions but without any decision-making autonomy granted to local authorities. The industry, which is the object of our study, then benefited from economic programs of the local industry (PIL) that were to be the basis for creating a second decentralized state industrial sector; local authorities have more autonomy for the execution of these plans. The aim of the PIL was to offset the negative effects of state industrialization process in order to use local resources, ensure the satisfaction of local needs and to decentralize land use policy. Thus, the industrial areas of activity have been created: nearly 500 business zones and 70 industrial zones spread over a total area of 22,000 hectares. These were, however, the areas of corporate storage. Following the liberalization of the economy since the 1990s, the lack of competitiveness of industrial enterprises has become a major problem, and then an industrial strategy has been developed since 2006 to create industrial activity integrated zones (ZIDI) or clusters. According to the national planning strategy, these ZIDI will be created in areas where there is concentration of businesses, infrastructure availability, proximity to university and research institutions and quality of services. We propose in this study to locate these clusters.

Introduction

Local industrial development in Algeria can be divided into two major periods since 1970: namely an economy administered period which involved the 1970s and 1980s during which prevailed a logical sector development at the expense of local development and a period of 1990 to the present days following the liberalization of the economy and therefore the decline in state intervention in the economy had to be more concerned with local development in particular to coordinate private investment. But, have we changed local development dynamics?

There are at least three forms of local development: endogenous development (G.Garofoli-1992), the dynamics of public authorities (H.Shmitz-1990) and finally the dynamics exogène.la first is based on the couple actors: project and based on a strong interaction between the political and the social, strong relations between actors in the locality, and a high degree of autonomy. The dynamics of government presupposes a centralized coordination with local development and state control. Exogenous dynamics is through the attraction of FDI. What local development will be developed in Algeria?

Evolution of industrial local development in Algeria

Local development in Algeria has long been marginalized in favor of a sectoral development carried out as part of an administered economy. At the independence in 1962, Algeria inherited through the Provisional Executive (GPRA) (Provisional Government of the Algerian Republic) general planar direction and Economic Studies, which was attached in 1963 to the Presidency. This management will be the precursor of the central organ of the Algerian planning. In 1965, the management will be integrated into the Ministry of Finance and Planning, wait until the launch of the first four-year plan (1970-1973) to see the implementation of functional structures of the State Secretariat to plan. The SEP (State Secretariat for Planning) suffering from the inferiority of its legal status so the weight of its arbitrage that could result from its power of persuasion with respect to sector leaders and the direct intervention of the head of the State.

Regionally, there was the creation of the Economic Planning Animation Services (SAPEC) in 1971 to address the lack of local capacity for study but SAPEC suffered from inferiority of their legal status because they do not sit on the executive wilaya (region) and it took until 1979 for them to be created DPAT (Departments of Planning and Territorial Development) who sit on the executive Wilaya (region).

In 1966 was implemented the first special program (regional) the special program of Ouargla. The 1st regional development programs have been designated as "special programs of development." From 1966 to 1973, 10 special programs have been launched. From 1970 to 1973 (first four-year plan) special programs will be complemented by the local equipment plan (PEL), there will be in 1970, 05 types (PEL) that should consolidate all the actions of local equipment.

- ✓ The first type of PEL: it is full employment programs or (EP). This is creating permanent and temporary jobs assigned to agricultural work or infrastructure.
- ✓ 2nd kind: these programs (DIL) for the development of local industry, they cover the following sectors: crafts, tourism, and hydrotherapy.
- ✓ 3rd kind: these are (DCF) programs for the development of community facilities. It is about creating community facilities to improve the living conditions of the population, conducting sanitation works.
- ✓ 4th kind: the (DER) program for rural development and agricultural production projects in the traditional sector.
- ➢ 5th type: the (RECLS) renovations and equipment Saharan local communities.

The PEL have experienced the same limits as special programs that preceded them.

- They are not based on a national planning policy.

- The design of the PEL has experienced shortfalls because of the technical competence of local authorities. In an attempt to overcome these limitations we created the (SAPEC) Animation Economic Planning Service, but these services are not operating as they do not attend meetings of the executive wilaya.

During the second four-year (1974 to 1977) there have been attempts to remedy these 02 boundaries by introducing (PCD) municipal development plans completed by the (PIL) local industry program.

