

# INDUSTRIAL PLANNING IN LESS DEVELOPED COUNTRIES

## On the role of informal sector in urban context

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### ABSTRACT

In many Third World cities, the approach to industrial planning is adapted from developed countries. Planning system may conflict with the dynamics of an informal sector where priorities are directed to the fundamentals of survival in an often competitive and hostile working environment. It is important for Third World' governments to identify planning approaches that respect the current condition of land use occupation. Modernization of traditional or informal sectors may develop integrated linkages with the formal sector creating opportunities land use integration between these sectors.

**Keywords :** industrial planning, informal sector, land use

### ABSTRAK

*Pada kebanyakan negara dunia ketiga, pendekatan perencanaan industri diadaptasi dari negara maju. Pendekatan ini mengalami ketidak sesuaian dengan keberadaan informal sector, dimana sektor ini memprioritaskan pada kompetisi tinggi dalam konteks lahan perkotaan. Penting bagi negara dunia ketiga untuk mengidentifikasi pendekatan perencanaan yang mengikut sertakan keadaan sesungguhnya dari pemanfaatan lahan kota. Modernisasi dari informal sektor yang menjadi bagian dari sistem produksi dari formal sektor dapat menciptakan integrasi dari penggunaan lahan kota antara dua sektor tersebut.*

**Kata kunci:** perencanaan industri, informal sektor, tata guna lahan.

### INTRODUCTION

Industrial planning in many less developed countries (LDCs) is currently adapted from developed countries. Planning approach in India, Peru and Indonesia shows a mismatch between current condition and industrial planning approach from the government. This mismatch gives unbenefited condition to most of the community that in massive shift from agriculture to industrial lifestyle, which is shown in growth of small industrial or commercial activity that is commonly known as informal sector. Currently, governments in LDCs regard the informal sector as a part of the systematic urban transition from an agricultural to an industrial economy; the informal sector, through its links to production, can encourage this transition.

This article will describe the characteristics of industrial development in several less developed countries, such as India, Peru and Indonesia. This will demonstrate significant differences to those characteristics in developed countries. In particular the complementary

development of an informal sector as a corollary to industrialization will be explored. This article based on literature review of industrial development. The structure of this analytical review will be started by understanding the industrial development in several LDC, either formal or informal sector, and the impact of industrial development in LDC. Finally, this article will examine the implication of the differences for industrial development in LDC, particularly in relation to the implementation of urban planning controls.

### THE INCEPTION OF INDUSTRIAL DEVELOPMENT

The location of the inception of industrial development was typically located in primary gateway cities, such as in the principal ports where infrastructure and markets were comparatively well developed (Balchin, Isaac & Chen 2000). For example in Surabaya-Indonesia, the city has functioned as a focus for transport and communications networks (Dick,

Fox & Mackie 1993). This has helped to connect hinterland areas as major providers of agricultural goods, with the port city as a point from which to distribute the products to wider markets.

Pre-industrial cities in LDCs have shown a land use pattern with a traditional focus on religious or government buildings (Balchin, Isaac & Chen 2000). However, the cities have evolved to encompass wide ranging industrial activity focused on the ports, with central cores comprising local bazaars with densely developed commercial uses. The evolution of the pre-industrial city into an industrial city has generated increasing urbanization pressures. The economic growth and prosperity of the city has been a major force in determining the migration of people from rural areas to the cities. Most industrial cities in the LDC are experiencing rapid growth of urban areas following economic restructuring into industrial activity (van Geenhuizen & Nijkamp 1995). Balchin (2000 p.2) believes that the process of urbanization follows the same process as economic growth. High levels of urbanization are associated with high levels of industrialization that further raises the level of economic growth.

This economic growth has seen a massive shift from agriculture into industry (Mills & Hamilton 1989). Mills & Hamilton (1989 p.405) explain this shift as a parallel process to economic growth. With low levels of economic growth, most income is spent on food, orientating the workforce towards the agricultural sector. However, with higher levels of economic growth, there are demand shifts from food to manufactured products and services, fuelled by the workers relatively higher wages and adaptability to technological change (Balchin, Isaac & Chen 2000).

