

205
/SPATIAL INEQUALITY IN POLAND, 1945 - 1981/

by

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TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	ii
LIST OF TABLES	v
LIST OF FIGURES	vi
Chapter	
1. INTRODUCTION	1
REGIONAL PLANNING: A BRIEF REVIEW	2
REGIONAL DEVELOPMENT AND CAPITALISM	5
PURPOSE OF THE STUDY	6
2. EVOLUTION OF REGIONAL PLANNING IN POLAND	10
THE FOUNDING OF REGIONAL PLANNING OFFICES IN POLAND	10
THE SCOPE AND LIMITATIONS OF REGIONAL PLANS	15
DEMANDS FOR A NATIONAL DEVELOPMENT PLAN	17
NATIONAL INVESTMENT AND DEFENSE PLANS	19
THE LEGACY OF THE INTER-WAR PERIOD	21
3. PLANNING INSTITUTIONS IN POLAND	25
PLANNING INSTITUTIONS	26
Centralization and Reorganization, 1950-1955	28
Perspective Planning	32
REGIONAL VERSUS NATIONAL PLANNING	34
4. REGIONAL DEVELOPMENT POLICIES	39
THE ADMINISTRATIVE DIVISION OF POLAND	39
POST-WAR SPATIAL POLICY IN POLAND	43

TABLE OF CONTENTS (continued)

i)	Post-war reconstruction	45
ii)	Centralization and reform	49
iii)	Extension of the resource base	55
iv)	The perspective period	59
	SUMMARY	64
5.	AN ANALYSIS OF SPATIAL EQUITY IN POLAND	67
	THE MEASUREMENT OF REGIONAL DEVELOPMENT	69
	METHODOLOGY	71
	INTERPRETATION OF DATA	77
	INDICATIONS OF CONVERGENCE	100
	SUMMARY	114
6.	CONCLUSION	118
	BIBLIOGRAPHY	122

LIST OF TABLES

Table	Page
1. Regional Planning Offices in Poland in 1937	13
2. State Investment Plan, 1948	48
3. Polish Hard Currency Debt to the West, 1971-1979	61
4. Z-scores, 1955	78
5. Z-scores, 1960	79
6. Z-scores, 1965	80
7. Z-scores, 1970	81
8. Z-scores, 1975	82
9. Z-scores, 1981	83
10. National Income, 1960	91
11. Net Value Added In Industry, 1960	93
12. Poland: GNP by Sector of Origin, 1965-83	99
13. Gini Coefficients, 1955-81	102

LIST OF FIGURES

Figure	Page
1. Planning Regions in Poland, 1937	14
2. Communications Network Proposed by National Planning Office, 1937	16
3. Spatial Planning Offices in Poland, 1947 to 1949	29
4. Polish Spatial Planning System	35
5. Administrative Division, 1945-75	40
6. Administrative Division, after 1975	42
7. Planning Macroregions	44
8. Proposed Settlement Network	63
9. Composite scores, 1955	84
10. Composite scores, 1960	85
11. Composite scores, 1965	86
12. Composite scores, 1970	87
13. Composite scores, 1975	94
14. Composite scores, 1981	95
15. Lorenz Curve, Urban Population	103
16. Lorenz Curve, Employment	104
17. Lorenz Curve, Investment	105
18. Lorenz Curve, Industrial Production	106
19. Lorenz Curve, Residential Space	107
20. Lorenz Curve, Retail Sales	108
21. Lorenz Curve, Kindergarten Enrollment	109

LIST OF FIGURES (continued)

22. Lorenz Curve, Students in Higher Education	110
23. Lorenz Curve, Radio and Television Ownership	111
24. Lorenz Curve, Doctors	112
25. Lorenz Curve, Hospital Beds	113

Chapter 1

INTRODUCTION

Questions of social inequality have been the subject of much research in the social sciences. Geographers have recently entered this field of analysis, adding an important dimension to the study of inequality. Whereas other social sciences focus attention upon discrimination by race, creed, color, sex or class, geographic studies have emphasised spatial inequality. Marked inequalities have been portrayed in the nations of the "developing" world and in the "developed" Western market and mixed-economy welfare nations.

Within individual countries, specific regional policies have multiplied as governments seek to overcome serious regional imbalances. Concomitant with this has been the growth in the number of regional economists, regional scientists and regional planners. Such has been the development of these professional fields that a vast array of literature has emerged, together with the establishment of teaching and research institutes and the holding of international conferences.

In spite of its emergence as a part of governmental machinery in a multitude of nations, regional planning has recently been subjected to severe criticism. Much, but not all, of this criticism furnishes a neo-Marxist perspective. From this standpoint, geographic inequality and the inability of regional planning to rectify spatial imbalances within

nations have been explained in terms of the flaws inherent in the capitalist mode of production (e.g., Harvey,1972; Holland,1976). To understand this criticism, and to provide a contextual setting for this paper, a brief review of post-war planning theory is in order.

REGIONAL PLANNING: A BRIEF REVIEW

In the decade after World War II, regional planning was barely accorded lip-service. Attention was focused instead upon policies for the reconstruction of war-torn nations and the creation of rapid economic growth. Economists were almost mute on the question of regional development; in the words of Holland, "The 'where' of activity was subsumed under the 'why' of price and profit theory" (Holland,1976:1).

Overall economic expansion emerged as the dominant concern in both the theory and practice of regional development. It was widely held that the achievement of high national levels of economic development would, in turn, benefit regions which may lack the resources - natural or human - to attain higher developmental levels. Further, the allocation of national resources to the 'lagging' regions was thought to detract from national economic performance.

Implicit in these notions of economic growth was a very definite position on income distribution: inequality spurred economic motivation. In short, equality was inefficient for growth (Friedmann & Weaver,1979: 93). Much emphasis was also placed upon optimal locations for industrial development. Such locations would increase remuneration on all factors of production, including labor which would flow toward the centers of industrial expansion. In turn, increased demand from the prosperous regions for goods from the stagnant periphery would induce a spread of

development, thereby fostering regional equalization.

Some evidence has been offered of the gradual elimination of inter-regional inequalities as national development proceeds. Williamson (1965) undertook exhaustive empirical analysis of twenty-four nations, concluding that regional inequalities are linked to levels of national development. He suggests that divergence takes place as development proceeds, but with higher levels of development diminution of these disparities occurs. Several writers supported Williamson's hypothesis (Friedmann,1972; Alonso,1968; Hirschman,1958), although a number of authors question the validity of Williamson's findings on both methodological and theoretical grounds (Myrdal,1970; Kaldor,1970; Richardson, 1973).

Although the free-market may in theory provide a mechanism by which regional development levels are gradually equalized, its abstract form does not translate well into practice, particularly when a spatial dimension is added.

The theoretical base for the free market in regional economics lies in the general equilibrium theory. But general equilibrium analysis tends to be static rather than dynamic. It rests on marginalist assumptions, whereas in the space economy locational inertia prevents instantaneous adjustments to marginal changes in costs and revenues. Moreover, even if equilibrating tendencies are strong the path of adjustment may be difficult and have harmful consequences. The efficacy of market forces depends on the assumption of perfect competition, yet oligopoly and monopolistic elements are common in the space economy; distance may be an effective barrier to competition (Richardson,1969,391-2).

The debate on the ability of market mechanisms to overcome regional inequality was given new scope by two classic works which emerged in the late 1950s. Albert Hirschman (1958) retained confidence in the efficiency of market forces in the allocation of factors of

production, believing that growth which originated in growth centers would eventually trickle down in the process of searching for new resources and markets.

In contrast to Hirschman's optimism Gunnar Myrdal (1957) expressed concern at the possibility of deepening inter-regional inequalities. He recognized both positive ('spread') and negative ('backwash') effects which would accrue from polarized development, and advocated government intervention to counteract the natural tendency of the capitalist system to promote regional inequality.