During the second four-year plan, the walis (regionally responsible hierarchically most important) that once were acting simply by delegation of the Ministry in charge of authorizing officers became direct spending. The walis and headquarters are the true holders of power design, development and implementation of investment projects. However, "local authorities, wilayas and communes are assisted entities as funding their equipment is 90% state». Industrial zones (ZI) were developed to accommodate industrial investments which were essentially state. They defy logic of decentralization or regionalization. At the end of the second four-year plan 73, ZI were built on an area of 15 000 hectares with no land use plan. Indeed, the first law on spatial planning was enacted in 1987. The latter was to meet the need to locate the investment at national, regional and local level. The majority of industrial areas was conducted between 1966 and 1977. An industrial zone was to be composed of at least five industrial units and provide at least 1,000 jobs in an area of 50-2000 hectares.

The communal development plans (PCD) can be classified into 03 categories:

1. Communal plans of agrarian revolution in the second four-year plan (agrarian revolution consisted in giving lands to the landless peasant) hit 580 communes.
2. Semi urban PC: they hit 70 predominantly urban towns
3. The PM.U: Urban Modernization Plan, applicable to urban areas for the benefit of local communities where industrial investments of national importance. They affected 30 municipalities.

The PIL was to be the basis for the creation of a decentralized state industry. Its purpose was to alleviate the negative effects of industrialization process undertaken by national societies in terms of job creation, the implementation of local resources to meet local needs and decentralization of development.

The period from 1967 to 1977 was dominated by a sectoral approach and state (proactive) economic development of Algeria, it took until the 1980s for the implementation of a territorial approach. Indeed, the first law on spatial planning was enacted in 1987, completed in 2001. The latter was to meet the need to locate the investment at national, regional and local hence the creation of SNAT (National Scheme of Planning), SRAT and PAW. SNAT locates great intellectual infrastructure, economic, transportation and communication. This new approach should respond to the regional imbalance that resulted from a sectoral approach focused mainly on industry. In addition, the private sector has been asked to complete the action of the state for non-strategic investments (heavy industry and oil remained a state monopoly). The latter, during the 1980s, chose to focus on the completion of investments in progress. Thus, OSCIP (Body for Monitoring and Coordination of Private Investment) was established in 1983 under the supervision of MPAT (Ministry of Planning and Spatial Planning). Its goal only is to give a technical approval but the final approval depends on private investment regional Commission (CRI), private commission investment of the wilaya (CAW) or the (CNI) or National Investment Commission. At the end of the 1980s, especially since the drastic fall of oil in 1986, all economic indicators are red, especially foreign exchange reserves were equivalent to less than one month of imports in 1989 from which the recourse to the IMF (1989 to 1998).

During the 1990s, territorial development was a brake. Indeed, as part of the privatization of public enterprises, which was a measure of the SAP (Structural Adjustment Program implemented between 1995 and 1998), several local companies have been closed aggravating deindustrialization which began in the 1980s. Indeed, before its restructuring, the local public enterprises (EPL) had 1324 companies spread over the entire national territory and employed nearly 220,000 workers. The restructuring undertaken since 1994 (Finance Law that prepared the privatization of enterprises) resulted in the dissolution of 935 EPL. Industrial zones designed to implement the development plan objectives in the context of a planned economy no longer suited the Algerian economy in the process of liberalization under the auspices of the IMF. Thus, new industrial areas called "new generation areas" are being developed in addition to the renovation of old areas. These areas are now called "Integrated Industrial Development Zones" or ZIDI or clusters. They were proposed by the MPPI (Ministry of Participation and Promotion of Investment) in 2007 (MPPI 2007). They were designed to implement the new industrial strategy based itself on the poles of competitiveness and excellence located by the SNAT 2025 in Sidi Abdellah, Boughzoul Bouinan and for the first poles. Six clusters have been identified by the SNAT 2025 (SNAT 2008), namely:

- ✓ Sidi Abdellah (ICT) Bouinan (food biotechnology and sports medicine)
- ✓ Oran, Mostaganem and Sidi Bel Abbés- Tlemcen: organic chemistry, energy and space technology and finally telecommunications
- ✓ Constantine, Annaba, Skikda: Mechanical métallurgie- biotechnology and petrochemical
- ✓ Setif, Bejaia, Bordj Bou Arreridj, M'sila: plastics, food biotechnology and Production
- ✓ Medea, Boughezoul, Laghouat: renewable energy, biotechnology, environment, health, agriculture and food, pharmaceutical industry
- ✓ Ouargla Hassi Messaoud, Ghardaia: petrochemical, agricultural biotechnology saharienne-arid and water

NOTE: SNAT 2025 was supplemented by the SNAT 2030 which focuses on sustainable development[1].