Industrialization absorbs a large number of workers in the industrial sector, in both skilled and unskilled occupations. Urbanization is a likely consequence of industrialization in order to meet the needs of employers and employees. In the 1960s, almost 50% of urban residents in LDC were migrants attracted to jobs in industry (Williamson 1995). According to Turnham (1990), there are two types of migrants: temporary migrants who come to seek employment in the informal sector, and permanent migrants who are seeking jobs in the formal sector but who temporarily may accept work in the informal sector, or be unemployed.

## THE URBAN CHANGE

Since industrial activities in LDC cities have been developed, economic conditions, population, land use, and the size of the urban area continually change (Balchin, Isaac & Chen 2000). Urban growth not only changes urban land use, but also the intensity of that use. In order to understand this change, it is important to analyse the process of urban change. There are three stages of urban change: population growth, manufacturing development, and retailing needs (Standback Jr & Knight 1976). Firstly, people come to occupy land leading to urban growth. Secondly, the concentration of workers may be capitalized upon by manufacturing activity. Thirdly, retailing employment grows in response to the wages circulating in the community. Labor supply is a locational factor that may attract industrial activity (Hayter 1997). While the industrial activity matures, this attracts a retailing sector to service the growing local population. These processes have occurred in most developed and less developed countries.

Manufacturing activity can also cause land values to rise where a fixed supply of serviced land faces increasing demands (Balchin, Isaac & Chen 2000). The nearer the location to the center of urban activities, such as an industrial estate, the greater the land value and demand for complementary commercial uses. Remote manufacturing activity creates the demand for nearby workers, leading to development of adjacent residential suburbs. To minimize transport cost to city center, retailing and commercial uses have developed around manufacturing areas.

As land values are determined by land accessibility, patterns of commercial uses can be seen to follow main roads. This pattern is known as ribbon development (Balchin, Isaac & Chen 2000). Rapid urban growth has placed great pressure on government to provide urban services and amenities, such as housing, water, electricity, transport, education, health and other social services (Midgley 1982). Industrial development, a prime motor of urban growth, reshapes the city, and plays a major part in determining the housing needs and services of the urban population, also in order to meet the need of the workers (Kivell 1993). In many LDC cities, such as Pakistan, India, Indonesia, Thailand, Nigeria, and Guinea, the urban land market through land policy is controlled by governments (Amitabh 1997). The government

has full authority over the land market, including service provision in areas surrounding manufacturing sites.

The location of any commercial activities is based on an assessment of profitability or utility (Balchin, Isaac & Chen 2000). Patterns of urban land use reflect the competition between supply and demand for sites. Where urban land supply is fixed or restricted; it is relatively slow to react dynamics of land demand. Retail activity looks to maximize demand by locating as close as possible to consumers and to other retailers supplying commodities and services, but as far as possible away from its direct competitors (Stahl 1987).

In brief, population growth, the initiation of a modern manufacturing sector, and commercial development are three main aspects of urban change. These three sectors link up with each other to reshape the city. The government as a main provider of urban infrastructure attempts to balance the needs, demand and supply of these three sectors.

### **THE UNCONTROLLED GROWTH**

An increasing population attracted to urban employment will produce the possibility of uncontrolled urban explosion, and a greater demand for urban infrastructure and urban land (Balchin, Isaac & Chen 2000). The uncontrolled conditions can be analysed from two different perspectives: the first is the perspective of development planning and the second is the capacity of government to manage urban change. These perspectives help to uncover the problems caused by industrial development.

As seen in India and other LDC cities, development planning for industrial development has been adapted from developed countries, such as Western Europe and North America. According to McAuslan (1985), many LDC cities are over ambitious in adopting planning systems from Western cities. He argues that the urban resources, administrative system, political philosophy, and bureaucracies in LDC are greatly different to those in Western cities. Industrial zoning in India and Zimbabwe has distorted the land market, causing inflated land values close to industrial areas (McAuslan 1985). Poor migrants from rural areas cannot afford these land prices nor can they afford the daily transportation cost of living further away from the industrial zone.