The concept of growth poles was dominant in the field of regional development and planning for more than a decade. It evolved rapidly under the attention of economists, regional scientists and regional planners. Geographers also became engaged in the debate, finding in growth center concepts, "a method of negotiating the difficult transition from economic growth theory to the theory of spatial organization" (Friedmann & Weaver, 1979:126).

By 1972, Leo Klaasen (1972:28) was able to suggest that "growth pole policy has become an integral part of regional policy". Despite its popularity and rapid evolution, the concept of growth poles was not without its critics. In point of fact, little concrete evidence was presented to display the positive effects of growth centers in the diffusion of economic growth. Rather, there was mounting evidence to the contrary. Particularly notable was Friedmann's (1972-3) observation that political as well as economic conditions will tend to preserve the dominance of the core over peripheral regions. Nevertheless, the application of growth pole theory has continued.

REGIONAL DEVELOPMENT AND CAPITALISM

The perpetuation of regional inequality in "developed" Western nations and Third World nations has prompted renewed criticism of regional planning theory. This has often been linked to "new" issues in the debate on regional development. Human welfare and a concern with equity, a new ecological ethic and advocacy of autonomy at many levels of the territorial hierarchy have emerged as crucial issues.

Many such ethical questions had found a platform prior to the Second World War. For example, there emerged in the United States a group known as the Regional Planning Association of America (RPAA). Its members initiated philosophical discussion of the nature and content of regional planning. One central theme turned on the question of economic development. The latter, it was propounded, was deficient as a goal in itself. Rather, it should be allied to the all-round development of the nation. This raised the question of equity over efficiency. Regional planning was viewed as a means toward this end.

In America the term [regional planning] has also been used to describe plans for city extension over wide metropolitan areas; this type of planning should properly be called metropolitan planning. Regional planning involves the development of cities and countryside, industries and natural resources, as part of a regional whole (cited in Friedmann & Weaver, 1979:32).

Whilst not explicitly Marxist, these views had been prevalent in Marx's analysis of the the imbalance and disproportion in capitalism. Marx saw, in the subjugation of capitalism and the rise of socialism, a means by which to overcome the extreme concentration of population in large cities, the amelioration of differences between town and countryside and the equalization of the levels of economic development of the regions of the nation (Marx & Engels, 1972).

Marxian analysis was swept aside by the neo-classical counter-revolution which has dominated orthodox economic theory since the end of the nineteenth century (Holland,1976:1), and the debate on regional development of the 1920s and 1930s was lost with the outbreak of the Second World War. But many of the principle issues have now re-emerged. Particular attention has been focused upon the question of equitable regional development.

For some, the underlying cause for spatial inequality lies in the capitalist mode of production and many critics have adopted a Marxist framework of analysis in order to discern the flaws inherent in the capitalist system. Concluding a review of spatial planning theory, David Smith resolved that,

spatial inequality in real income or well-being is inevitable under a capitalist system...Only in the mature socialist state can we expect to see the spatial equivalent of: "From each according to his ability, to each according to his needs". (1977:126-7)

PURPOSE OF THE STUDY

Detailed analysis of regional development in socialist nations has been sparse. As such, one is unable to judge the efficacy of centrally-planned economies in overcoming spatial inequality¹. In the light of continued criticism of the capitalist system this deficiency needs to be addressed. It is the primary purpose of this paper to review the theoretical foundations, and to assess the practice, of regional development in a socialist state.

¹It must be amplified that many, if not all, of the Western critics of the capitalist system would not be advocates of state socialism as witnessed in Eastern Europe or the Soviet Union.

In accord with Marxist-Leninist theory, the Polish authorities have continually stressed the desire, and the advantages, of the nation's socialist system to combat spatial inequality. Forty years have now passed since the installation of socialist authority in Poland and we may now conclude that sufficient time has elapsed for these aspirations to be evaluated.

The socialist and capitalist systems share common goals. In particular, both emphasize the primacy of economic development. As Marx wrote of the future communist society, there will come a stage when "the productive forces have also increased with the all-round development of the individual, and all the springs of co-operative wealth flow more abundantly...." (Marx,1950:22-3). This was echoed by Lenin who wrote that the expropriation of the capitalists

will make it possible for the productive forces to develop to a tremendous extent. And when we see how incredibly capitalism is already retarding this development...we are entitled to say with the fullest confidence that the expropriation of the capitalists will inevitably result in an enormous development of the productive forces of human society (Lenin,1968:333; emphasis in original).

Thus, Marxist-Leninist theory commits the nations of Eastern Europe and the Soviet Union to vast expansion of production and wealth. It needs to be assessed whether Poland has, in the face of rapid national economic growth, contrived to accomplish regional growth of a form that would be compatible with their aspirations of spatial equality. In other words, has equity received as much attention as efficiency?

In Poland, regional planning is viewed as a means by which national economic development can be coordinated in order to attain

a more rational distribution of the population and socio-economic activity, the evening-out of disproportions in living conditions over the whole country, and the rational use and conservation of the geographic environment (Malisz,1976:24).

These aims have remained consistent since the hierarchical structure of planning in operation in Poland today was established by a government Decree in 1946 (Zawadzki,1969:15). However, a prevailing dilemma has emerged between the aims of regional plans and the targets of national economic planning. The latter seek to maximize the productive processes of the nation by means of the smallest possible outlays, wastage or loss. As such the national economic plans seek the most efficient utilization of national resources. In contrast, regional plans propound an equitable distribution of productive forces and redistribution of a nation's wealth. This may, particularly in the short term, result in considerable conflict between nationally and regionally planned goals.

Pragmatism has demanded an inevitable compromise between efficiency and equity (Mihailovic,1975:26). Chapters 3 and 4 will address this compromise. The planning institutions of post-war Poland will be discussed in Chapter 3. The position of regional planning in the planning hierarchy has been subject to much flux and a consideration of its relative status will provide insight into one facet of the compromise between efficiency and equity in the course of the past forty years.

Along with changes in the planning system, regional policy has not remained consistent. In the elaboration of national economic plans, emphasis has frequently oscillated between consideration of regional development, to almost total disregard of this process. Spatial policies

in post-war Poland will be discussed in Chapter 4. This will reveal the apparent variation in the status of the "regional question".

Since important continuities exist between pre-war and post-war planning theory in Poland, Chapter 2 will recount the emergence and evolution of regional planning in Poland.

Having provided the contextual setting an analysis will be undertaken of regional development in the past thirty-five years. This will seek to uncover whether progress has been made toward the ultimate goal of regional equalization in socio-economic development levels.

Chapter 2

EVOLUTION OF REGIONAL PLANNING IN POLAND

THE FOUNDING OF REGIONAL PLANNING OFFICES IN POLAND

Since the advent of the socialist government in Poland regional planning has played a fundamental role in determining the spatial structure of the nation. But the seeds of modern regional policy were sown more than fifty years ago. In the decade prior to the outbreak of the Second World War, there occurred important developments in the methodology and philosophy of regional planning. A consideration of these is indispensable when considering postwar regional policy.

The initial momentum toward regional plans was provided by urban planners. There emerged a growing consensus in that profession that the spatial extent of the city was too confined for adequate regulation of its development. It was proposed that regional plans be drawn up which took account of the socio-economic processes occurring in the immediately contiguous area and the surrounding region. The basis for such plans was laid in February 1928 when a presidential decree stated that whenever local (town) plans covered more than one gmina (the smallest political unit), "the local authority should appoint a special commission to construct the plan." (Zawadzki, 1971:17).

