



**TOGETHER**  
*for a sustainable future*

## OCCASION

This publication has been made available to the public on the occasion of the 50<sup>th</sup> anniversary of the United Nations Industrial Development Organisation.



**TOGETHER**  
*for a sustainable future*

## DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

## FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

## CONTACT

Please contact [publications@unido.org](mailto:publications@unido.org) for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at [www.unido.org](http://www.unido.org)

06436

UN  
CID  
A  
CID/S



Background Paper No. 4.  
Agenda Item No. 3.  
(CID/S)



**Inter-Regional Seminar on Development Policies and  
Planning in Relation to Urbanisation**

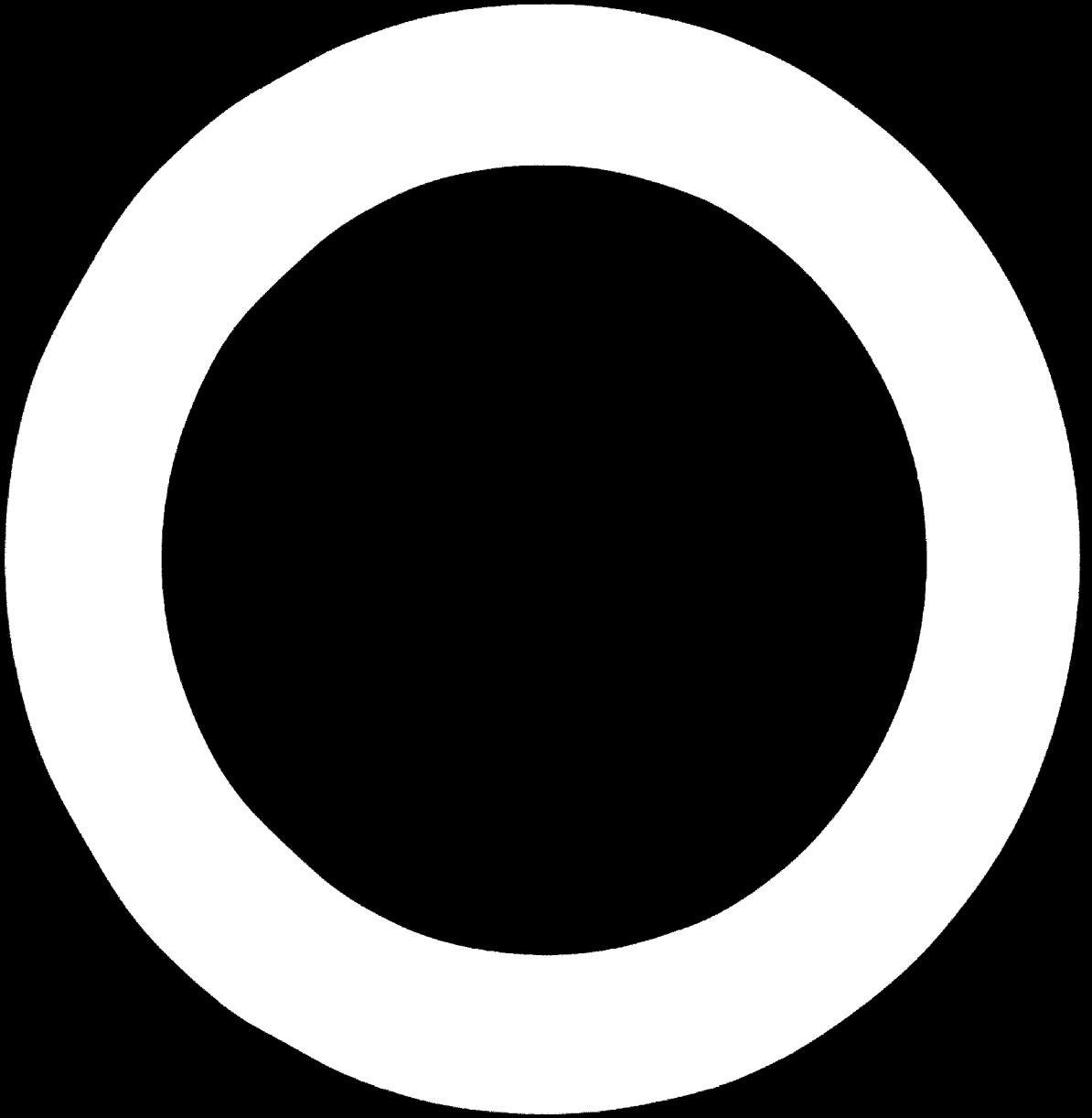
Organized by the United Nations Bureau of Technical  
Assistance Operations and the Bureau of Social  
Affairs in Co-operation with the  
Government of the United States of America

University of Pittsburgh, Pittsburgh, Pennsylvania, USA  
24 October - 7 November 1966

**Industrial Location and National Economic Growth**

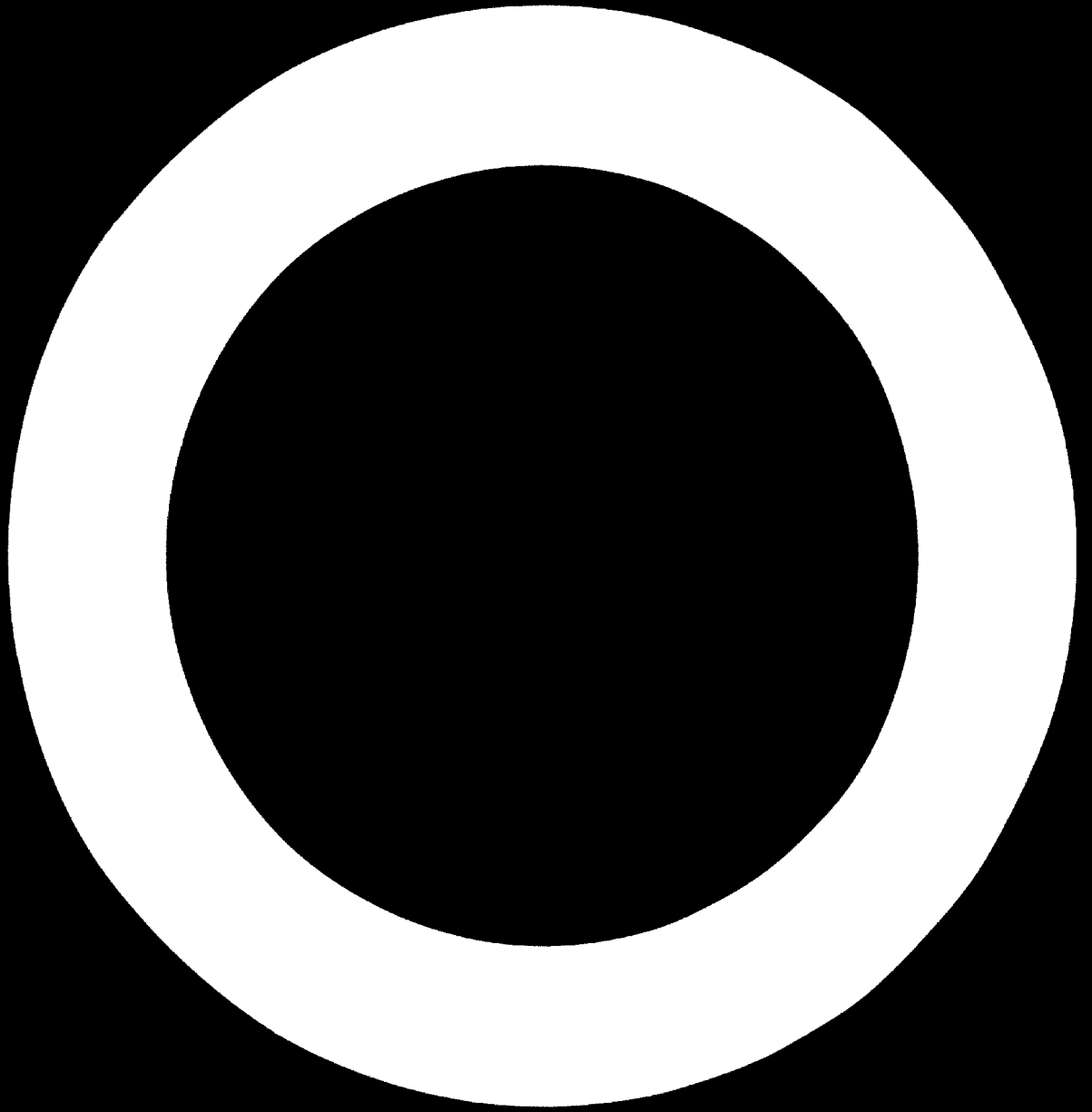
Prepared by the United Nations  
Centre for Industrial Development

We regret that some of the pages in the microfiche copy of this report may not be up to the proper legibility standards even though the best possible copy was used in preparing the master for the microfiche.



## TABLE OF CONTENTS

A.	INTRODUCTION	1
B.	LOCATION ANALYSIS	3
	Transport	3
	Factor Endowments	4
	Agglomeration Economies	8
	Regional & Urban Planning	10
C.	LOCATION AND REGIONAL DEVELOPMENT PROBLEMS	11
D.	CONCLUSIONS	15



## INDUSTRIAL LOCATION AND NATIONAL ECONOMIC GROWTH

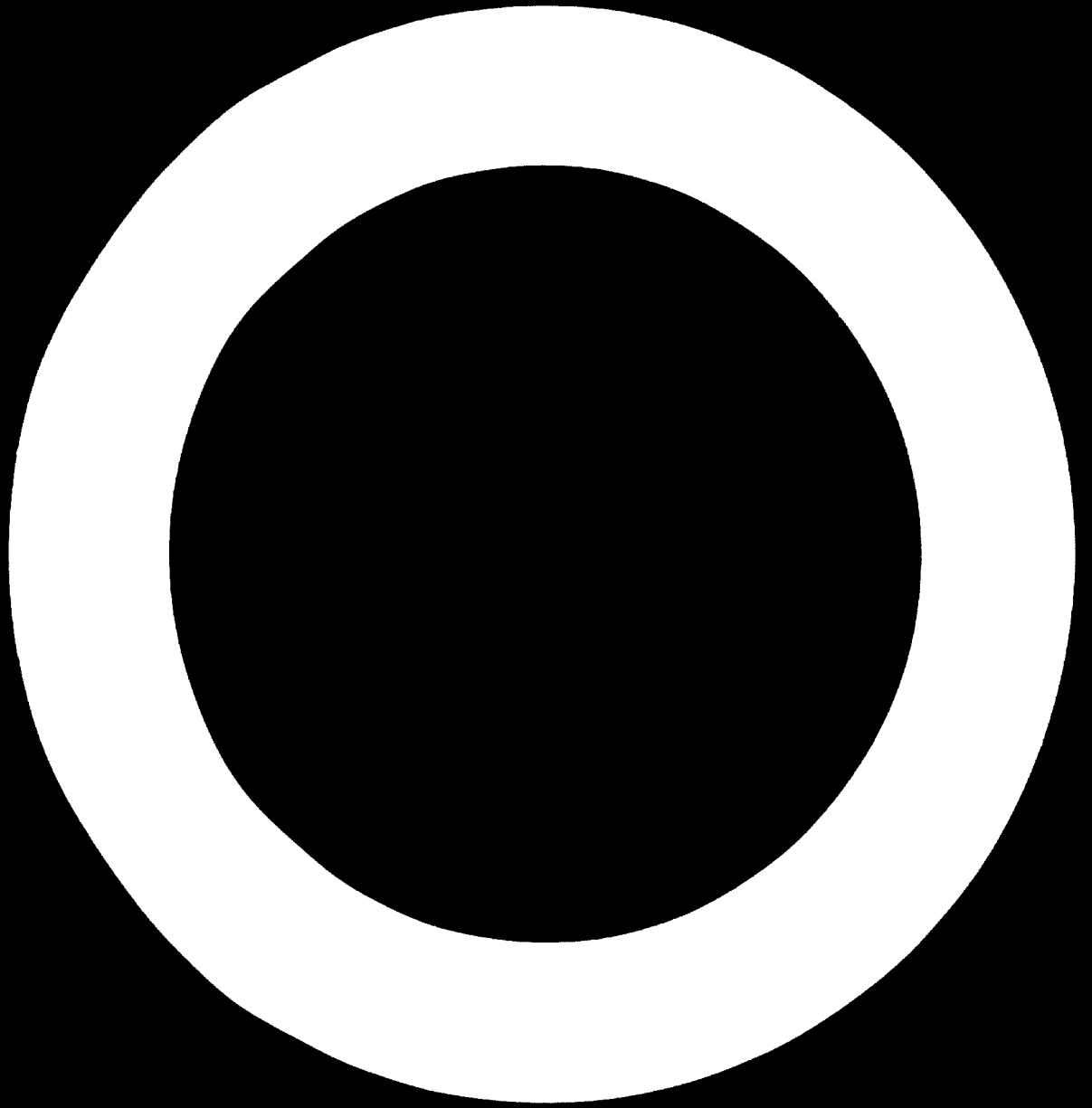
### A. INTRODUCTION

1. The desire of all nations for economic growth and higher per capita incomes must inevitably focus on the need to achieve industrial development. There is disagreement, however, concerning the locational pattern of economic activities. The issue, however, is rarely expressed in such terms, but is hidden within the debates over the problems of regional income disparities, dispersion of industry, and urbanization.
2. Decisions on the geographic distribution of industrial activity are instrumental in determining the pattern of overall growth of the various regions of a country. The special emphasis given industrial location is due, first, to the crucial role of manufacturing in generating economic development and, second, to the existence of greater possibilities of influencing the location of industry than of agriculture or services.
3. One strategy of location that has been advocated is that of "balanced" regional development. In the early stages of development the existence of external economies and of economies of scale leads to a "polarization" and to greater disparities in regional incomes. Unless this tendency is counteracted, some fear that the regions of a nation in which development first occurs will continue to grow leaving the others further and further behind<sup>1</sup>, e.g. the problem of Brazil's North-East.
4. The counter argument has been that since development begins with a sudden spurt in particular regions or urban centres (pôles de croissance), the urgent demands of these areas for public investment should be given higher priority than any pattern of "balanced" regional development. Implicit in this approach is the idea that giving special attention to depressed or