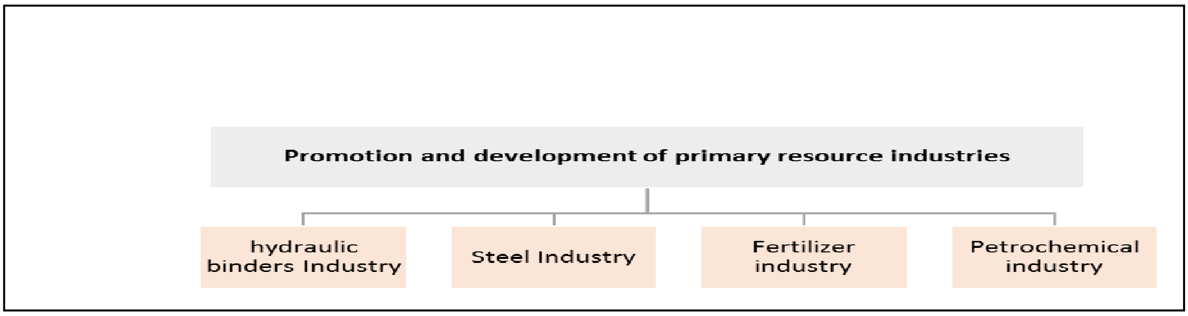
Companies specializing in ICT and pharmacy are already located at Sidi Abdellah,
SNAT includes creating ZIDI in the guideline 'attractiveness and competitiveness of the territories». According to the MPPI, the cluster or ZIDI is an innovative territory with institutional, industrial and research potential that can integrate seamlessly with international competitiveness. The creation of these ZIDI should be done in areas where there is concentration of companies, availability of infrastructure, proximity to university and research institutions and finally quality of services. The pattern of ZIDI developed by the MIPI (Ministry of Industry and Investment Promotion established in 2008 in replacement of MPPI) has selected 29 wilayas for the establishment of 42 multi-purpose and specialized ZIDI. Their implementation is performed from 5 pilot wilayas by the ANIREF which is the National Agency for Intermediation and control of land" created in 2007. The 5 wilayas are: Annaba, Oran, Setif, Bordj Bou Arreridj and Blida. The ANIREF is responsible for regulating the land

market and real estate for economic activity. The ANIREF is with ANDI (National Agency for Investment Development) execution levels of new investment system introduced in 2006. Since 2006, investment skills are organized into three levels:

- ✓ The strategic level represented by the CNI (National Investment Council), under the authority and the presidency of the Head of Government, which decides on the investment strategy and consider and adopt projects of national interest
- ✓ The political level represented by the MIPI which develops the national investment policy and ensures its implementation through the DGI (Directorate General of Investment)
- ✓ A run level is ANIREF ANDI and under the control and direction of MIPI.

ANDI examines investor records for the granting of benefits (tax exemption ...). ANIREF offers the concession of land for the benefit of investors in ZIDI by the auction procedure or OTC (Over The Counter). These transactions consist of goods relating to the private domain of the state, the residual assets of dissolved companies, surplus assets of economic public companies (independent companies) but also private property. The grant is open to any natural or legal person, Algerian or foreign, enjoying his civil rights and justify a certain address. The concession is granted for 33 years renewable 2 times or a maximum of 99 years. Actions to build ZIDI are the promotion of the industrial networking in need of innovation, new technologies, export support, upgrading of enterprises. The financing of ZIDI is done by the "industrial competitiveness promotion fund" which is a special appropriation account (CAS) established in 2000 which the authorizing officer is the MIPI. It is mainly funded by budgetary allocations and external financing as MEDA. The program's eligibility of land applications for investment purposes returns to CALPIREF (Assistance Committee at the Location and the Promotion of Investments and the Property Regulation) at the wilayas. Monitoring the implementation of the investments is provided by ANIREF and CALPIREF.

Cities that appear most competitive are Algiers, Annaba, Bejaia, Blida, Constantine, Jijel, Oran, Sétif, Sidi Bel Abbes, Skikda, Tizi Ouzou, Tlemcen. In a study we conducted in 2013, we spotted an industrial cluster grouping Bejaia, Tizi Ouzou, Algiers, Setif and Oran. They already have major assets such as the presence of universities, the proximity of the EAST / WEST highway, a railway network and industry experience.