The first such commission was established in October 1930 in connection with the Warsaw city plan and bore the name of the Warsaw

Regional Planning Office (Biuro Planu Regionalnego Warszawy). This agency published an important study in 1936 by Chmielewski and Syrkus entitled Functional Warsaw (Warszawa Funkcjonalna) which stressed the need for the development of the capital city to take place outside of the excessive concentration of functions in a limited area (Malisz, 1966: 59). The ideas and methods contained in the study were subsequently adopted by contemporary planners for regional development schemes. The concept of broad, functional regions in relation to city planning was also adopted in New York (1929-31), Greater London (1929-33) and Moscow (1935) (Cherry, 1980:8). A related initiative in Germany produced Frankfurt's Transport Association for the Rhine-Main Economic Region (Verkehrsverband für den Rhein-Mainischen Wirtschaftsbezirk) (Rebentisch, 1980:85).

In Poland the broadened interpretation of city planning led to the creation of other planning bodies in the cities of Lodz, Katowice and Poznan. Gdynia, on the Baltic Coast, also had a planning body of particular importance. The Versailles Treaty at the conclusion of the First World War had granted Poland a small coastal area and to avoid dependence on Gdansk, which had been excluded from the Polish territories and given the status of a 'free city', the new town of Gdynia was founded on the site of a former small fishing port.

The notion of planning regions was not confined to urban places. Offices were also established in the extensive areas of rural over-population in central and eastern Poland which required much new industry to absorb excess labor, and in the Beskid Mountains in the south which offered attractive recreational sites.

By 1937, eleven regional planning offices had been established (Table 1). The area embraced by each regional plan varied considerably, ranging from the relatively small, but vitally important, Katowice industrial mining complex, to the extensive Wolyn region. Together, these plans combined to cover almost one half of the country's territory.

Figure 1 illustrates the location of the planning regions. One can observe the relative clustering of these regions in the central area of the nation. This was primarily due to strategic considerations, which were prevalent in the hostile atmosphere of the Central Europe in the second half of the 1930s.

Much work was required to integrate the nation following independence in 1919. In the eighteenth century Poland had been partitioned between three powers: Prussia, Russia and Austria. The levels of development between these three sectors exhibited great variation (Leszczycki, 1965). Intensive development had taken place along the Odra and Warta rivers and in the ports of Gdansk and Szczecin in the Prussian zone, together with the industrialization of Upper and Lower Silesia. The development of the Russian sector centered upon the district of Piotrkow, which included the Dabrowa Coal Basin and the city of Lodz, wherein textiles were strongly developed. The cities of Warsaw, Piotrkow and Tomaszow were also important centers. In contrast to these areas the Austrian section witnessed little development.

These variations in development levels spurred the Polish government to intervene in the economy. Of particular import was the desire to develop communication networks which extended across the

Table 1
Regional Planning Offices in Poland in 1937

Region	Office Location	Head of Office	Area Under Plan ('000 km ²)
Warsaw	Warsaw	Jan Chmielewski	11.8
Lodz	Lodz	Kazimierz Gawronski	8.5
Bialystok	Bialystok	Waclaw Broda	19.5
Kielce-Radom	Kielce	Jozef Renski	12.0
Wolyn	Luck	Adam Jurewicz-Jaroniec	35.8
Poznan	Poznan	Roman Pekalski	8.1
Gdynia	Gdynia	Kamil Lisowski	8.6
Krakow	Krakow	Zygmunt Novak	11.0
LWOW	LWOW	Jozef Rybicki	6.6
Stanislawow Voivodship (mountain region)	Stanislawow	Stanislaw Niemierko	9.6
Industrial-Mining Region	Katowice	Stanislaw Piotrkowski	5.1
Total area			136.9

Source: Zawadzki, S.M. (1978) "Od Planowania Regionalnego do Planu Krajowego", In B. Malisz (ed.) *40 Lat Planowania Struktury Przestrennej Polski*, KPZK PAN, Studia t.LXIV, Warsaw, pp. 23-40.

FIGURE 1



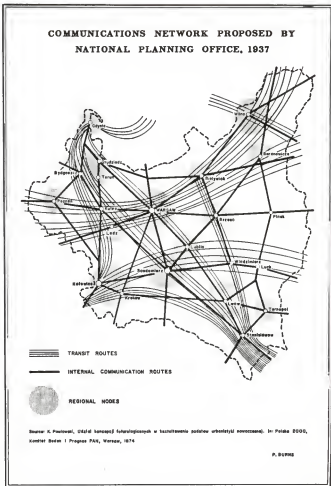
former boundaries of partitioning. Transportation was placed under the authority of the government and development began with the construction of a new railway from Poznan to Warsaw, via Konin (Winiarski,1976:102). This was part of a comprehensive plan for the reconstruction of communications which was drawn up by the National Planning Office (Figure 2).

THE SCOPE AND LIMITATIONS OF REGIONAL PLANS

The 1932 conference of the Association of Polish Town Planners (Towarzystwo Urbanistów Polskich) established the scope of the initial work of the regional planning offices, which was limited to the collation and mapping of statistical material for each region. This included the current conditions of the natural environment, demographic data and private and public investments, along with some forecasting of future population and economic trends. Further methodological research was carried out at the Jagellonian University's Geographical Center in Krakow. These initial studies led to the elaboration of an outline of development for each region and thence to a third stage of constructing an appropriate plan.

A number of factors contributed to impair the efficacy of these regional planning bodies. First, although the studies undertaken by the offices revealed serious socio-economic problems within the country, the planning offices had no legal basis on which to base their policies. As such the planners did not anticipate any implementation of their policies, nor did they produce guidelines for their realization (Zaremba,1966:274). Private ownership of land and property has also been cited as a considerable obstacle to the resolution of planned goals.

FIGURE 2



Stanislaw Piotrkowski, the head of the Katowice planning office, wrote:

A considerable majority of the land ownership lies in the hands of large industrial concerns...with the result that each development plan is subject to arduous co-ordination and negotiation, and the desirable results can only be accomplished with considerable goodwill on the part of numerous interested parties (1935:77).

The most frequently cited dilemma with regard to prewar regional planning was the absence of a plan for the physical development of the nation within which the regional proposals could be structured. Under a special decree of the Minister of Internal Affairs in 1937, the regional planning offices had been charged with the duty of establishing plans which not only performed specific regional functions, but also linked together to serve the national interest. But the absence of guiding principles at the national level confounded attempts to co-ordinate regional plans.

DEMANDS FOR A NATIONAL DEVELOPMENT PLAN

In due course there arose a clamor of calls for the establishment of a national development plan by which the work of the regional planning bodies could be co-ordinated. The advocates may be divided into two broad groups: the urbanists and the scientists.

In September 1937 the First Congress of Polish Scientists convened in Lwow under the slogan 'Mobilize Creative Energy for an Independent Poland' (Zawadzki,1971:32). The main issue of discussion was the means by which Poland's resources - both natural and human - could be put to their most productive use. Many of the proposals were of a technical nature, relating to the development of transportation, the electrification of the nation and the technology of individual manufacturing processes.

In the first section of the Congress' report, however, the final resolution called for the creation of a national economic plan as a guiding force for regional plans. The former, it was proposed, could attend to the division of the nation based on economic criteria, the distribution of communications networks, energy and industry with national and inter-regional significance, whilst regional plans could devote attention to the delimitation of the economic functions of individual regions.

Since it was realized that the proposed fundamental transformations in production and the spatial structure of Poland could not be swiftly attained, three time-spans were offered for national plans: short-term (three years), medium-term (nine to twelve years) and long-term (fifteen to twenty years). Although these proposals did not come to fruition, the notion of varied time-spans for plans has been important in the post-war period and provides an example of the continuities between pre- and post-war planning practice.