---

<sup>1</sup> Gunnar Myrdal, Rich Lands and Poor: The Road to World Prosperity (New York: Harper, 1957)

\* Portions of this paper have been prepared for a paper on Industrial Location Planning to be presented at the International Symposium on Industrial Development, 1967.





retarded areas should be left until the nation has reached a stage of sustained economic growth.

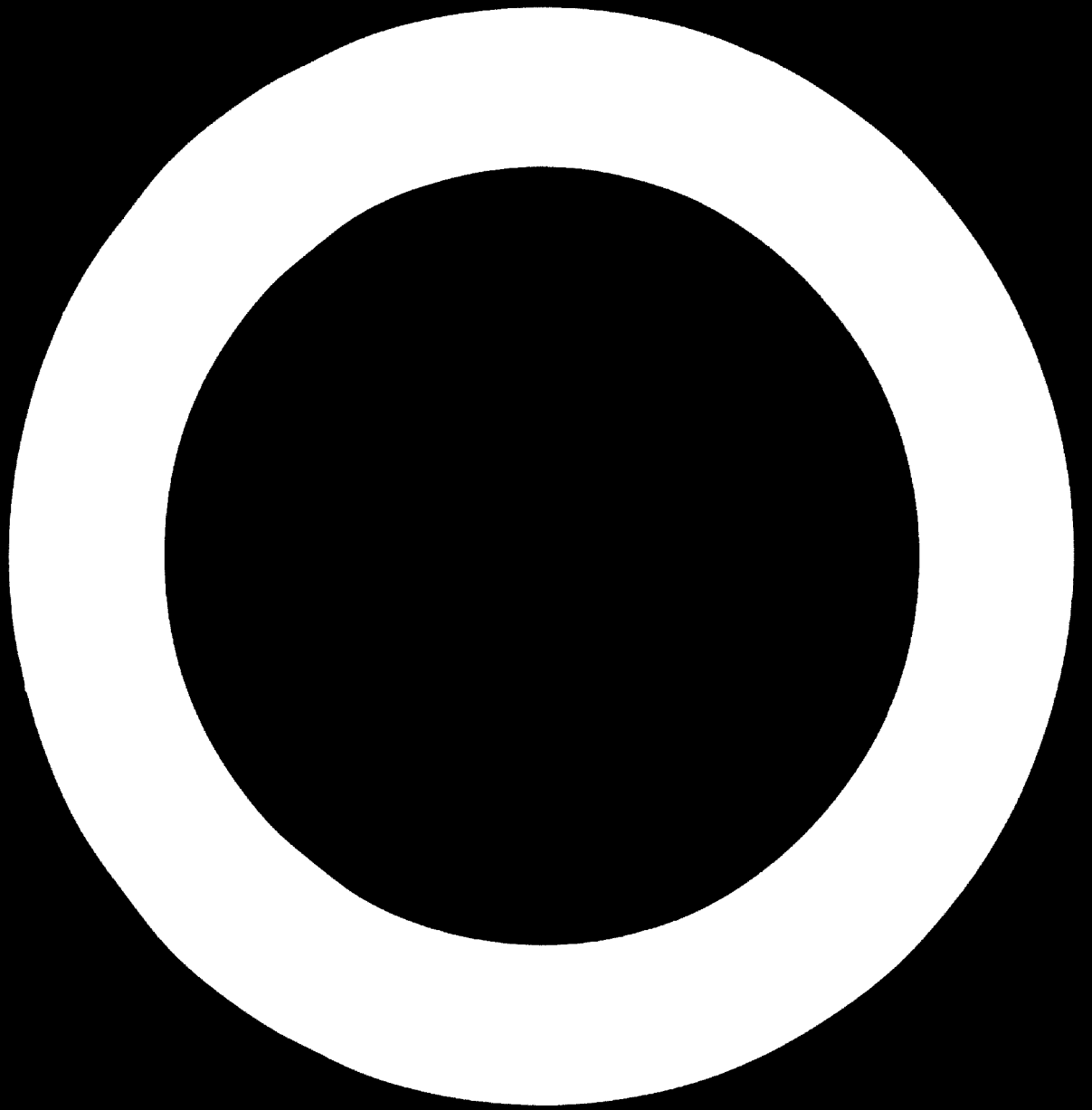
5. A second issue, that of concentration versus dispersion, is also in essence a matter of industrial location. Many planners have favoured concentration of industrial activities in metropolitan areas where spatial juxtaposition economies can be realized. John P. Lewis, among others, however has argued against metropolitan concentration in favour of town-centered location.<sup>2</sup> It is claimed that such a policy would require less migration of labour and lower social overhead costs, and, at the same time, insure greater political stability.

6. The recent growth of economic literature in the field of industrial location planning has not produced as efficient criteria of location for developing countries as for already developed ones. This is partly due to disagreement among researchers and planners on fundamental issues and principles. Very often policy-making is hampered by an involuntary mixing of totally different viewpoints and by a lack of agreement on the meaning of even the most basic terms. It is essential to realize that completely different solutions may emerge if the location criteria are based on national objectives than if they are based on regional ones. The same holds true with respect to the time horizon chosen: efficient short-run policy prescriptions may actually be harmful to achievement of long-run objectives. In this context, the basic distinction between a 'static' approach (concerned mainly with the efficiency of the existing location patterns) and a 'dynamic' approach (concerned with changes in that pattern) should always be kept in mind.

7. The very identification and definition of the basic issues depends on the objectives to be achieved. What is the main issue from one point of view may be quite irrelevant from another. An attempt should be made to view regional location from one angle at a time. Thus, if one begins by looking at these

---

<sup>2</sup> John P. Lewis, Quiet Crisis in India (New York: Brookings Institution, 1962, Chapter 7: "The Role of the Town in Industrial Location").



- 3 -

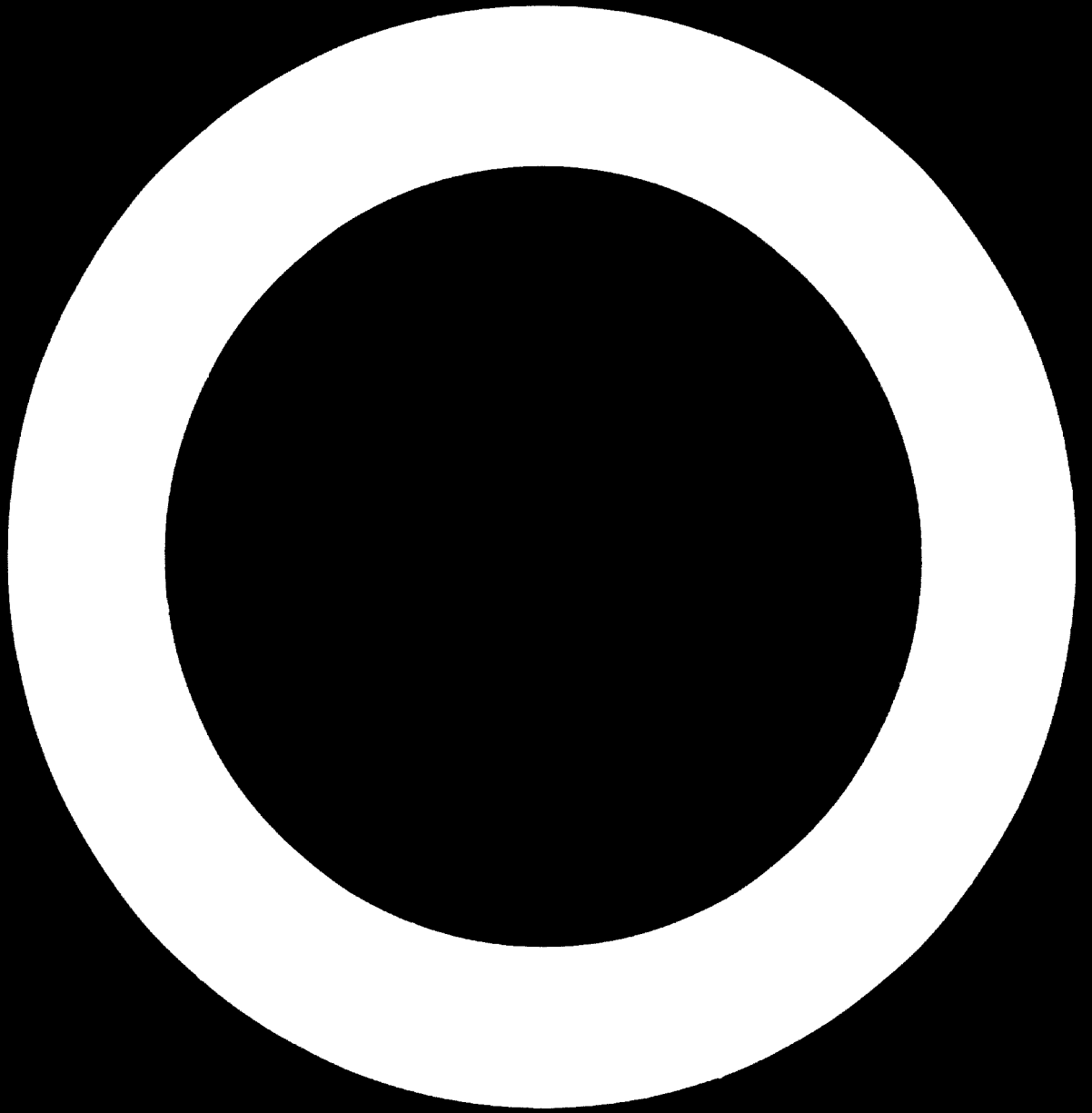
problems from the national economic profitability point of view, one should carefully avoid complicating the analysis needlessly with elements such as the political repercussions of crowded urban housing or the social costs of agricultural underdevelopment. Elements such as these, while undoubtedly of great weight in a different context, should be brought into play only after the economic conclusions have been reached, in order to qualify them and realistically adapt them to the complex socio-economic environment. Of course, the reverse is also true: if the planners have a socio-political outlook on location problems, they should take up considerations of economic objectives only after they have reached conclusions that are feasible within that outlook.

8. We adopt throughout the following a long-run national economic growth point of view. The conclusions reached thus must be qualified by social and political considerations. If the overriding planning objective is national economic growth then clearly regional growth targets are merely an instrument to achieve the national goal. The first basic distinction to be made, therefore, is the one between regional location planning as an end in itself or as an instrument of national growth. Correspondingly, urban planning can be considered either as a way to improve regional or national planning, or as a means for realizing "balanced" city development.

9. Despite the shortcomings of existing locational criteria when applied to developing nations, they do provide at least a first approximation toward solutions of locational problems. Certainly, it is inconceivable that planning for economic growth in developing nations could take place without careful attention being paid to questions of location. Decisions as to where to place new projects can be as crucial as the decisions to undertake them at all. Through location analysis, one can judge the economic soundness of plans to engage in particular activities at particular places. It is the application of the economic goal of optimization to matters of spatial distribution of economic activities.