De Soto (1989) believes that these sorts of imbalance between workers' demands and land supply reflect the economic and political capacity of Peru. He sees the problem as being derived from the incapacity of the state to satisfy the basic needs of urban growth. Legal systems in LDCs seem designed to support particular groups through legal access to information, money and public infrastructure. Not all Peruvians can obtain this access and this inhibits the transformation from an informal to formal economy. In brief, industrial development in LDCs is facing problems in adapting to the demands of urbanization. Currently, control of urban land and equal access to legal status is a major problem in many LDCs.

### **FORMAL SECTOR**

The formal sector of industrial development in LDCs can be characterized into two distinct components (Handinoto 1999). The first type has evolved from inception industry, traditionally located near the ports or near the source of raw material. The government has moved to formalize this activity to protect its contribution to the developing economy and to encourage further industrial investment. The second type is planned development operating under government regulation in custom designed industrial estates. These activities have the legal and formal status required by industrial regulation and are managed by a local government sector (Kivell 1993).

India and Korea both initiated their industrialization focusing on the formal sector in the 1950s (Williamson 1995). The urban growth rates between 1950-1975 in both of these countries ranged between 24% and 83%. This caused land rents to rise, living conditions to deteriorate, and public services to fail (Williamson 1995). So characteristic are these conditions that governments in LDCs often regard them as a part of the systematic urban transition from an agricultural to an industrial economy (Williamson 1995).

Theoretically, industrial areas located in an urban context should meet the following conditions (ULI 1988):

- Benefit the public interest through efficient land planning and growth management
- Ensure the compatible operation of business activities essential to an urban society

- Provide marketable products and services needed by society
- Assist the community by attracting new employment opportunities
- Contribute to community development

While these principles can be applied to LDCs, McAuslan notes that urban land regulation in India has failed to be implemented even though it espouses efficient and comprehensive planning principles (McAuslan 1985). This highlights the gulf between ideological intent and institutional capacity.

Industrialization in LDCs currently focuses on the process of economic engineering to achieve:

- Higher value of raw natural resources.
- A new push into export oriented industrialization geared to the developed country markets.
- Effective contribution to international trade in industrial output.
- A new approach to improve the industrial performance through technological advancement and structural change in industry (Singh 1986).

Therefore, industrial development in LDCs has been realized with a dualistic focus (Singh 1986). The foci are: a modern export-oriented manufacturing sector and a backward traditional agricultural sector. In LDCs, while the manufacturing goods were created, small and ancillary industry sprang up with and were dependent upon each other (Singh 1986). In Indonesia, the government has tried to strike a balance, between the modern manufacturing sector, and the traditional/ informal sector (RI 1984) although it is the modern export oriented manufacturing that has benefited national income that has achieved higher levels of per capita income following independence.

LDC governments have tried to support the small industries of the informal sector, which, in turn, support the activities of the formal sector. In some LDCs there have also been attempts to modernize the informal sector particularly in areas where it is seen to support manufacturing activity. These foci have implications on state policy.

## INFORMAL SECTOR

The informal sector has been characterized with many terms, such as the 'hidden economy',

'working poor' (Haan 1989) p.3), 'unregulated sector' (Portes 1989) p.15), 'foot-loose activities' (Ramanujam 1998) p.51) and even 'greediness workers' (Portes 1989) p.11). Despite such disparaging descriptions, the informal sector can contribute up to 60% of the total input into the formal manufacturing sector (Jagannathan 1987) and is an important provider of employment (Ramanujam 1998).

The definition of the informal sector can be understood by comparing its definition with other industrial activities (Portes 1989). Portes defines three types of industrial activity in LDCs: the formal sector, the informal sector, and the criminal sector, based on the coverage of law. The sectors have been further defined as follows:

- The formal sector is an economic activity that has a legal final product and legal processes of production and distribution.
- The informal sector produces a legal final product, but incorporates illegal processes of production and distribution.
- The criminal sector has an illegal final product and illegal processes of production and distribution.

Based on the above explanations the informal sector can be defined as follows: a commercial or industrial manufacturing activity that has no legal license from the government to operate the activity, but produces a legal final product or service, and is located in inappropriate land use zones. The activities of the informal sector lie outside the principal regulation of the state (Forbes 1988).