In contrast to the scientists, many of the urbanists were employed in the regional planning offices and, at first hand, had recognized the need for the co-ordination of individual plans. Their advocacy of national planning was based on a desire for guiding principles which could serve as a basis for methodology in regional plans and the provision of legislation facilitating their realization (Tobepnitz, 1933:77).

In 1937 Chmielewski, the head of the Warsaw Planning Office, suggested that "the regional planning process...is approaching a time when the planning of individual regions, outside of a national plan,

will become impossible" (cited in Zawadzki,1971:26). He alluded to a growing conviction among planning organizations that only the establishment of a central planning office, capable of issuing compulsory directives and laws, could resolve the impending problems.

This appeal was echoed the following year by a resolution adopted at the First Assembly of Regional Planning Chairmen (I Zjazd Przewodniczących Komisji Regionalnych Planów Zabudowania), which stressed the need for directives upon which planning could be based. It concluded:

the question of the organization of a national plan must be treated as extremely important and urgent since the results of regional planning depend upon its suitable and hasty resolution (cited in Zawadzki,1971:40).

NATIONAL INVESTMENT AND DEFENSE PLANS

The advocates of national planning were optimistic that such a body would be formed, and their hopes were roused when an Office of Planning was created under the authority of Vice-Premier Kwiatkowski in connection with the Four-Year Investment Plan (1936-40). The aims of the plan were to stimulate the depressed national economy and to expand the Polish defense potential. Both of these goals were closely related to transformations of the nation's spatial structure.

The plan foresaw the exploitation of the potential in the underdeveloped regions of the nation which were chiefly located to the east of the Vistula River. In these voivodships employment outside of agriculture was chiefly confined to handicrafts, small mineral plants, timber and foodstuffs factories (Misztal & Kaczorowski,1980:208). This area was designated as Poland 'B' in contrast to Poland 'A' which lay to

the west of the Vistula. A region known as the Central Industrial District (Centralnego Okregu Przemyslowego) was also created (Figure 1). This was deemed to offer a strategic location away from the Upper Silesian Coalfield - at that time divided by the Polish/German frontier - for new armaments and basic industries. This region was also an integral part of a Six-Year Development Plan (1936-41) for the Polish defenses. Within the Central Industrial District, it was forecast, new investment would create approximately 107,000 new jobs outside of agriculture, mainly in industry. The district was to consist of three zones, each with a specialized function: Kielce voivodship (region 'A') would supply raw materials; Lubelsk voivodship (region 'B') would be developed for food supplies; manufacturing industries were to be established in the district of Sandomierz (region 'C') (Winiarski, 1976:105).

There was an inherent connection between the Investment and Defense Plans since it was the government's belief that linking the problems of defense and the economy would provide solutions in each sphere:

it appears [that such a linkage] will achieve advantageous consequences for the nation, since a general economic plan will serve defense, and the investments in the defense industries will strengthen broad economic processes (Vice-Premier Kwiatkowski, cited in Zawadzki, 1971:44).

As was previously mentioned, the creation of a planning office in connection with these plans fostered a sense of hope that the succeeding stage would be a central planning body charged with the task of elaborating a national plan. A considerable amount of research was undertaken on the spatial structure of the national economy in relation

to the investment and defense plans. But the Planning Office never employed more than a small group of specialists and had no formal linkages with other spatial planning agencies (Zawadzki,1978:16). Consequently the optimism appears unfounded.

THE LEGACY OF THE INTER-WAR PERIOD

Both the investment and defense plans were interrupted by the Nazi invasion in 1939. By that time a small number of factories had been constructed in the Central Industrial District, employing some 10,000 persons (Winiarski,1976:106). But for the most part the plans failed to achieve significant results (Hamilton,1982). The considerable disparity in development between Poland 'A' and 'B' had barely been altered - although in fairness thirty years of post-war development have also failed to rectify this. Nevertheless, there did emerge a number of positive results from the inter-war period.

Perhaps the most significant of these was the contribution to methodology in regional planning. The eleven regional planning offices and the Jagellonian University in Krakow pioneered innovations in regional analysis. Their work brought together an assortment of specialists: geographers, naturalists, engineers of many types, agriculturalists, economists, sociologists, architects and lawyers. The result was a number of immensely detailed, diligent and fascinating regional studies which facilitated a better understanding of the nation. These works disclosed a multitude of unknown and valuable attributes of the regions in addition to highlighting numerous social, economic and technical problems which needed to be resolved.

Cartographic representation was broadly employed in these

studies and it was another enduring impact which arose in the inter-war years. It was subsequently employed to a considerable degree, along with the other methodological advances, in the elaboration of post-war regional plans. This was particularly evident in the work of Professor Zajchowska and others in their research on the Recovered Territories at the Western Institute in Poznan¹.

The broadening of the urban canvas to include the surrounding region, and the socio-economic processes pertaining therein, is a further outcome of the prewar period. This found adherents not only in postwar Poland, but also in other nations, and Chmielewski and Syrkus' treatise on Functional Warsaw inspired a number of urban plans.

Besides the urban planners, Polish scientists and economists began to produce tentative solutions to the questions of regional disparities in levels of technico-economic development. Particular attention was devoted to the means by which the underdeveloped regions could break out of a vicious circle. Low levels of development hindered the achievement of any fundamental changes in their structure. In turn, the impossibility of the utilization of the resources in these regions, particularly human resources, impeded their further development (Zawadzki, 1978:18).

A further legacy emerges from a plan which was never introduced.

¹The Recovered Territories was the name given to the area which Poland gained in the West as a result of post-World War II boundary changes. The Western Institute undertook exhaustive studies of these Territories, publishing a series of regional monographs detailing almost every aspect of the regions. The studies played an important role in the creation of suitable policy for the area.

In December 1938, Vice-Premier Kwiatkowski announced in the Polish parliament a perspective plan for the development of the nation. He suggested that it would extend over fifteen years (1939-1953) in five periods each of three years. Each stage would stress the priority of particular sections of the economy (Zawadzki, 1963):

- Stage 1 (to 1941) - construction of industry of military importance
- Stage 2 (1942-44) - communications
- Stage 3 (1945-47) - modernization of the countryside and agriculture
- Stage 4 (1948-50) - urbanization and industrialization of the nation
- Stage 5 (1951-53) - standardization of development levels within the nation, erasing the differences between Poland 'A' and 'B'

The utilization of a long-term, perspective plan continued in the post-war period. Elaboration of such a plan provides a framework within which short and medium-term plans can operate. As such it is of great importance in post-war planning practice, and its initial conception may be traced to the 1930s.

Boleslaw Winiarski (1976:106) outlines four further legacies of the inter-war period related to the conception of the Central Industrial District:

- 1) the foundation of the Central Industrial District represented a large venture attempting to change the spatial structure of the nation and to initiate development in the hitherto weakly-

developed regions,

ii) the creation of regional planning offices linked to central government via the vice-premier,

iii) the necessity of government intervention in the economy was explicitly recognized, and

iv) the notion of the Central Industrial District was founded upon the establishment of modern industrial development. The application of such industry in the transformation of the spatial structure of economies considerably predates the theories of the 1950s and 1960s which linked modern industrial development and growth pole concepts.

The 1930s was an important era in the development of regional planning in Poland. Any consideration of postwar planning practice demands examination of the continuities it furnished, since

one of the characteristic features of the system of planning of the national economy as followed in Poland, is the use of certain forms and instruments, historically derived from the inter-war traditions, which serve the purpose of directing the process of spatial development (Winiarski, 1966:57).