#### B. LOCATION ANALYSIS

10. Transport: the question of location is essentially one of movement of goods



and services in space, and, consequently, transport is a key element in determination of the proper location of industry. Nations are not composed of isolated regions, and their geographic areas are somehow tied together. Similarly, the industries of a national economy are inter-related - the products of one are the inputs of a second, etc. Location of industry, therefore, depends upon a reliable transportation network that links plants with their suppliers and customers.

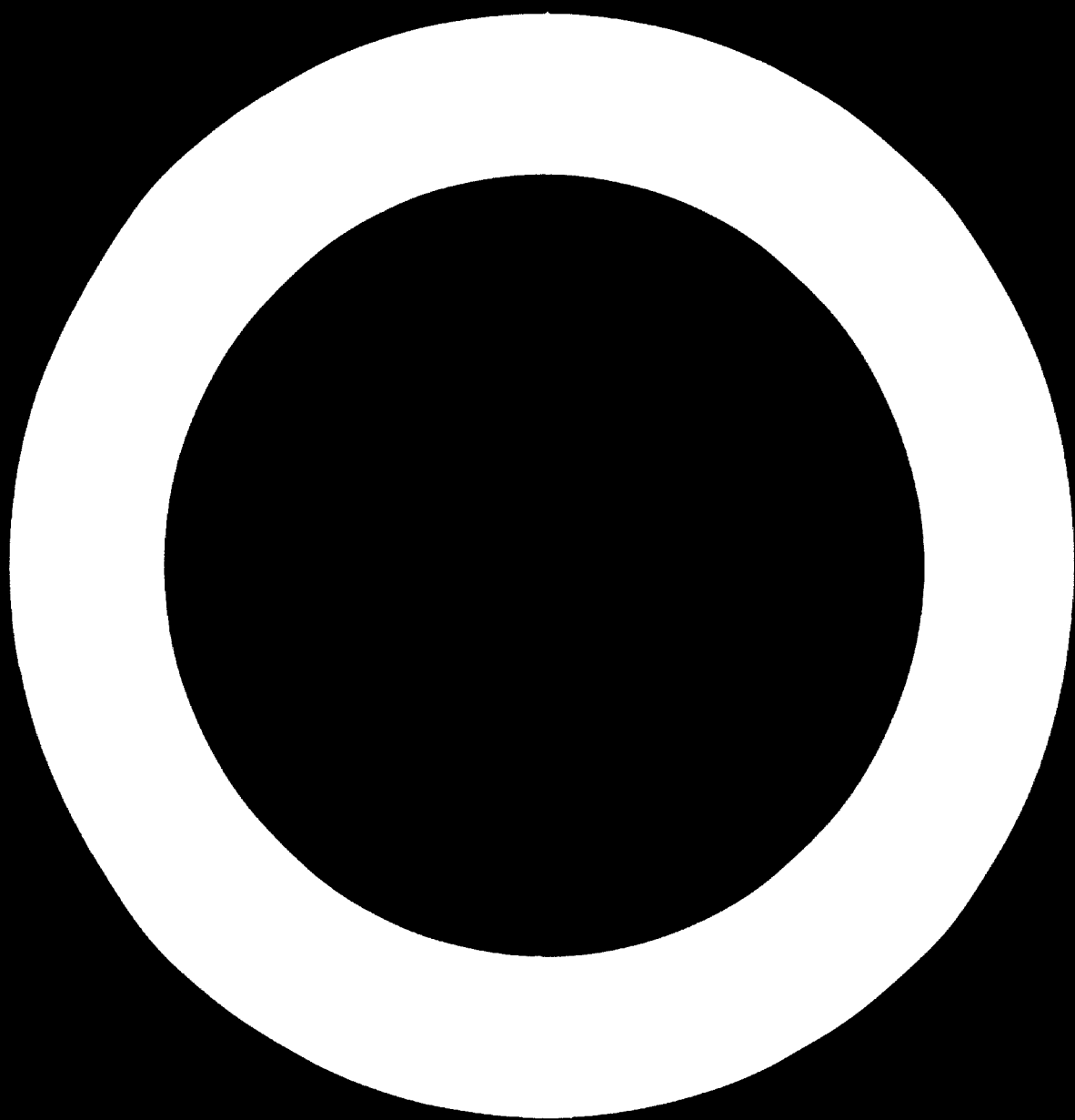
11. A denser network of transport routes permits less roundabout transfers and increases the number of points to be considered as possible production locations<sup>3</sup>. Thus, an inaccessible place suddenly becomes accessible and attractive to the location of industry when a railroad or highway is extended to it. In actual practice, the sequence of development of the area may be just the opposite - the starting of economic activity at a location induces the extension of the railroad or highway to it.
12. The optimum location for an industry or a plant is that from which it can serve the largest possible market for the least cost, including both social and private costs. In locational analysis, therefore, it is necessary to consider the number and location of the potential customers for the plant's products (including projections of demand into the future), the inputs needed and their location, the input costs and the prices at which the output can be sold, and the costs of transporting materials and finished goods.
13. Factor Endowments: besides attempting to minimize input and output transport costs, locational analysis must take account of plants' needs of the factors of production and the structure of their production costs, because the advantages they offer at particular locations may outweigh transport costs disadvantages.

(a) Land

14. Land, of course, is crucial in any consideration of location. In a broad

---

<sup>3</sup> Edgar M. Hoover, The Location of Economic Activity (New York: McGraw-Hill 1948) p.18.



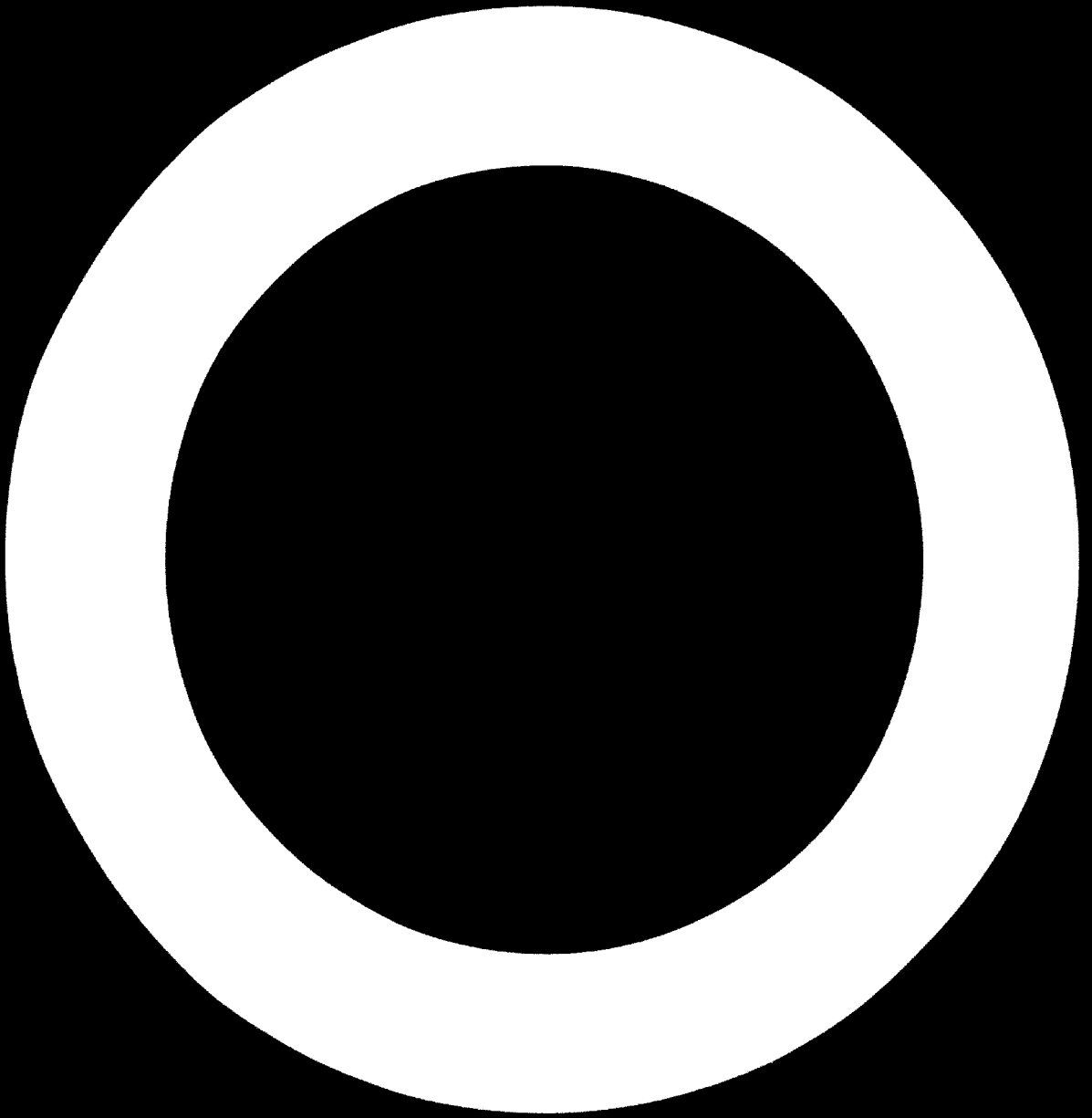
context. "land is defined to include the raw materials, fuel, and energy that are used in producing goods." Where these materials are bulky and hence, costly to transport, industries requiring relatively large amounts of them, will tend to locate close to the sources of supply. Natural resources, water, extensive plant sites, and favourable climate are not ubiquitous and so regions rich in resources vital to industrialization have an advantage for becoming more highly developed than less well endowed regions.

(b) Labour

15. Industrial activity also requires a supply of labour. In the absence of other compelling locational pulls, industries are attracted to cities because they offer large sources of labour from which to draw sufficient numbers of workers. This is of particular importance to businesses characterized by uncertainty of production schedules, because they must be able to hire additional workers on short notice.
16. For some industries, primarily those whose products are made by relatively unskilled workers and are highly competitive with respect to price, labour cost differentials become a significant locational influence. These generally less capital-intensive industries, in which labour costs comprise a significant part of the total cost of production, also tend to have low transport costs, e.g. textiles and apparel. Their proclivity, therefore, is to seek locations offering sources of cheap labour supply. Since in developing countries, almost all regions have abundant supplies of unskilled labour, such industries have wide freedom of locational choice, and they offer the most likely candidates for policies designed to increase industrialization in lagging regions.
17. Where special skills are required their availability becomes a major criterion of locational choice. A dearth of skilled and educated manpower, therefore, may make a region highly unattractive for the location of industry. Possibilities for overcoming such shortages include training programmes and policies designed to induce mobility of needed skilled manpower.

---

<sup>4</sup> See, for instance, N. Njekrasov, "Zonal'noje Razvjesjtslenije Chimitsjeskoj Industrii," Voprosy Ekonomiki Moskva, March, 1964, for a discussion of the importance of raw materials, water and energy in the location of chemical industries in the Soviet Union.





18. In the developed nations, mobility of labor is high, particularly in the technical and professional categories. This may be the same for developing nations, but it is concentrated by a few urban centres. Some people, particularly those in the rural areas, are relatively scarce and they exhibit specific skills. In the urban areas, the availability of technical and professional labor is to a lesser degree of operative skills. This is a major factor in the location in developing countries.

19. A classic question in location theory is whether it is more advantageous to move industry to people or people to industry. The pushing migration of people rests on the fact that the rate of growth is due to its being an unproductive sector, whereas the pulling migration is taking advantage of superior production possibilities. The case for moving industry to where the people are is more difficult in the case of population through emigration are most difficult to deal with because of more social overhead investment in housing, education, etc. The only real case of shifting to where people are to people is that applied to "infant industry" arguments. Is a protective tariff or a subsidy temporary?