Source: MPPI 2007

Pilot clusters are being established in the food industry, more specifically in the industrial tomato in Annaba and Guelma, dates (Biskra and Ghardaia), drinks and milk (DEVED Programme Program of Sustainable Economic Development in cooperation with the German GIZ). Similarly, a cluster is being developed in the engineering industry in Constantine and Rouïba or places where are
located SNVI (National Company of Industrial Vehicles) and ENMTP (National Company of Construction Materials). The creation of these clusters is part of an industrial strategy developed in 2007 that we can schematically as follows:

We find that the mechanical and food industries are part of industries that must perform a trace-back upstream. Indeed, the national food industry imports most of its inputs and has a very few export capacity. To remedy this situation of export consortia to pool resources in creativity, innovation and expertise in order to face international competition are in progress. . Existing industrial zones are currently rather corporate storage spaces that do not correspond to clusters. We can point among the achievements of ZIDI, the industrial park of Sidi Khettab created in 2012 in Relizane (west of Algiers in the Oran region). This industrial zone is a strategic position due to its proximity with the East / West Highway, the presence of a railway and the nearby port of Mostaganem and university. A project is in progress or a production plant pipelines for transportation of hydrocarbons and water.

We have seen through the above that industrial local development has gradually been integrated into a regional planning approach to remedy the regional imbalances in industrial development. These have been aggravated by a sectoral approach and a centralized financing development that characterized the 1970s and 1980s. The measures taken to the liberalization of the economy since the 1990s, including the creation of ZIDI we have presented below, would they contribute to solving this industrial regional imbalance?

Using synthetic indices of krugman and herfindahl for measuring the concentration of specialization

Since the publication of the work of P. Krugman of economic geography which he is the founder, the focus is increasingly on aspects of homogenization and differentiation of spaces. The use of indicators to measure these aspects is essential and development is also.

These indicators we retain the simple synthetic indices Krugman and Herfindahl to measure regional specialization and concentration.

-The index of Krugman

The Krugman index is equal to the sum of the differences in absolute value between the industrial structure of an area and the rest of the reference area :

The regional specialization Krugman index is given by:

$$ISKj=\sum_i \left|s_{ij}^{s} - s_i\right|$$

And Krugman index of geographic concentration:

$$ICKj = \sum_j \left|s_{ij}^{c} - s_j\right|$$

i: sector i = 1 ... n

j: Region, j = 1 ... m

S_{ij}^{s}: The weight of the population occupied in industry i of region j among the total employed population of region j; i : secteur, i= 1…n

j : Région, j = 1… m

$$S_{ij}^{s} = \frac{E_{ij}}{E_j} = \frac{E_{ij}}{\sum_i E_{ij}}$$

E: represents the employed population

S_{ji}^{c}: The weight of the employed population in the region j i industry among the total employed population in industry i;

$$S_j = \frac{E_j}{E} = \frac{\sum_i E_{ij}}{\sum_i \sum_j E_{ij}}$$

S_i: The weight of the total employed population in industry i among the employed population;

$$S_i = \frac{E_i}{E} = \frac{\sum_j E_{ij}}{\sum_i \sum_j E_{ij}}$$

S_j: The weight of the total working population of the region j among the employed population;

$$S_j = \frac{E_j}{E} = \frac{\sum_i E_{ij}}{\sum_i \sum_j E_{ij}}$$

The value of the index is between 1 and 0. Closer to 0, the index means that the distribution is homogeneous (specialization and concentration) and therefore relative lack of specificity. Closer to 1, the index of Krugman means there is specialization and regional concentration.

The Herfindahl index

It is equal to the sum of the squares of the weight of all individuals,

The Herfindahl index of specialization is given by the following formula:

$$IHH_j^s = \sum_i \left(s_{ji}^s\right)^2$$

The Herfindahl index of geographical concentration is:

$$IHH_i^c = \sum_j \left(s_{ji}^c\right)^2$$

With

Avec S_{ij}^s *et* S_{ji}^c : having the same meaning as above.

The value of the HHI is between 1 / n and 1 and n is the number of sectors. This index takes the maximum value of 1 when all the sector workforce is concentrated in a single area and takes the minimum value 1 / n when the numbers are distributed evenly among the n zones.

Data source

The data are collected from the NSO (National Statistics Office of Algiers), the ANIREF (National Agency for Intermediation and Property Regulation), and the Ministry of Industry and Mining. They concern the year 2011 and 48 regions (administrative divisions or departments in 48 wilayas).