Chapter 3

PLANNING INSTITUTIONS IN POLAND

The problem of disproportionate spatial development and the means by which it may be rectified have been important national issues in most industrial societies since the Second World War. The British have employed a number of measures in an attempt to promote manufacturing expansion in the 'depressed' industrial regions (Lonsdale, 1977:590); the Italians have invested large sums of capital to attract industry to the south (Holland, 1976:51); and the Scandinavian countries have addressed the problems of inter-regional differences in living conditions (Toft-Jensen, 1982:127).

The goal of spatial equality has ideological as well as practical importance in socialist societies. In its pursuit of Marxist-Leninist doctrine, the Polish government is committed to the eradication of disproportions in levels of development among regions of the country. This aim relates both to the economic structure of regions and to a number of social and cultural indices. The elimination of inter-regional inequality is viewed as the means by which the basis of socialism will be constructed.

Economic development, and more particularly the development of productive forces, is a crucial element in this goal (Malisz, 1952). The propagation of industrial production is the main tool for creating a

socialist society, and its introduction into every part of the country is viewed as being "of vital economic, social and political importance" (Dziewonski,1962:45).

In tackling the manifold problems of regional development, the Polish planners through central planning have at their disposal means not available to their counterparts in the West. This enables vital investment resources to be readily transferred between regions in the pursuit of equalization. As such, "socio-economic rationality" can be achieved in the national economy, in contrast to the supposed "undirected and uncontrolled" process of economic development apparent in capitalist nations (Winiarski,1966:97).

Despite these avowed advantages in the sphere of regional planning, it needs be recognized that the command economy and centralized planning were developed with the specific task of rapid national economic growth in mind (Winiarski,1972:191). High growth rates remain a fundamental goal for the Polish economy today. Thus, Polish planners are faced with an apparently universal dilemma of attempting to reconcile the desire for both high national and regional economic growth.

PLANNING INSTITUTIONS

The legal bases and institutional form of physical planning in post-war planning were first defined in a decree on April 2, 1946 which resolved that

any activity, both public and private, pertaining to the utilization of land and the settlement of population must conform to the rules and decisions of physical planning (Economic Life Cooperative,1948:31).

Prior to this decree the Polish Cabinet had established 'sectional' plans which designated quotas for individual industries. These now became part of the planned national economy. The implementation of centralized policies was facilitated by the Nationalization Act of January 1946. This transferred to state control

all formerly German-owned property, and all minerals, forests, water resources, mines, factories and communications facilities, banking and insurance, and a substantial proportion of the land (Hamilton,1982:122).

Although a Three-Year Plan was elaborated for the period of 1947 to 1949, the five years following the conclusion of the Second World War were dominated by an extreme liberality in economic planning. Because of the enormous destruction suffered during the War this was a period dominated by reconstruction. Decisions were often made individually outstripping the pace of planning, and quickly, giving priority to the rebuilding process (Kawalec,1978:140). This was particularly evident in the Northern and Western Territories. These regions had been incorporated into the Polish state at the conclusion of the War and the authorities sought to quickly integrate them into the nation (Burns,1981).

Despite the liberality of this period, in terms of planning decisions, important advances were made in the creation of planning institutions. Economic planning was placed under the direction of the Central Planning Office (Centralny Urzad Planowania). This agency oversaw the coordination and elaboration of plans for divisions and branches of the economy and also for ministries, industrial federations and enterprises (Winiarski,1976:121). Spatial planning was regulated by the Central Physical Planning Office (Glowny Urzad Planowania

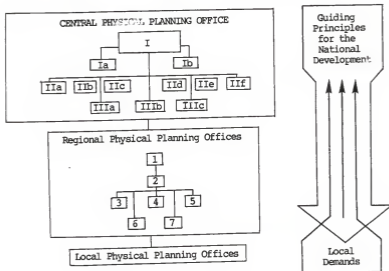
Przestrzennego), and consisted of a three-tiered, hierarchical organization of agencies (Figure 3). At the highest level stood the spatial plan of national development. Local demands were incorporated into this plan which, once resolved, became the guiding principles for the spatial development of the nation. Below the central level of spatial planning were two further tiers: regional and local (town) planning offices.

Although Toeplitz (1978:23) has suggested that the tripartite organization of spatial planning facilitated connections between economic and spatial planning organs, other authors have contended that the latter division of planning created considerable difficulties. For example, Zawadzki (1969) suggests that spatial plans possessed an 'autonomous' character, remaining outside of economic planning. This division was furthered by the differences in the principal elements of each planning section (Winiarski, 1976). Economic plans favored the general utilization of economic decisions relating to production, investment, employment and costs, seeking to maximize the economic development of the nation. Spatial planning, by contrast, sought a rational configuration of productive forces in accord with the principles of regional equalization.

Centralization and Reorganization, 1950-55

Toward the conclusion of the Three Year Plan, critics of the planning institutions questioned the effectiveness of spatial plans which were being elaborated without concrete directives from economic plans, and without adequate studies of the economic effects which might support the proposed solutions (Zaremba, 1966:279). In apparent response

Figure 3

Spatial Planning Offices in Poland, 1947 to 1949

I. President Ia. Vice-President Ib. Vice-President

IIa. Research Bureau IIb. National Plan Bureau
 IIc. Regional Plans Bureau IIId. Town Planning Bureau
 IIE. Country Planning Bureau IIIf. Organization and
 Administrative Bureau

IIIa. Research Secretariat IIIb. Independent Legal Section
 IIIc. Independent Scheduling Section

1. Director 2. Vice-Director 3. Regional Studies Division
 4. Regional Plan Division 5. General Division
 6. Town Settlements Division 7. Country Settlements Division

Source: Economic Life Cooperative (1948), *Polish Planned Economy*,
 Warsaw: Ministry of Foreign Affairs.

to the criticism, the Central Planning Office and the Central Physical Planning Office were liquidated. In their place there emerged a new organization, the State Economic Planning Commission (Panstwowa Komisja Planowania Gospodarczego).

Opinion as to the effectiveness of this new institution is mixed. Winiarski (1976:123) suggests that regional planning was now limited to simply issuing regulations of regional, or even local, significance and that regional planners had little or no input into plans for economic development. Specifically, the instruments shaping regional development, the policies of investment location, remained in the hands of the central organs. In contrast, Zawadzki (1969) maintains that the singularity in planning administration furthered the connections between economic and spatial planning authorities, thereby enhancing the possibilities for spatial considerations to be advanced during the initial stages of plan construction.

To some degree the debate is moot since the foundation for the Six Year Plan (1950-55) had been laid by the previous, dualistic system (Welpa, 1978:41). In addition, the new plan contained policies specifically aimed at the reduction of inter-regional inequalities. The precise content of the plan will be discussed below; suffice it here to say that the interests of individual regions were apparently observed in the Plan, thereby making it unnecessary for strong regional advocacy. Draft plans were produced for fourteen key regions of the nation and these areas were designated as future recipients of increased investment in industry, transportation and housing construction. In addition, initial studies were carried out for seven other regions

(Zaremba,1966:280). Particular attention was focused upon the Krakow region, the Upper Silesian Industrial District, the Czestochowa region and the Lodz and Warsaw Industrial Districts (Zawadzki,1969).

In 1954 there arose a new office which assumed control over regional planning: the Regional Planning Office (Biuro Planow Regionalnych). Its history was short-lived as it was replaced in 1956 by the Voivodship Regional Planning Commission (Wojewodskim Komisjom Planowania Regionalnego).

The end of the Six Year Plan marks something of a watershed in Polish post-war history. It was a period of increasing social unrest, culminating in street riots in Poznan and the return to power of Wladyslaw Gomulka. Upon his reinstatement as First Secretary in October 1956 - he had held the position from the conclusion of the war until his imprisonment in 1949 - Gomulka promised decentralized management and planning of the economy (MacShane,1981:32). His proposals sparked an intense period of debate on questions of political, social and economic life. Considerable reforms in all spheres of Polish society were advocated. The object in the words of Po Prostu, the student newspaper "was to bring about a radical transformation of the Stalinist model of Socialism to a Polish model, genuinely Socialist." But, in spite of the bountiful optimism, many reforms were not forthcoming and, in many instances, centralized control was increased.