(c) Capital

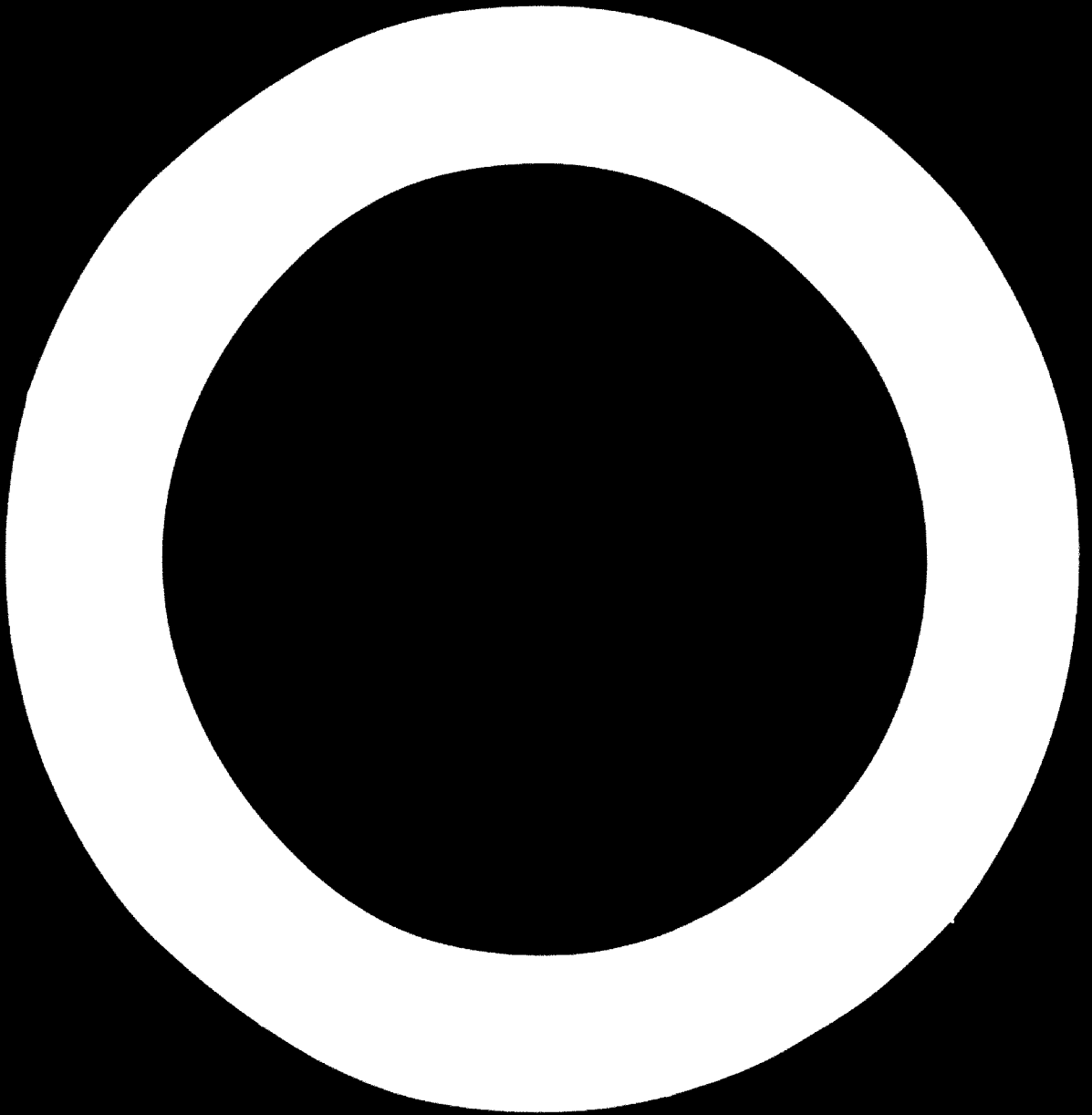
20. In centrally planned economies, capital is not a locational variable but in market economies, when a venture demands upon private capital, the availability of capital is different. In a market economy, although capital is the most mobile of the factors of production, its mobility may be dependent upon knowledge of the probability distribution on returns. The case of transferring confidence, therefore, may yield a capital supply function which operates as a variable. This may help to explain why development is often located most distant from existing centres of economic activity.

21. The other factor endowments in addition to land, labor, and capital

5 See Salvatore Schiavo-Campo, 1966, Skills and Regional Development: The Case of Mexico, paper presented to the Second International Conference on Regional Planning, Rio de Janeiro, August 1964.

6 Edgar M. Hoover, op. cit., p. 276.

7 Benjamin Chichis, "Contracts in Agriculture," Journal of Agricultural Economics and Proceedings, American Economic Association, May, 1961.



to be considered with respect to the location of industry. A region may grow for historical reasons: industry started there and growth begets further growth. The original developers may have lived there, or it may have been economically rational - an industrial complex may have arisen at a port city at river junction, and even though river traffic is no longer of consequence, the advantages of the early development continue to attract new industries.

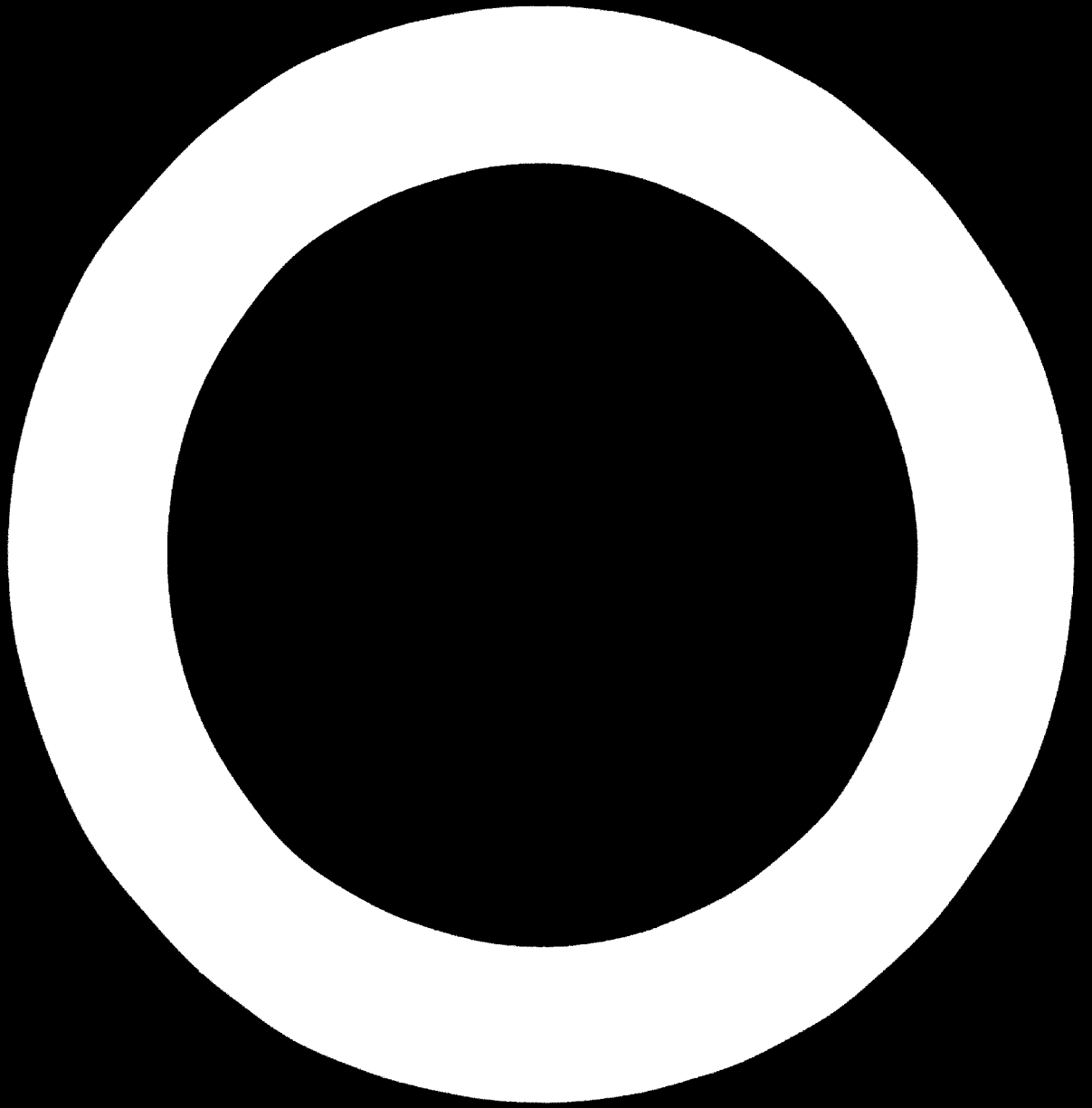
(d) Degree of Urbanisation

22. The vast literature on urbanisation indicates that the social and cultural amenities - theatres, concerts, museums, schools etc - offered by major cities tend to draw people and business to them. Many economic activities, moreover are dependent upon quick delivery or upon face-to-face contact between producers and their customers between manufacturers and the suppliers of their intermediate products, and between manufacturers and those who provide business services to them, e.g. accountants, lawyers, designers, advertising agencies, management consultants etc. The recent study of the New York Metropolitan region described the Manhattan luncheon table as a "provider of ideas" far more valuable as a cost saver to some types of pursuits than the user cost of labour, space or transportation in other locations would be. The role of the city as a generator of economic activity is universally true.

(e) Entrepreneurship

23. In market economies, entrepreneurship also plays a role in the location of industry. Theoretically entrepreneurship, as capital, is supposed to be mobile but firms may locate in particular places because their managers prefer to live there. Courlet, for instance, found that one of the reasons for the concentration of Greek industry in the Athens area was that management was localised there. The immobility of management was due in turn to the social life that Athens offered as well as the identity in a less developed nation of entrepreneurship and management.<sup>8</sup> Furthermore for various historic, economic and cultural reasons, one area may produce more entrepreneurs and generate more capital to be used intra-regionally than another. This is often particularly true in developing nations which tend to suffer from shortages of entrepreneurship and savings.

<sup>8</sup> George Courlet, The Localization of Greek Industry (London: Centre of Economic Research, 1959) pp 136-137.



(f) Government Policy

24. Finally, government policy itself becomes a locational factor. Places differ in their attractiveness to industry because of differences in tax burdens, zoning regulations, labour and social welfare laws, political stability and a host of other government-related factors. In centrally-planned economies the role of government policy with respect to location of industry is, of course, crucial, but even in market economies, governments have adopted policies designed to influence the pattern of location of economic activities. Government decisions whether based on political motivations or economic criteria thus assume extreme importance in the location of industry. The great stress in recent decades on regional development is indicative of this, and there are examples from all nations of the growth of particular regions because of governmental actions. e.g. the trans-Ural (Western Siberia) region of the Soviet Union and the Tennessee Valley of the United States.

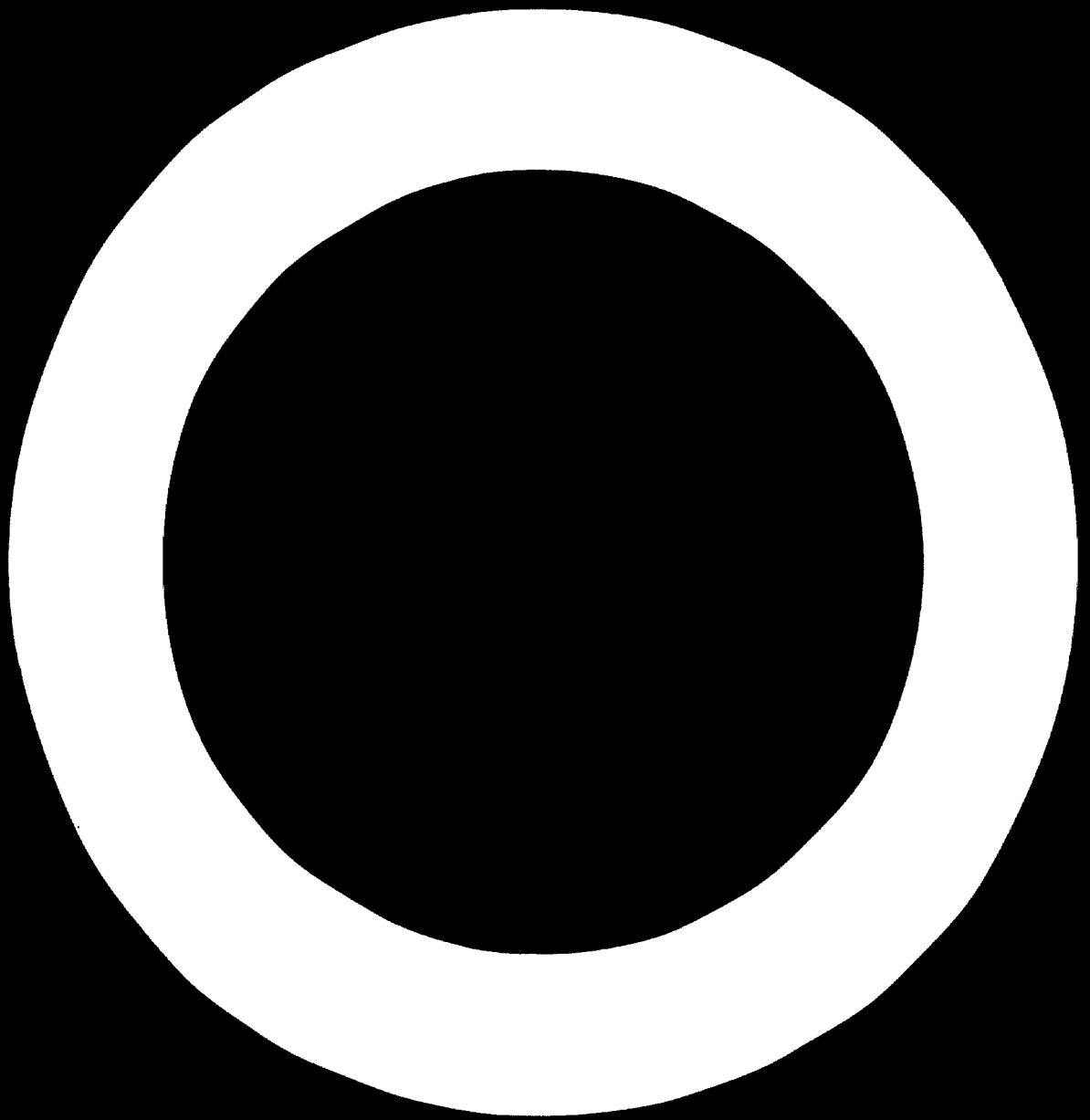
25. Agglomeration Economies: location analysis must also examine agglomeration economies, for the very process of economic growth often alters locational orientation - expansion of the market for a product leads to larger scale production which includes economies of scale and factor substitution or the development of external economies as large industrial centres come into being.