On the basis of the above definitions the informal sector can be seen to develop under two major conditions; urbanization that is caused by industrialization, and a high dependency on the manufacturing sector. Urbanization has created the informal sector because of the incapacity of the city to absorb large numbers of poor job seekers among the urban dwellers, and rural-urban migrants who have been unable to secure waged employment in the formal sector (Ramanujam 1998). As previously explained, the formal sector offers only limited job opportunities in the manufacturing and service sector.

The early informal sector studies, e.g. ILO/ UNDP Employment Mission of Kenya, several characteristics of the informal sector were defined (Haan 1989):

- ease of entry
- reliance of indigenous resources

- family ownership of enterprises
- small scale of operation
- labor intensive and use of appropriate technology
- skills acquired outside the formal education system
- operating in unregulated but competitive markets

Another characteristic of the informal sector is its heterogeneity. Ramanujam (1998) states that the sector is not uniform; it manifests itself in different ways, in different countries, different cities, and even different parts of the city. Data on the informal sector is rarely collected by government, since this sector is too small to be covered by regulation, to report economic information, or to pay taxes (Thomas 1992). Its heterogeneity has been categorized into three segments (Awasthi, Bhandari & Pandey 1994):

- Established; operating under a roof as an economic enterprise.
- Foot-loose; operating in the open on pavements and market centers.
- Home-based; combining economic activities with domestic chores.

Proprietors in the informal sector respond to the incapacity of the city to provide formal job opportunities (De Soto 1989). Proprietors in Peru have no alternative but to operate illegally. It is costly and time consuming for the proprietors to establish themselves in the legal/ formal sector. The proprietors are mostly migrants from rural areas that could be categorized as low-income people or the urban poor. A recent survey estimates between 20 and 60 percent of urban employment or non-agriculture employment is in the informal sector (Turnham 1990). From a land use point of view, most of the informal sector occupies land that is illegally occupied and illegally subdivided (McAuslan 1985). The land is often outside of core government concern, as it has no infrastructure or community services. The buildings are usually self-built buildings, whether permanent or temporary.

In brief, the informal sector in LDCs is a part of urban lifestyle. The advantage to national economic growth cannot be denied, even though LDC governments do not regulate the sector.

## **CONCLUSIONS**

Current approaches to planning regulation in LDCs are facing many problems in

implementing planning approach from developed country. For example, industrial planning in India is prepared under an urban Master Plan, which is developed based on the views of planning consultants schooled in Western European, a North American Planning ideology. The British planning system has been exported around the world. All over India, town and country planning laws are based on English legislation of the 1930's. In Indonesia, the current planning regulation and laws are adapted from original Dutch legislation.

Developed countries and less developed countries have significant differences in their approach to development. Firstly, LDCs experience a very rapid rate of expansion mainly because of migration to the cities from the rural areas during development (Evans 1985). Secondly, LDCs have to address issues surrounding the development of an informal sector (Evans 1985).

Few social scientists have been appointed to government planning institutions. Rather development issues are dominated by architects and economists. In this environment, plans are prepared with a lack of understanding of social concerns and the long-term requirements of the city and its people. A further problem of planning in LDCs is the role of the state in allocating urban resources, such as land and public infrastructure.

According to Singh (Singh 1986), it is important for LDC' government to take into account the current condition of land use occupation through the modernization of the traditional/ informal sector, and the development linkages into the formal sector, opening the possibility for more integrated land use outcomes. Ideally, the LDCs' government should pursue the following conditions of land use control and regulation (McAuslan 1985):

- Efficiency; ensuring a sufficient supply of urban land at an affordable price.
- Health, safety, and welfare; concentrating on reducing overcrowding, limiting pollution, and improving the safety of buildings.
- Equity; ensuring that certain classes of people are not denied land.
- Adaptability; ensuring that the city is adaptable to people's needs and desires.
- Conflict resolution; regulation should be able to mediate competing interests in land disputes.

In summary the planning problem in a contemporary industrializing country, is blocked by the inefficiency and unwillingness of the government to respond to rapid urban population growth as a natural impact of industrialization. The standard response is to segregate land based on Western planning theory; while in reality this constrains the interdependency between the formal and informal sector.

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