In the sphere of regional planning the debate on possible reforms was carried out in important journals such as: Miasto, Investycje i Budownictwo, Gospodarka Planowa and Zycie Gospodarcze. The participants in these discussions were unanimous on two questions;

first, that spatial planning should be bound to a perspective, or long-term, program of economic development and, secondly, that it should retain its three-level character i.e. national, regional and local (town) (Zawadzki,1969).

Some attempt was made at decentralization of investment decisions. Laws passed in 1955 and 1957 reduced the central bureaucracy involved in investment. The State Economic Planning Commission was limited to the control of enterprises employing more than 400 persons, whereas Voivodship Regional Planning Commissions were to bargain with the central ministries for the location of smaller plants (Kawalec,1978:156; Hamilton,1982:130).

Perspective Planning

The notion of perspective planning had emerged in the inter-war years in Poland (see Chapter 2) and in the Soviet Union, Lenin's GOELRO Plan initiated in the 1920s bore the characteristics of a perspective plan (Kruszczynski,1974:37). Now, in apparent response to the petitions of regional planners, perspective planning came to occupy an important place in the Polish planning system. In 1958 the Voivodship Regional Planning Commission produced a document outlining the development of the nation between 1961 and 1980. In the course of the development of this perspective plan, regional planning was regenerated in a new form. Regional plans were now introduced into the economic planning of the nation and interpreted as perspective economic development plans (Winiarski,1976:123).

The aims of the perspective plans were outlined in the Spatial Planning Act of 1961. This Act bound together the spatial and economic

components of planning, thereby "making possible the total planning of the development of various parts of the country" (Zaremba, 1966:286). Perspective plans, however, do not possess a "directive" character, that is, they do not contain binding decisions on future spatial and economic development. Rather, these plans outline the general directions for such development and the presentation of firm directives remains in the hands of the economic planners (Winiarski, 1966; Kruszczyński, 1974).

At the outset of the development of perspective planning in the early 1960s, there were revealed considerable methodological problems for regional planning. It was emphasized that regional planning should become an integral component of perspective planning since this would allow the analysis of the problems associated with the long-range development of individual regions of the nation, their future functions and their prospective role in the development of the national economy (Zaremba, 1966:285). This was achieved through a union between regional planning and perspective planning, since plans for long-term development were now established for each voivodship.

But the new position of regional planning within the planning structure was not without its critics. Much of the critical comment centered upon the continued subordination of spatial planning to economic planning. These two spheres were linked solely by the Perspective Plan for national economic development and, as such, Winiarski (1966) has suggested that there existed inadequate elaboration of the potential problems relating to the process of the nation's economic growth in spatial terms.

In spite of the contemporary, and continued, criticism of the

planning hierarchy, no alterations have been forthcoming. Consequently, the structure remains essentially the same today (Figure 4).

REGIONAL VERSUS NATIONAL PLANNING

In a discussion of future regional development in Poland, Winiarski (1964:6) outlines the aims of socialism as

the satisfaction of each member of society through economic development, not simply through the maximizing of national income, but also through the appropriate division of income....in order to satisfy the needs of each individual.

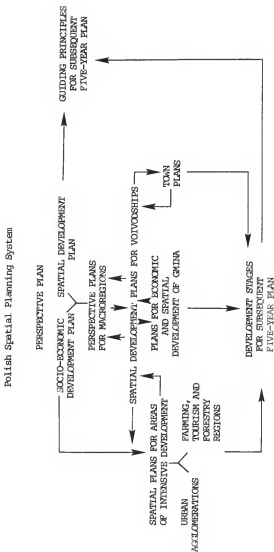
On the principles of this statement, Winiarski continues, there is no argument. However, a major concern is the question of harmonizing the just distribution of income with the maximizing of the national economy.

There are several ways in which national and regional goals of efficiency and equity may come into conflict. Perhaps the most important is the discord between planning authorities within the government.

It was previously noted that within the Polish planning hierarchy, regional planning has become subordinate to national planning. As such, the notion of equity has often been eclipsed by criteria of efficiency. The question as to what degree regional policies should be guided by egalitarianism in the development of individual parts of the nation is one of the central problems shaping the connections between national and regional plans.

The centralized economies of Eastern Europe and the Soviet Union have stressed the sectorial structure of the economy and this has often left the regions with a passive role in planning. Thus, it is the ministries who are the brokers of regional development since it is

FIGURE 4



Source: Grabowiecki, R. & S.M. Zawadzki (1980) *Polityka Przestrzennego Zagospodarowania Kraju*, Warsaw: PWN

they who possess and control the means for such development and, in addition, they formulate directive plans regarding the distribution of these means.

The strength of the branch-division system is furthered under the principle of economic rationalization (Kruszczyński, 1974). Guided by this principle, ministries seek to achieve the maximum effects with minimum outlays. The result has often been one of increasing concentration of production in established regions and centers. Such agglomerative tendencies have prompted diverse reaction among Polish authors. Winiarski (1966) suggests that a distinct advantage of the socialist system is in its mechanism of redistribution whereby the collective consumption fund can be distributed between regions without regard to the amount of revenue produced in a particular region.

Other authors have questioned the continued trend toward agglomeration. Lissowski (1965) called attention to the undermining of local authority that would result from the ever-increasing size of the economies of industrial branches and divisions. This increase, he suggested, would require a concomitant growth of central authority. There have also been calls for an augmentation of the input which regional planning agencies provide in the national planning process.

The increased scale and complexity of industrial development prompted Kolodziejcki (1972) to propose a complete overhaul of the regional planning apparatus. He suggested that the existing apparatus was ill-equipped to deal with the new technological and economic trends of industrialization and urbanization. Contemporary industrial

development, through the processes of concentration, specialization, co-operation and integration, now functions at the macro-economic scale. However, the regional planning structure continues to operate at the more narrow, voivodship level. As such it is not capable of dealing with contemporary processes of development.

To a considerable degree this deficiency has been rectified by the increased importance placed upon perspective planning. This mode of planning, since it does not possess a directive character, is able to constantly re-evaluate its posture in the face of changing conditions and advances in research (Kruszczynski, 1974). This begs the question as to whether its formulations are arrived at in advance of, or succeeding important spatial changes.

Although the primacy of the economic planning apparatus is subject to criticism, it must be noted that the critics do not propose that regional planning replace economic planning as the principal element in the national planning structure. As Zawadzki (1969) points out, if that situation were to arise, rather than the Ministries possessing considerable power, the large, wealthy regions would assume that role. There would be fierce inter-regional competition for the largest investment funds. Conversely, regions could discriminate against industrial localizations if it were believed that there may arise a clash of interests. For example, it may be considered prudent to prevent excessive agglomeration or deglomeration, to protect nature or the landscape.

With regard to the former reservation, one may concur with Zawadzki in the light of Khrushchev's "sovnarkhozy" experiment. In the

face of a number of problems arising primarily from the strength of the Soviet economic ministries, Khrushchev abolished the ministries in the spring of 1957, transferring their administrative functions to 105 regional economic councils or "sovnrkhozy" (Nove,1982:72). These regional councils exercised authority over the economic ministries during the course of the planned period. It was hoped that a regional division of the economy would overcome the "empire-building" and autarkic tendencies developed by the ministries. However, the regionalization of the economy failed as the regional authorities essentially replicated the failings of the ministerial structure. The sovnrkhozy were accused of 'localistic' tendencies, or of putting local interests before those of the nation (Pallot & Shaw,1981:42). Amalgamation of the sovnrkhozy, first to 103 and still later to 47, failed to overcome these problems and the regional councils were abolished in 1965 and the central ministries restored.