(a) Economies of Scale

26. Increasing returns to scale means that production costs per unit of output decrease as production levels increase. Therefore, it is necessary when planning new industrial activity to compare the advantages of a few dispersed plants serving more geographically limited markets, but enjoying low transport costs, as against the lower production costs of a larger plant. It may be that the latter's economies of scale may overcome the additional transport costs, and permit a centralised location to serve a much wider market area.

27. Isard has extended the discussion of scale economies beyond that of the single activity to the location analysis of industrial complexes in his Puerto Rico study<sup>9</sup>. Taking account of factor and product substitution (based on

<sup>9</sup> Walter Isard and Thomas Victoris, "Industrial Complex Analysis and Regional Development with Particular Reference to Puerto Rico". Papers and Proceedings of the Regional Science Association, 1955.



different relative prices and the fact that changes in prices may lead to a process change and thus influence factor proportions and the inter-relationships of an industrial complex, he made recommendations concerning the geographical location of petrochemical complex best suited for Puerto Rico.

(b) Localization Economies

28. While the large-scale producer can achieve internal economies, small-scale producers can realize external economies by concentrating in one area. Because of the existence there of specialized firms which provide services to many of them and a pool of labour to which they have access.

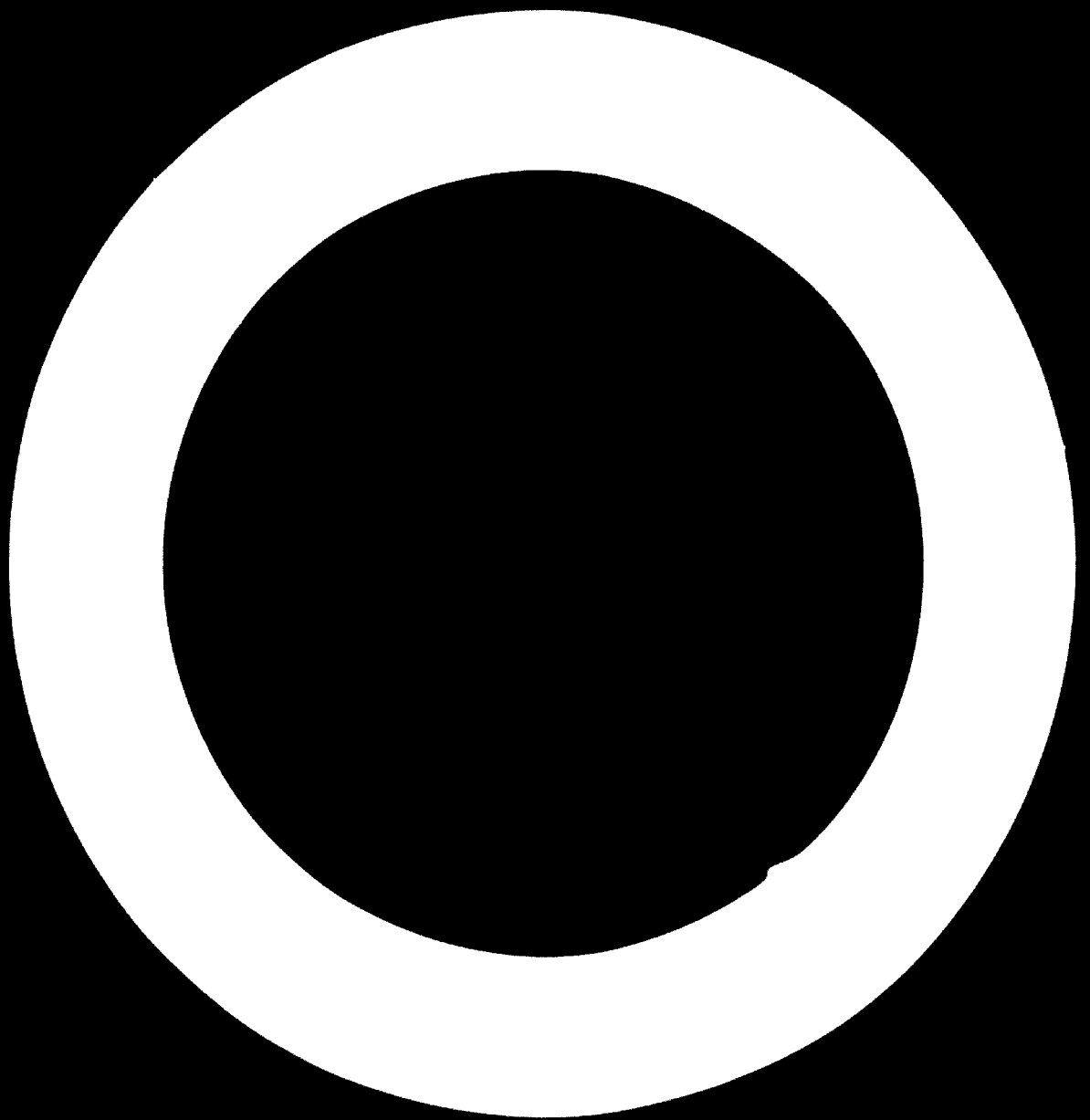
(c) Urbanization Economies

29. Urbanisation economies also accrue to firms concentrated in one centre. Plants located in major urban centres are able to purchase from and sell to each other intermediate products, and to utilize the services of research laboratories and universities. The cost of needed infrastructure, often prohibitive for any given industry may become tolerable if spread over several industries. Co-existence of many diverse activities in the same geographic area may lead to the spreading of a generalized "industrial mentality", in addition to the creation of transferable operative skills. The existence of auxiliary industries and services in an area will often prove to be instrumental in rendering a new industry profitable. Substantial reductions in manufacturing costs, and an all-around rationalization in production practices and management may ensue from vertical integration of production.

30. Agglomeration economies assume their greatest relevance when viewed dynamically. The location of a new industry may generate the growth in that region of suppliers of intermediate products ("backward linkages") and/or constitute the basis for the rise of industries that utilize its products ("forward linkages"). The concept of the industrial complex is one, of course, that seeks to locate a group of activities that are so interrelated.

(d) Agglomeration Diseconomies

31. There are agglomeration diseconomies, as well as economies. The system

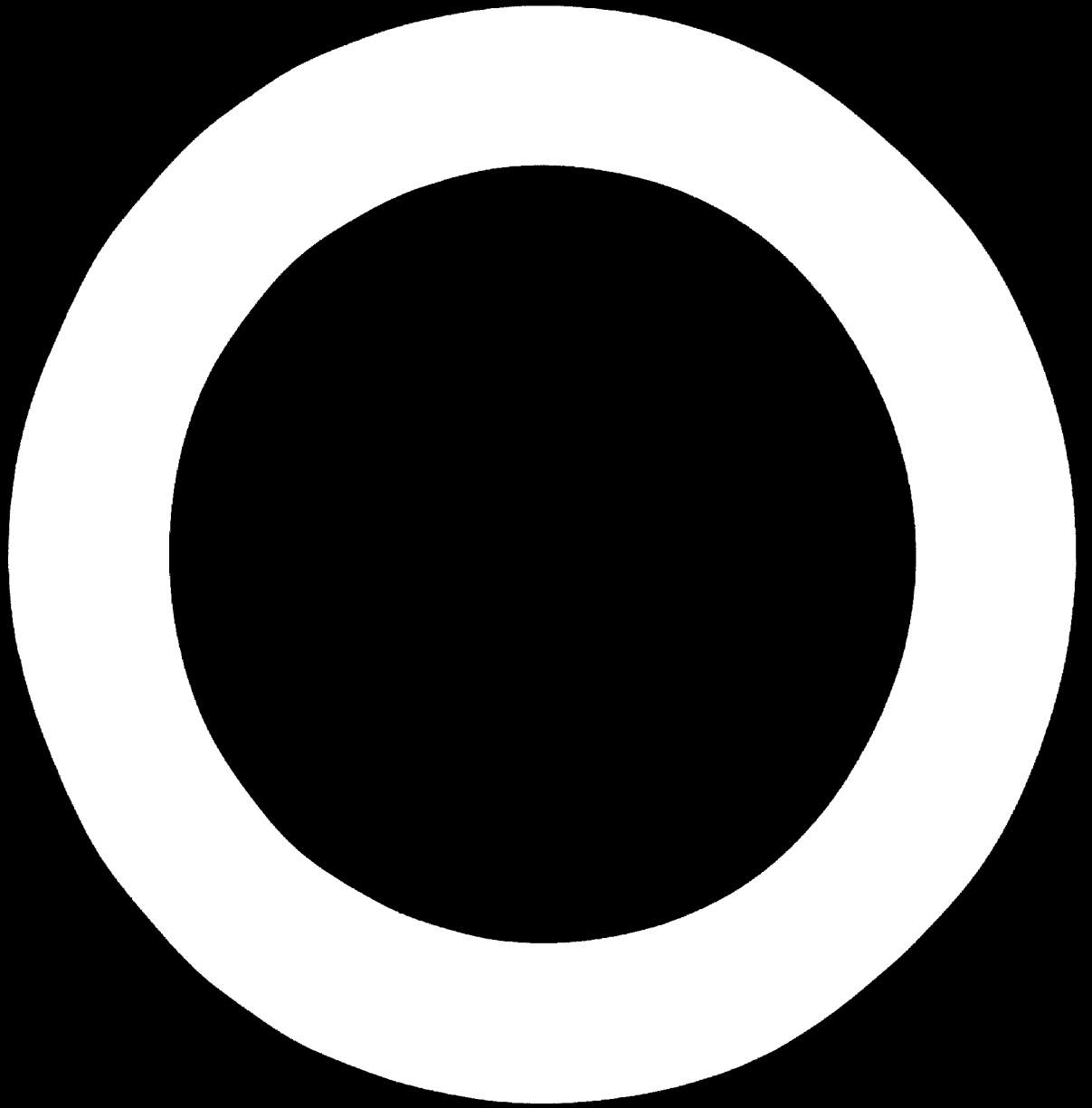




from increases in living costs and wages. In the case of local industries produced under conditions of diminishing returns, in the case of other costs of transportation, and in values and services. Traffic congestion in the large metropolitan centres is an obvious example of such diseconomies. In the context moreover, that concentration of industry continues to take place in large cities because the diseconomies appear as so high, other costs are not properly allocated to the cost structures of the individual establishments. It is, however, maintain that the importance of agglomeration diseconomies, including social as well as private costs, are grossly exaggerated.

32. Regional and Urban Planning: In practice, location analysis must be supplemented with regional analysis, for decisions to undertake industrial activities at a place can become the basis for the generation of further growth there. Regional economic analysis, therefore, can enable planners to identify the most promising regions for the location of industry in order to achieve multiplier effects and maximize national growth potentials. National, engaging in regional development, moreover, must coordinate regional with national plans to insure that they are working towards the same goals.

33. Urban planning is also essential, since urban areas are most attractive industrial location. The metropolitanization of the cities in the developed nations has focused attention on the problems of urban planning to meet their needs. In France, much research and action has been designed to disperse industrial concentration in the Paris region and disperse industry to other locations. The New York metropolitan region, probably the world's largest urban conglomeration, was the subject in the late 1950's of intensive economic analysis. The study culminated in a series of books which shed light not only on the New York region, but on urban problems and location of economic activity in general. One of its most interesting findings in terms of location of industry was that despite the relative loss of wage-oriented sectors of many industries, the New York region has held on to about 12 percent of the United States' manufacturing employment, largely because of its role as an industrial "nursery". The region has continually attracted rapidly growing industries because of the environment it offers them - many specialized subcontractors to service small



provides a base of communication with multitudes of small and medium-sized  
of labor possessing varied skills and products. Factors are identified  
contacted for. All these reduce the investment requirements of many of the  
companies.