In our case, these regions are divided into sub-regions (according to the survey conducted by the NSO in 2011).

North Central: includes 10 wilayas (regions)

Algiers, Blida, Boumerdes, Tipaza, Bouira, Médéa, Tizi Ouzou, Bejaia, Chlef and Ain Defla.

The Northwest has 7 wilayas:

Oran, Tlemcen, Mostaganem, Ain Témouchent, Relizane Sidi Bel Abbes and Mascara.

The North East: includes eight wilayas:

Annaba, Constantine, Skikda, Jijel, Mila, Souk Ahras, El Tarf and Guelma.

The Highlands: 14 wilayas include:

Djelfa, Laghouat, M'Sila, Setif, Batna, Khenchela, Arreridj Bordj Bou, Oum El Bouaghi, Tebessa Tiaret, Saida, Tissemsilt, Naama and El Bayadh.

The Big South includes: 9 wilayas:

Bechar, Tindouf, Adrar, Ghardaïa, Biskra, El Oued, Ouargla, Tamanrasset and Illizi.

The selected sectors are industry and trade and services. The first concerns us as it is characterized by high deindustrialisation and requires more attention from the government, the services have become very important since trade liberalization induced Structural Adjustment Plan (SAP) and the free trade agreements since the 1990s.

The results:

The calculation of concentration and specialization indexes for the regions is given by the following table:

	Indice de Krugman pour la concentration géographique	*Indice de d'Herfindahl pour la concentration géographique*
	Industrie et commerce et services	Industrie et commerce et services
Le Nord-Centre	0,03449195	0,00595892
Le Nord-Ouest	0,01189859	0,00223538
Le Nord-Est	0,00827712	0,00052417
Les Hauts Plateaux	0,01032798	0,00091148
Le grand Sud	0,00815403	0,0002858

The results show a weak value of the indices, indicating a low concentration of activities, the North Central region being slightly more concentrated than the rest of the territory. On specialization, both indices Krugman and Herfindahl show a difference between industry and services (including trade) for different regions. Thus, for the industry the North Central and Central

Highlands are more specialized than the rest of the territory while for services the distribution is more homogeneous and regions are almost equally characterized by the distribution of services. These results corroborate those for industry we have obtained in our study (2013). Indeed, statistically we detected an industrial cluster grouping the wilayas of Bejaia, Tizi Ouzou, Algiers, which are located at NORTH CENTRE region. Oran is located in the NORTH-WEST region and Sétif is situated in the HIGHLANDS region. We find that the industry is mainly located in the NORTH or the NORTH CENTRE which is the illustration of the regional imbalance in the industrial field.

Krugman Index for regional specialization Herfindahl index for regional specialization

	Indice de Krugman pour la spécialisation régionale		**Indice d'Herfindahl pour la spécialisation régionale**	
	Industrie	Services et commerce	Industrie	Services et commerce
Le Nord-Centre	0,14275824	0,05072461	0,65837145	0,5126852
Le Nord-Ouest	0,04518076	0,05610429	0,61575896	0,51346015
Le Nord-Est	0,0683363	0,03270737	0,62076696	0,50696931
Les Hauts Plateaux	0,11666802	0,06836481	0,63990162	0,51084734
Le grand Sud	0,0825884	0,05001336	0,62039208	0,50887396

These results are expected because there is a regional imbalance in terms of infrastructure and the North Central region which includes Algiers is better off. In addition, the majority of SMEs and SMIs and particularly in services comes from public business creation devices and jobs and resources are generally evenly distributed among regions or weighted by the size of the population.

We can conclude that local development in Algeria is initiated, the components of clusters are being formed but their finalization field is late arriving, it faces significant obstacles, the main ones deindustrialization of the economy that began during 1980s and worsened by SAP but also the fact that the Algerian State, to use an expression of G.Schelle "maintains an obsessive relationship with its territory", in other words, financing of industrial territorial development remains highly centralized, so it is very dependent on the resources and therefore the decisions of the state. Local communities have benefited many resources intended for them such as the FNI (National Fund of investment created by the 2009 finance law) which attributed to local authorities a budget allocation of 48 Billions DA or 1billion per wilaya (region) but these are still funds from the state budget. Similarly, there exists a mutual fund local government financing (FCCL), but its resources are highly dependent on the state budget such a part of the VAT (tax on added value) collected by the budget. One consequence of this situation is the persistence of regional industrial imbalance that we have demonstrated in this work.

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