Consequently, it would appear that the most pragmatic approach to achieving appropriate methods of regional development is to integrate as fully as possible the branch-division and regional planning institutions. By closely linking the two systems it should be possible to establish an apparatus in which the feed-back relationships between social, economic and spatial planning will yield an all-embracing system of studying, anticipating and determining future developments (Kolodziejewski,1972).

CHAPTER 4

REGIONAL DEVELOPMENT POLICIES

THE ADMINISTRATIVE DIVISION OF POLAND

Before considering post-war spatial policy it is necessary to briefly describe the administrative division of Poland since these divisions define the 'targets' of spatial policy.

Since 1950 the voivodship has been accepted as the basic economic and administrative region within Poland (Zaremba, 1966:287). Prior to this time some regions had been given differential treatment. For example, the Recovered Territories, comprising the voivodships of Olsztyn, Koszalin, Szczecin, Zielona Gora, Wrocław, Opole and parts of the Gdansk and Katowice voivodships, had been treated as a large economic region immediately following the Second World War. This was done because destruction was considerable and, in addition, the Poles sought to quickly integrate these Territories into the nation. Industrial regions, such as the Upper Silesian Industrial District, have also been the subject of plans at various times. Occasionally, perspective plans are elaborated for areas which comprise parts of neighboring voivodships.

From 1950 to 1975 an administrative division existed in Poland comprising seventeen voivodships (Figure 5). Reservations were initially expressed that the new voivodships, incorporating older regional forms,

FIGURE 5



may not meet economic and social needs (Ministry of Reconstruction, 1948: 48). However, the division imposed spatial limits on the development of society and the economy and facilitated the creation of socio-economic linkages within the voivodships (Czyz, 1981:6).

The seventeen voivodships remained until 1975 when an administrative reform led to a completely new spatial pattern of voivodships. The number was increased from 17 to 49 (Figure 6). According to Malisz (1976), the new voivodships are treated as "target regional systems" which would seem to indicate that in the future the voivodships are to become coherent and functional structural units. The Perspective Plan for Spatial Development to 1990, discussed more comprehensively below, proposes the creation of a spatial system based upon "tempered polycentric concentration". In addition to twenty-three urban agglomerations, twenty centers of "national importance" will be developed. Consequently, almost all of the forty-nine voivodships are slated for development as urbanized regions. Also, it is proposed that economic specialization of the voivodships take place. The larger number of voivodships, and their smaller size, is likely to facilitate the foundation of homogenous spatial units, in turn permitting an increase in their economic specialization.

In the course of work on regional plans, and in connection with the Perspective Plan for Spatial Development to 1990 it became apparent that an intermediate territorial division was required which linked the national and regional components. This division would embrace inter-voivodship connections since important economic and spatial linkages fell between the existing territorial divisions. Thus, there arose the

FIGURE 6



macroregions (Figure 7). It should be noted that the macroregions do not have a plan preparation character. That is, no physical plans are elaborated for these macroregions, although guidelines for macroregional development are established. They do not constitute a separate planning level, rather they belong to the central planning apparatus as an integral component of the Perspective Plan. The principal task of the macroregional structure is to coordinate and rationalize inter-voivodship linkages (Pyszkowski & Zawadzki, 1976).

The need for intervoivodship coordination and cooperation is revealed especially in migration flows, foodstuffs, land-use, raw materials exploitation and the conservation of the environment. The basic issue is thus the formation by the [Perspective] plan, within the boundaries of the macroregion, of a pattern of functional linkages intended to make more effective use of resources, and to increase the satisfaction of the needs of neighbouring voivodships (Cryz, 1981:17).

POST-WAR SPATIAL POLICY IN POLAND

Throughout the post-war period the Polish authorities have maintained a commitment to eliminating disproportions in the levels of development among regions of the country. Policy statements have continually cited the goal of 'all-round' development of the living conditions in each region. This comprises social, cultural and economic development. In the view of the Polish authorities, social and cultural aims can only be attained through the appropriate economic development of individual regions; industrialization is seen as the main tool for creating a socialist society (Dziewonski, 1962:45). Consequently, this review of policy will emphasize the economic policies which have been introduced in the past forty years. Social and cultural issues will be alluded to, but as in official Polish policy, they will be treated as a

FIGURE 7



consequence of economic development.

In the past forty years one may distinguish four periods in which divergent spatial policies have been adopted:

- i) the late 1940s, Post-War Reconstruction,
- ii) the 1950s, Centralization and Reform,
- iii) the 1960s, Extension of the Resource Base and
- iv) from the early 1970s to 1981, The Perspective Period.

Post-War Reconstruction

At the conclusion of the Second World War, Poland was devastated. The relative losses of population (Poland's total population shrank from 34.8 million in 1938, to 25 million in 1950) and property (38.2 per cent of all fixed assets were destroyed) were unparalleled in any other European nation (Hamilton,1982:122). In addition, Poland's borders were shifted westward to the Odra and Nysa Rivers, whilst in the East a substantial portion of land was ceded to the Soviet Union (Figure 1).

The Territories gained in the West, following the Potsdam agreements in 1945, had been part of the original Polish state in 966. But a succession of foreign powers had subsequently occupied the regions. The rapid integration of the Territories into the Polish nation at the conclusion of World War II became a national priority since the Poles were extremely sensitive to German criticism of the Potsdam agreement. A separate Ministry for the Recovered Territories was established with the express aim of rebuilding and integrating the area.

The remainder of Poland also required extensive reconstruction.

In several ways the Recovered Territories assisted in this design. The Baltic coastline had been considerably extended, facilitating the export of Poland's primary resource, coal. In addition, the Upper Silesian coalfield was now a single unit within the Polish nation, having previously been divided by the Polish/German frontier.

The Regained Territories fulfil three basic conditions for industrial development: they bring in natural resources, a well developed network of communication lines, and sources of power built into a fine system of power plants (Economic Life Cooperative, 1948:18).

Given the need for extensive and rapid reconstruction, it is perhaps not surprising that Kawalec (1978:140) characterizes the period of 1945 to 1950 as one of extraordinary independence from the national economic plan. Approximately seventy-five per cent of industrial location decisions involved the question of whether to rebuild or modernize destroyed structures (Kawalec,1978:141).

Initially, sectional plans were introduced for each industrial sector which stressed the need to rapidly restore industrial output. A dividing line may be drawn between this period of sectional planning and the introduction of the planned economy. The latter was announced in a resolution of the National Home Council on September 21, 1946:

The National Economic Plan is the general plan for the Polish economy, and comprises all the particular plans and the guiding principles for all the branches and sectors of the national economy (cited in Economic Life Cooperative,1948:30).

The same resolution outlined the policy of industrial investment for the Three Year Plan (1947-49):

Industrial investment should be undertaken according to the promptness of its productive effect and the importance of these investments to production, and in view of preserving the national property from destruction (cited in Wrobel & Zawadzki,1966:434).

The emphasis placed upon reconstruction and the swift development of productive forces is evident from this extract. It is further manifested in the State Investment Plan for 1948 (Table 2). Approximately 37 per cent of total investment funds were directed toward the industrial sector.

Given the understandable desire to rebuild the devastated national economy, ideological concern for spatial equality was temporarily laid aside. Explicit statements regarding the location of industry were made, but it is apparent that these took second place to reconstruction. The National Home Council stated that one of the factors determining investment decisions should be "the regional point of view" and that "in the absence of a decisive factor of location, further extension of industry in the region of Silesia should be avoided" (Economic Life Cooperative, 1948:63). But during the course of the Three Year Plan, nearly one half of all industrial investment funds were directed toward Upper Silesia with the intention of securing the maximum productive effects in the shortest time (Wrobel and Zawadzki, 1966:435). A further large proportion of investment was aimed at the traditional, relatively well-developed regions of Walbrzych, Warsaw, Lodz and Krakow (Zaremba, 1966:276).