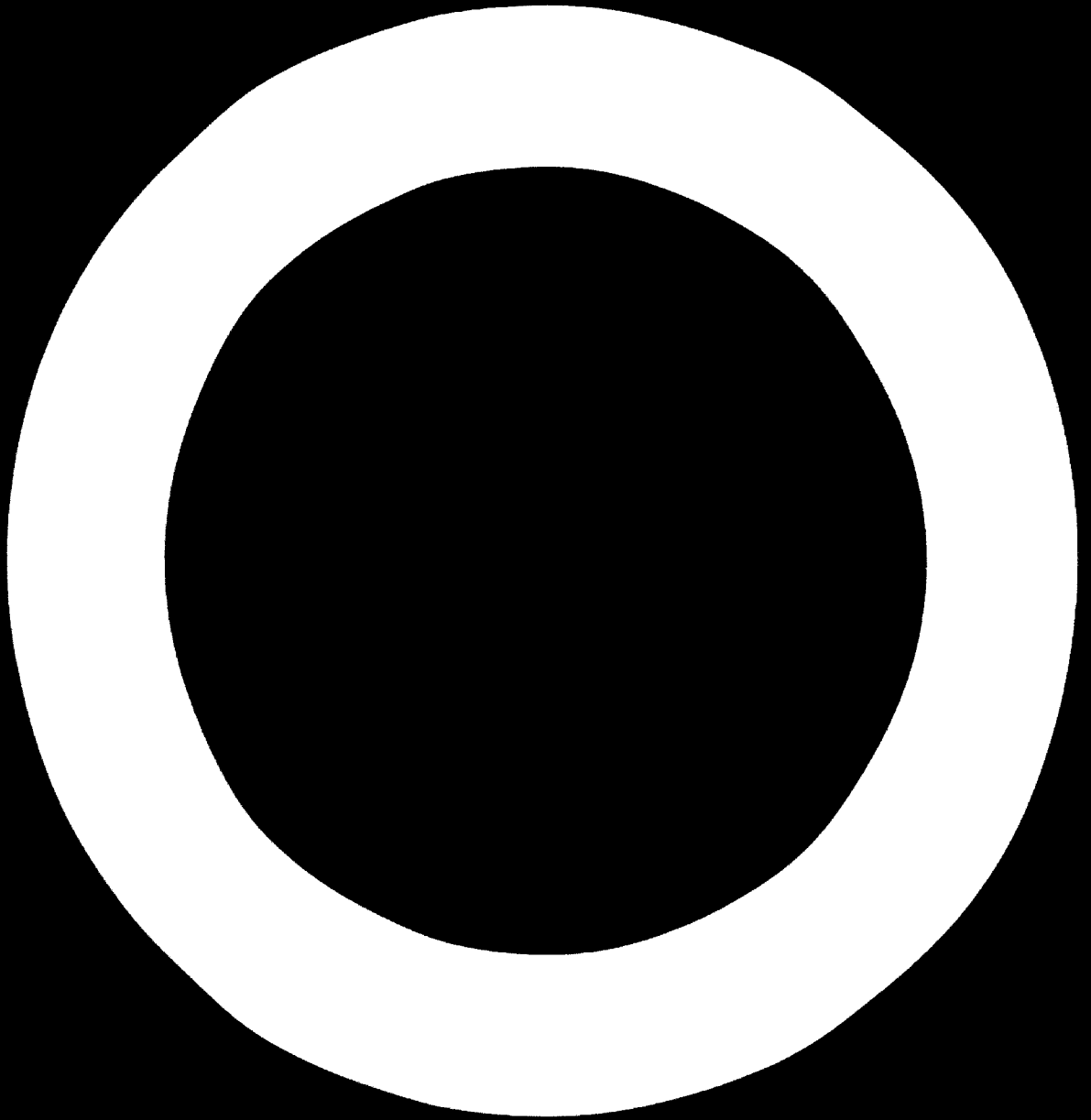
34. Developing nations should be aware of the tremendous advantages which  
offer as industrial locations, and instead of desiring to be free plan for  
orderly growth. Such planning must take account of people's needs for  
consumers of industry's products and suppliers of basic services to industry  
need factories and the like in which to work and earn a livelihood, homes  
in which to live, educational institutions for their development as people, and  
citizens' recreational facilities for their leisure time, and other means of  
getting from one to the other. Urban planning, therefore, should give the  
role as a growth pole for economic development, and at the same time, also  
providing a decent environment for human habitation. These developing nations  
concerned with over concentration in one or two major urban conglomerations  
instead of dreaming of dispersing industry to the villages, might more fully  
fully seek to develop infrastructure and other social overhead capital in a  
couple of other promising areas and so make them attractive for location of  
industry.<sup>10</sup>

### C. LOCATION AND REGIONAL DEVELOPMENT PROBLEMS

35. While developing nations should be cognizant of the importance of location  
criteria they also should understand that there may be limitations in applying  
them to their situations. First of all, there will be times when locational  
decisions will be made on the basis of motivations other than economic opti-  
mization. For political reasons, perhaps in order to foster national unity,  
plants may be built in a particular region, even though it is economically  
not the best place for them, that is, they will yield a smaller return there  
they would have in a different location. The nation, however, should at least  
be aware of the economic costs involved, and exercise extreme care that the  
locational decision does not seriously retard its economic development. If  
does, then neither economic nor political aims will be realized.

10

For a discussion of the formation of growth centres as part of a program  
regional development in the Soviet Union see S. Tokariev, "Ekonomika  
Sobremennogo Nazmjenitajemija Ekonomitjelnych sidov. Prilozenie 2, 2  
1961, 1962. Tjehrititsjeskaja, 1962. For more information see  
November, 1962.



16. More importantly the vast bulk of theoretical and empirical research on location relates to the situations in the more developed countries. In these countries infrastructure is generally poorly developed and is a constraint on the growth of lesser developed nations. locational choices are usually severely limited and industry tends to become concentrated at a few points exhibiting agglomerated economies. Albert O. Hirschman has advocated a strategy of economic development in which efforts would be concentrated in the areas containing the major metropolitan centres with development spilling over from them to other regions. According to Hirschman:

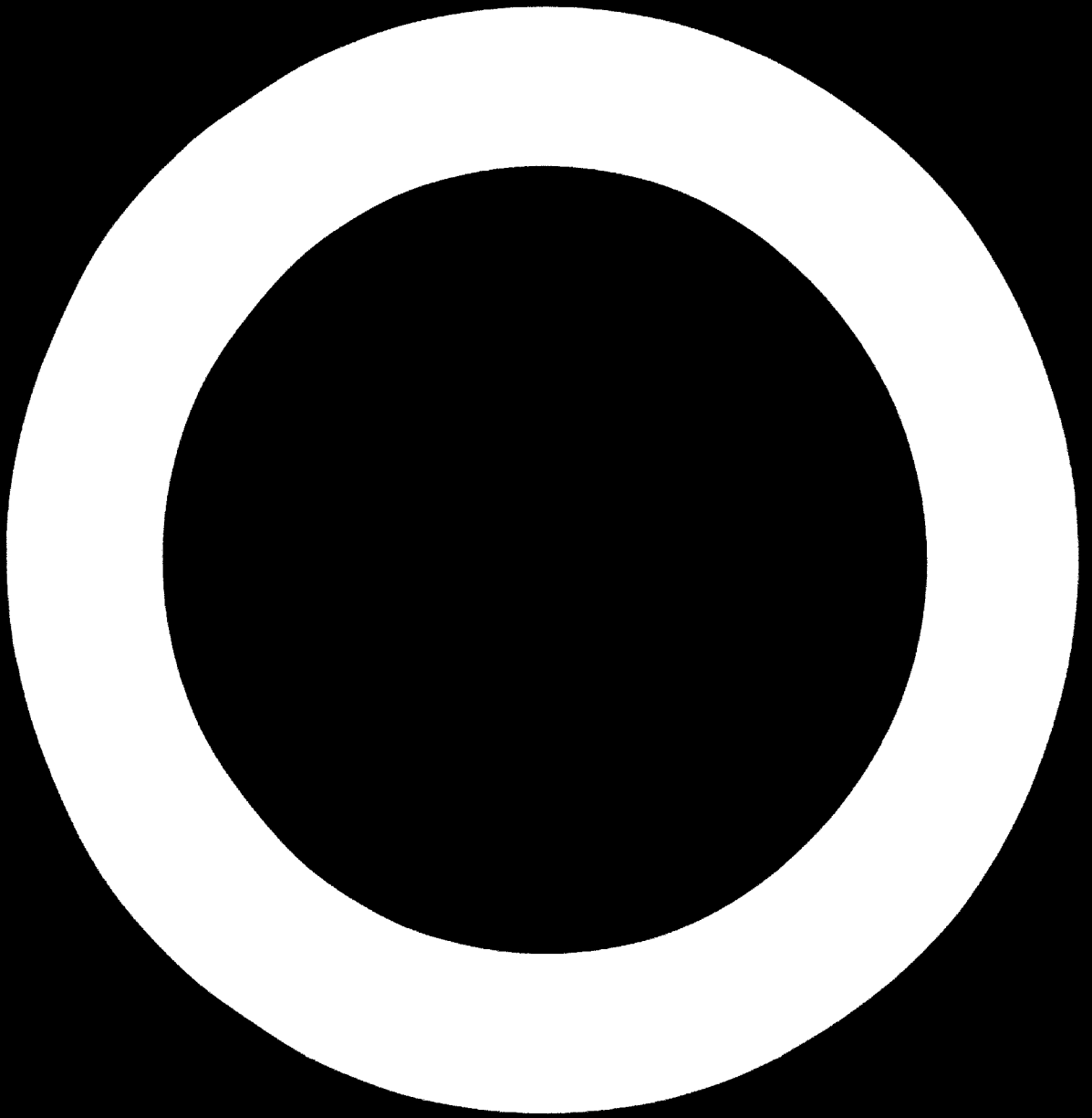
"Whatever the reason, there can be little doubt that an economy to lift itself to higher income levels, must first develop with itself one or several regional centres of economic strength. The need for the emergence of 'growing points' or 'growth centers' in the course of the development process means that international and interregional inequality of growth is an inevitable concomitant and condition of growth itself.

"Thus, in the geographical sense, growth is necessarily unbalanced".

17. The role of government planning in developing nations, particularly as to the regional allocation of public investment, is crucial. Given the shortage of capital that plagues developing countries, decisions as to where to invest as well as in what types of projects, can determine the success or failure of industrial ventures. A geographically-wide dispersal of public investment, particularly of the infrastructure type, may prove of little value to any industry or region, whereas a massing of capital-intensive public investment in one or two places at a time may induce further investment and growth at those locations. Malcolm Rivkin, for instance, in his analysis of Turkey's efforts to disperse industrial development, reached the conclusion that area development efforts are most effective when made on a selective, concentrated basis in peripheral regions of high growth potential instead of scattered widely over the country.<sup>12</sup>

<sup>1</sup> Albert O. Hirschman, The Strategy of Economic Development (New Haven: Yale University Press, 1958), pp.183, 184.

<sup>2</sup> Malcolm D. Rivkin, Area Development for National Growth: The Turkish Precedent, New York: Praeger, 1965.



18. Such a policy may be particularly effective when implemented in a region in which development has already gotten underway. It is rather dangerous, therefore, to stray away from such a policy on the grounds that it may seem to help those who are best able to help themselves and to neglect the plight of the lagging regions of the country. Writing in the same volume, Lefebvre and Lefebvre pointed out to the Indian Planning Commission that:

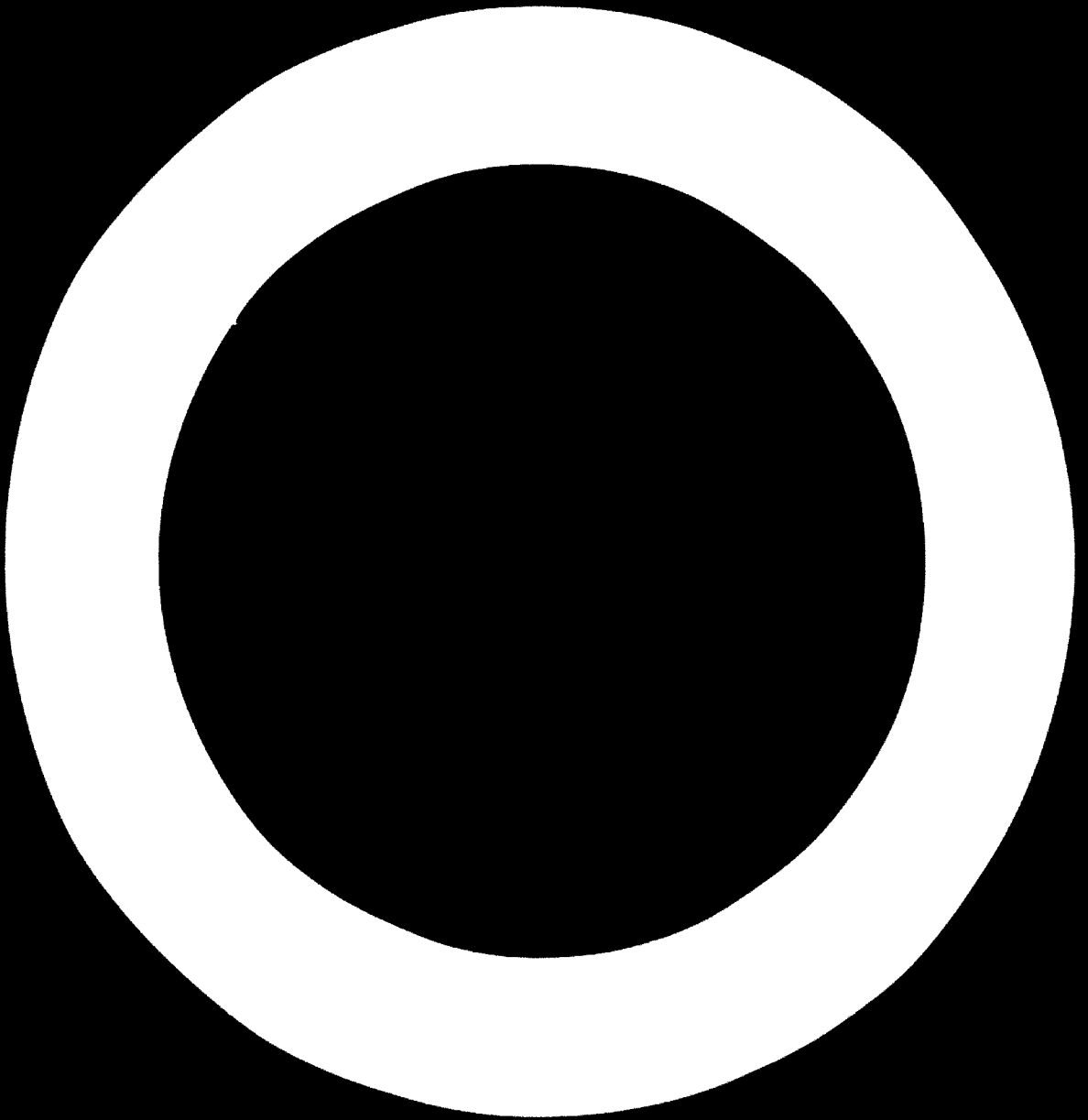
It is a paradoxical but inevitable fact that in order to accelerate the future development of retarded regions, the growth of and activity in more advanced areas must be encouraged. If the latter should receive insufficient investment the very opportunity to accelerate the latter and the advancement of retarded areas will be destroyed.<sup>13</sup>

19. A recent OECD conference on regional planning in Greece, Israel, Portugal, Spain, Turkey and Yugoslavia brought forth the view that most countries held that "the first concern of development policy must be to promote a vigorous economic expansion for the nation as a whole" and was tended to "steer from the thrust of industrial activity in the more advanced regions." "Interference with this process therefore in the interests of specially unfavourable regions will inevitably obstruct the attainment of national growth targets."<sup>14</sup> Yet most of these countries had embarked on regional development actions in order to correct some of the glaring interregional inequalities. It was reported that in Turkey, regional development was being identified with national development policy and being based on considerations of efficiency rather than welfare. In Spain regional development sought to exploit the industrial possibilities of the most promising growth points. Greece too indicated that its way to regional development no longer lies through the special nurturing of the underprivileged areas.<sup>15</sup>

<sup>13</sup> Louis Lefebvre, "Regional Allocation of Resources in India". In Paul Rosenstein-Rodan, Pricing - Fiscal Policies: A Study in Method, and reprinted in John Friedman and William Alonso, editors, Regional Development and Planning (Cambridge, MIT Press, 1964), p.645.

<sup>14</sup> Regional Development and Accelerated Growth Organization for Economic Co-operation and Development, December 1965, p.12.

<sup>15</sup> Ibid., pp.16, 17.





... of certain...  
... location...  
... if...  
... in...  
... only in... regions...  
... interest of the public...  
... stress in development...  
... the rate of economic growth...  
... regional development...  
... that is... investment...  
... that the existence...

... with...  
... of manufacturing...  
... plants...  
... as a result of...  
... is extended only for a temporary...  
... stand on their own...  
... the choice of location was an...  
... economic...

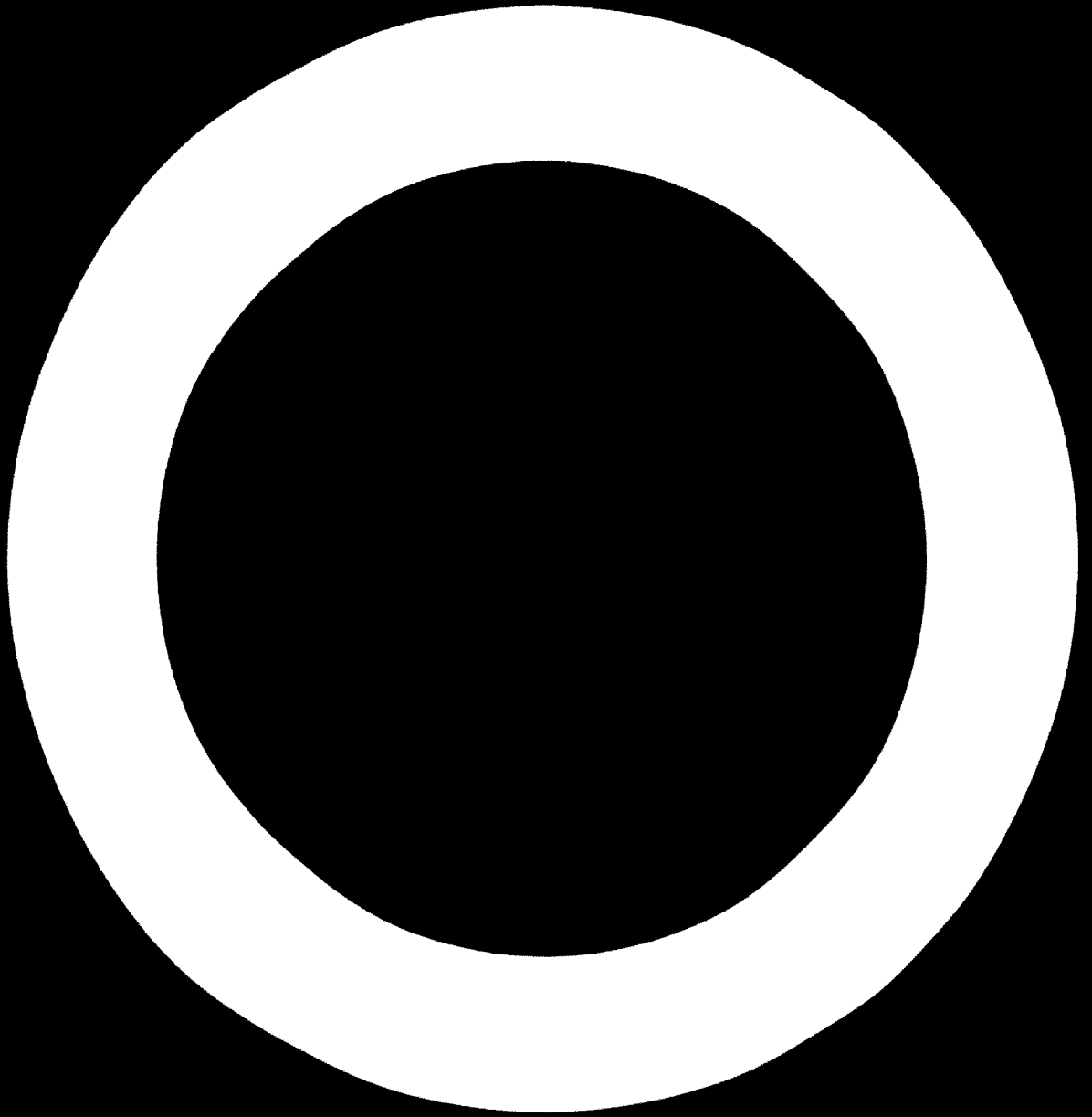
42. Administered prices can act as...  
... particularly true with respect to freight rates...  
... ing growth in some areas or inducing the establishment of manufacturing fa-  
... facilities in uneconomic locations and a consequent waste of resources...  
... railway rates are accused of discouraging milling "in the producing areas...  
... where it logically should take place since the commodity is...  
... bulk in processing".<sup>16</sup>

43. The very process of development has tremendous impact on locational  
criteria. Location theory accepts transport facilities as... as the  
transportation network improves and markets grow and spread, many industries  
tend to... raw materials - and more market-oriented. The expense

<sup>16</sup> Samir P. Bhatia, The National Cost's Approach for the Planned Economic  
Development of India, Pottersdam, 1964.

<sup>17</sup> Ibid., p. 140.

<sup>18</sup> Ibid., p. 147. Refer to... as a... example of...  
... conditions... economic waste as a result of...  
... distorted prices.



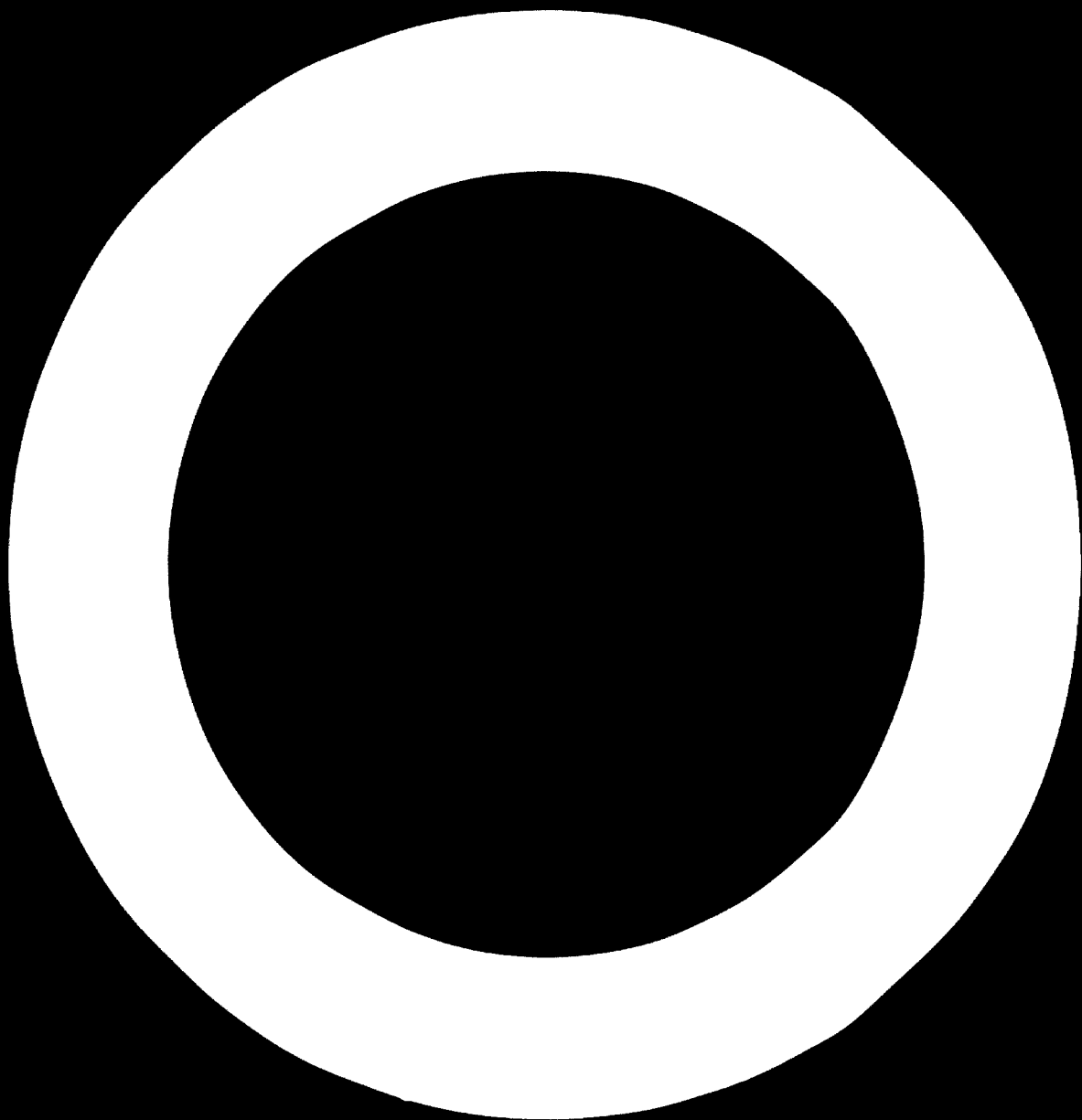
transportation facilities means that formerly inaccessible regions are now open to economic growth. The growth of markets moreover permits plants to enjoy economies of scale and production need no longer be tied solely to the few points offering external economies. In practice economies of scale are not a centralized location of production because the large plant can serve a larger market area. There is evidence from the very highly developed nations that as economic development continues beyond a certain point there is a reversal of regional decentralization trend because of the growth of demand in remote more regions of the country up to the point necessary to provide sufficient markets for plants of efficient size.

### DISCUSSION

Despite their limitations, location criteria can be employed for considering the crucial issues with respect to the location of industry within a programme of economic development. Thus, the proposal that nations seek "balanced" regional development can be put to the test in specific situations of what is such a policy means locating industries incorrectly, that is, ignoring the comparative advantage of particular regions and not maximizing opportunities for future growth of the nation's economy.

A particular shortcoming of the "balanced" regional development approach is its failure to recognize that decision-making capability is a principal scarce resource in developing countries. Recognition of the scarcity of decision-making capability means, among other things that interaction of ideas and personal contacts among decision-makers in industry are necessary to induce investment and, consequently, that industry should be concentrated.

4. The size of the country of course has an important bearing for in a very large nation (India and Brazil may be cases in point) it may be feasible at even low levels of development to have a number of growth centres rather than only one or two. In smaller developing nations given the size of the domestic market and technical factors, the number of plants of efficient size that can operate profitably is limited, particularly if agglomeration of plants of different industries brings further improvements in efficiency.



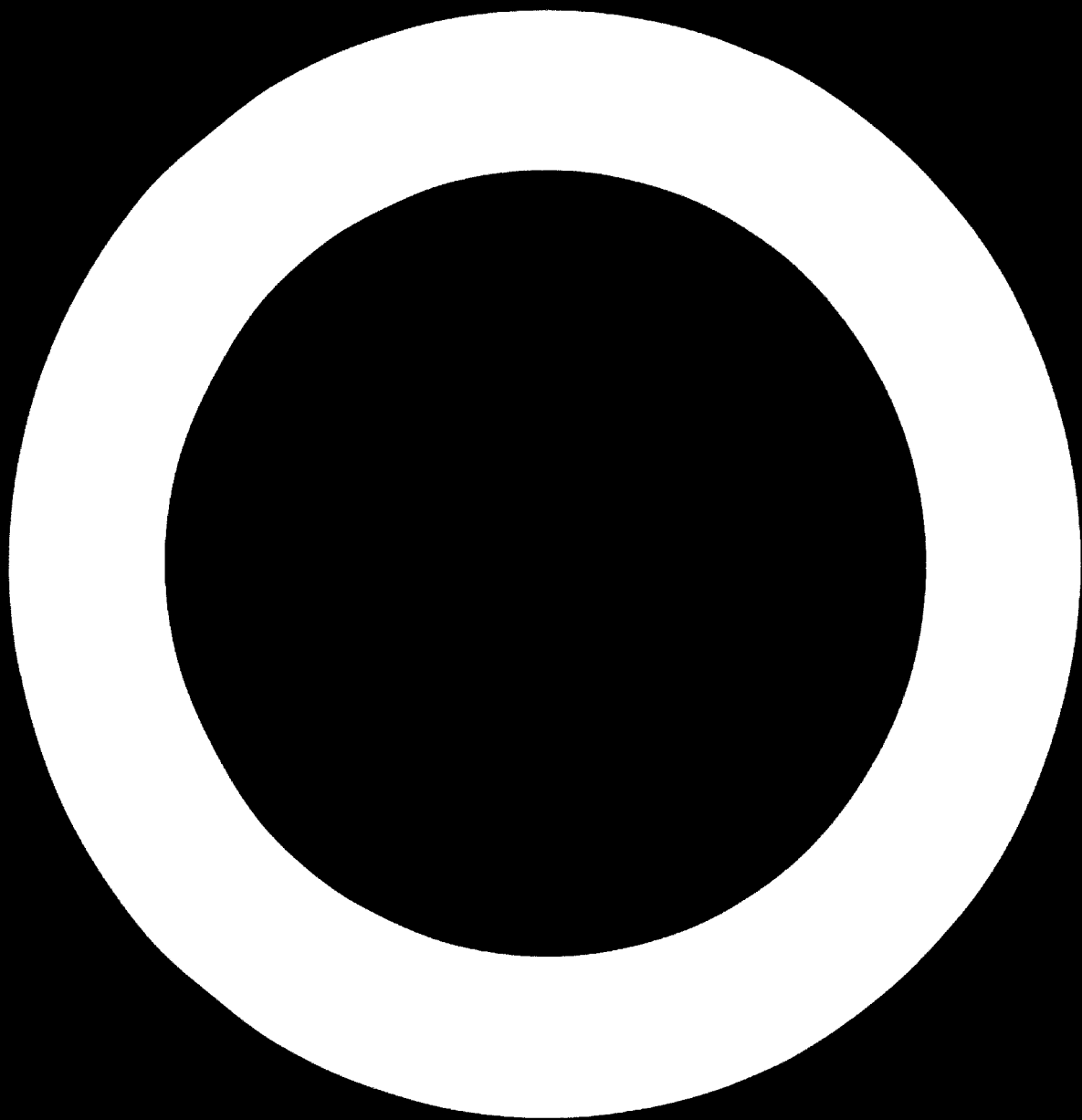
Attempts to invest in a larger number of smaller plants scattered in different regions can be very costly and can seriously damage the country's chances for sustained growth.

47. Questions of dispersion or concentration of industrial activity and town vs. metropolitan area-centered location, therefore, must be judged in terms of comparing the economics of spatial juxtaposition and the diseconomies of agglomeration. It seems that an advisable pattern of location is a geographically-concentrated one, rather than a dispersed one, until a degree of concentration is reached at which external diseconomies arise and decision-makers become plentiful. Such a point has not been reached by many developing countries.

48. Also, due to the existence of scale economies, external economies, and a powerful attraction toward urban living, there is a very strong natural tendency for industries to agglomerate in a few centres. If the developing country already possesses an infrastructural and transportation network, the natural tendency to agglomerate will be re-inforced by gravitation of industry toward nodes of the network.

49. Two important conclusions may be drawn from the above considerations. The first is that, in the absence of government policy designed to counteract it, there will prevail in most developing countries a tendency for industry to concentrate in a small number of "central" places. The second is that in most cases this tendency is beneficial for national economic growth and should not be opposed but, rather, favoured by policy measures tending to raise even more the growth potential of the areas of agglomeration. The choice of the pattern of geographical distribution of industry most conducive to national growth in the long run is thus not a choice between a "centralised" and a "dispersed" pattern, but simply a choice between alternative geographically-concentrated location patterns.

50. A related aspect of this basic choice (in fact, the same choice viewed



in a different geographic dimension) is the question of the costs and benefits of urbanization in developing countries. Most of the above considerations apply also to the question of urban concentration versus dispersal to small towns. Even if urban costs rise after a certain point, productivity may rise even faster (by reasons of external economies or economies of scale) and big cities may yield a greater net return per worker or inhabitant than small ones. William Alonso contends that "there is no basis for the belief that primacy or over-urbanization per se is detrimental to the efficiency goal of economic development." On the contrary, "there are good grounds for believing in increasing returns to the urban size".<sup>20</sup> Excessive concern, therefore, with policy goals such as the prevention of "congested" areas can be dangerous, given critical shortages of capital, markets, managerial talent and skilled manpower, the choice often may not be between further development in region A versus new development in region B, but between further development in A or nothing.

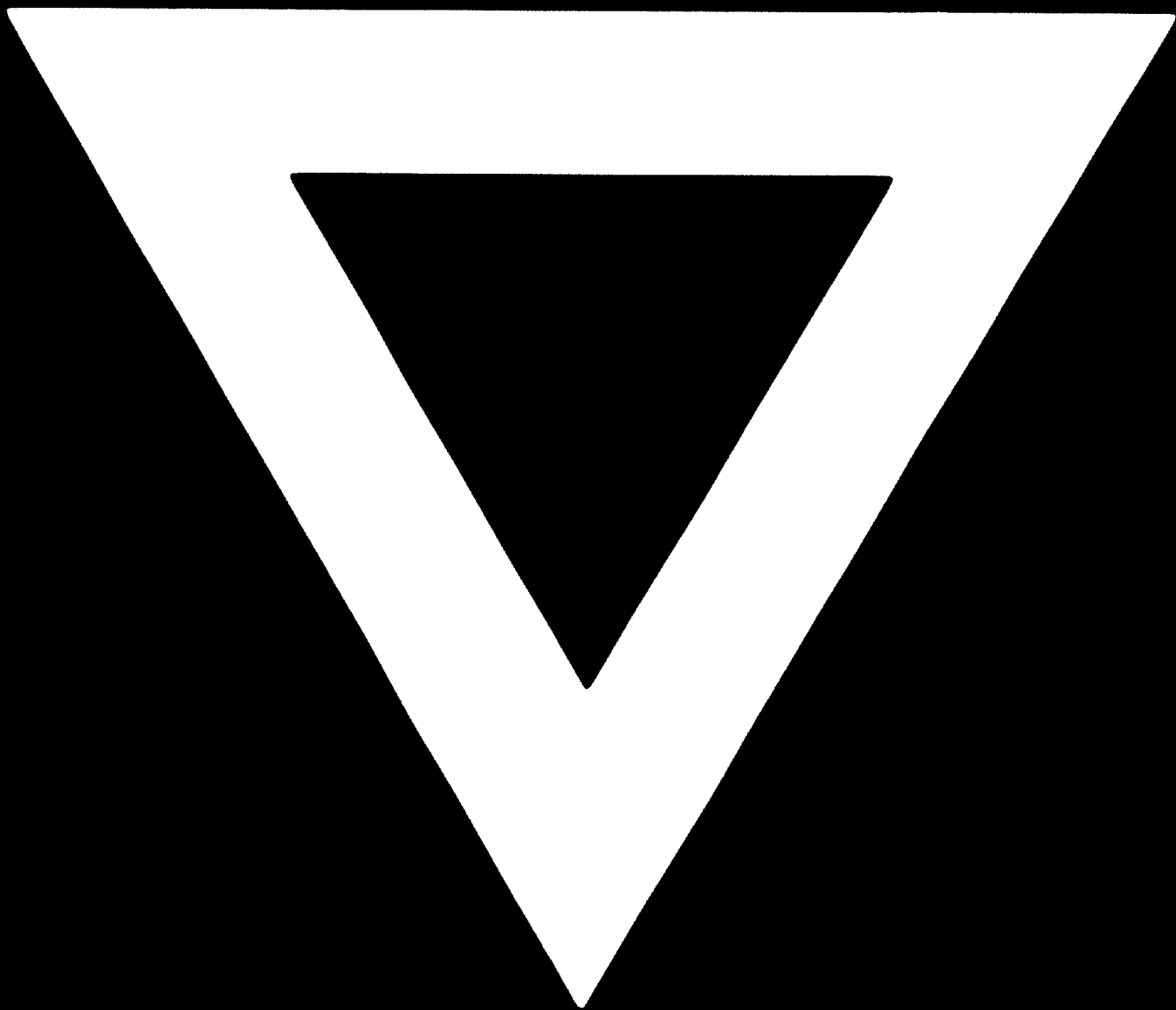
51. In summary, the aim of location analysis is to contribute to providing a framework for developmental decision-making that will help nations to achieve the most productive uses for their scarce resources and maximize potentials for further growth. If nations choose the goal of long-run economic growth then they will in most cases have to accept as inevitable a location pattern of unbalanced regional development, geographical concentration and continued urbanization.

---

<sup>19</sup>William Alonso, Location, Primacy, and Regional Economic Development, paper presented to the Second International Congress of Regional Planning, Rio de Janeiro, August, 1966.

<sup>20</sup>Ibid.





**76.01.16**