Nevertheless, some important investments were undertaken which were beneficial for subsequent regional development. For example, work began on the creation of three new industrial regions in weakly-industrialized areas: the Lomza region (Bialystok voivodship), the Pila region (Poznan voivodship) and in Sandomierz (Kielce voivodship) (Lijewski, 1978:56). The development of the last had begun in the inter-

Table 2
State Investment Plan, 1948

Sector	Investment (milliard zlotys, 1948 prices)
Reconstruction and development of state industry	69.8
Reconstruction and development of local government, cooperative and private industry and handicrafts	3.8
Agriculture (excluding building investments)	18.6
Sea fishing	0.7
Transportation (including navigation and communications) .	45.3
Distribution of goods	4.0
Housing (excluding industrial and transportation construction)	40.7
Health care	1.8
Social welfare	1.0
Public instruction and culture .	4.0
Total	189.7

Source: Economic Life Cooperative (1948) Polish Planned Economy,
Ministry of Foreign Affairs, Warsaw.

war period as part of the creation of the Central Industrial District (Winiarski,1976:105). As a result of such development, whilst the greatest absolute increases in employment occurred in the traditional, well-developed industrial regions of Katowice, Wroclaw and Lodz, the highest relative increases were experienced in the hitherto weakly developed regions of the North and West (Leszczycki,1965:32). For example, the increase in industrial employment in the Koszalin voivodship amounted to 171.5 per cent, compared to a national increase of 144.4 per cent. But the absolute increase of 3,500 employees represented only 1.1 per cent of the national increase in employment (Chojnicki,1965:407).

Centralization and Reform

The introduction of the Six Year Plan (1950-55) was accompanied by a period of stern Stalinist authority. The previous planning period had been one of considerable latitude for private trade, handicrafts, light industry and individual agriculture, and pronouncements had been made on the protection of the private sector of the economy. But this compromising attitude was subsequently abandoned. Boleslaw Bierut, premier and Communist Party chairman, reflected the new posture:

[A people's democracy is not] a synthesis or a permanent co-existence of two differing social systems but a system which pushes out and gradually liquidates capitalistic elements and simultaneously develops and strengthens the foundations of the future socialist economy (cited in Starr,1962:86).

Many members of the previous government were imprisoned as the Stalinist authorities strengthened their role in the administration of the nation. An increased centralization of authority extended to the sphere of regional planning where the State Economic Planning

Commission now oversaw all modes of planning.

The concepts underlying the location of productive forces in this period may also be attributed to this transition toward Stalinist ideology. In the Act of Parliament introducing the Six Year Plan, it was stated that

In the operation of the plan, a long-range process will be initiated pointing toward a more uniform placement in the whole country of both productive forces and social and cultural facilities. The disparities in the economic and cultural development of the country, resulting from Poland's economic conditions in the era of capitalism, will be diminished (cited in Wrobel & Zawadzki, 1966:435).

The notion of uniform placement of productive forces was drawn from the work of influential Soviet economists. Now it became an integral concept behind the distribution of productive forces in Poland in the Six Year Plan. Malisz (1950) outlines the five guiding principles for industrial location in this period:

- i) the uniform distribution of industry,
- ii) bringing industrial production closer to its resource base and market places,
- iii) activating under-developed regions,
- iv) the deglomeration of industrial regions in which the process of concentration has proceeded too far, and
- v) increasing the nation's defense forces.

It is apparent that these principles contain a number of conflicts. Through attempting to bring industrial production closer to its resource base, it is highly probable that uniform placement of productive forces will not be achieved since resources are far from uniformly distributed. This may also, therefore, preclude the

possibility of activating less-developed regions and achieving deglomeration.

Priority was given to heavy industry. This, too, drew upon Stalin's philosophy of the need to provide socialist nations with a substantial industrial base. The expansion of heavy industry was intimately linked to the activation of the weakly industrialized regions. The parliamentary Act introducing the Six Year Plan asserted that in order to obtain basic economic objectives, the Plan aimed to

raise the economic and cultural activity of the backward eastern and central parts of the country, and of several districts, not yet economically recovered, in the western and northern voivodships, by an adequate policy of locating productive forces (cited in Wrobel & Zawadzki, 1966:435).

Overall investment in the plan was raised four times (from 6.5 billion to 26 billion zlotys, in 1971 prices) in comparison to the Three Year Plan, of which seventy-three per cent was directed toward the weakly industrialized voivodships (Lijewski, 1978:57). Here there existed considerable surpluses of manpower and these were seen as a beneficial factor in the expansion of the industrial base. The plan projected the construction of 1287 new industrial enterprises. These included the initiation of several very large projects, for example, the shipyards in Gdynia and Szczecin, a nitrogen plant in Kedzierzyn, a chemical plant in Blachow Slask and synthetic fabrics factories in Gorzow Wielkopolski and Jelenia Gora (Kawalec, 1978:93).

The extension of investment over too broad a front contributed to a shortfall of 470 of the planned plants. Of these, almost half (203) were destined for the least developed regions (Winiarski, 1976: 97). In addition, Lijewski (1978:65) suggests that in spite of the

initial intentions of the Six Year Plan, the majority of investment was directed toward the industrialized and urbanized regions, notably Krakow and Warsaw.

A supplemental reason for the relative failure of the plan to be satisfactorily executed may be found in the international political situation at this time. The intensification of the Korean War was accompanied by large-scale armaments contributions from the member nations of the Council for Mutual Economic Assistance (CMEA). It is not possible to accurately determine the effect of increased armaments production on the Polish economy. Edward Ochab, at the time First Secretary of the Party, subsequently announced that Poland "spent millions for the defense industry" and had "changes made in the Six Year Plan" which were not revealed to the public (speech on Radio Warsaw, August 16, 1956; cited in Starr, 1962:133). Consequently, it would appear that the dislocation of the economy was substantial and this contributed significantly to the failure in accomplishing planned goals.

Whilst external events may have contributed to the shortcomings, Fajestka (1972) asserts that during this period the priority given to planning based upon branches of the economy and to short-term considerations embodied in the Six Year Plan and its annual components was not amenable to the requirements of rational spatial planning. This suggests the existence of a basic conflict between efficiency and equity criteria. Nevertheless, some progress was made toward overcoming regional disparities in development, particularly in the Eastern regions. In the words of Leszczycki (1965:33), the Six Year Plan yielded

"the first distinctly noticeable diminution of the disparities in the distribution of industries in Poland."

The period between 1955 and 1960 has been included in this section because of the apparent continuities with the Six Year Plan period. In political terms, however, these two periods manifest considerable differences. The death of Stalin in 1953 and Khrushchev's famous speech to the Twentieth Congress of the Soviet Communist Party in Moscow in February, 1956, revealing the crimes of Stalin and attacking his 'cult of personality', opened the door for reform. Wladyslaw Gomulka was 'rehabilitated' and assumed the position of First Secretary of the Polish United Workers Party. Addressing the Eighth Plenum of the Party, Gomulka reflected the mood of the nation:

There can be different types of socialism. It can be the socialism that was created in the Soviet Union, or it can be formed as we see it now in Yugoslavia, or it can be of some other type still. Only by experience and by studying the achievements of the different countries that are building socialism can the best model arise in given circumstances (cited in Bethell, 1969:219).

Some, but not all, of the demanded reforms were adopted. There was certainly a liberalization in political and social life. Perhaps the most important reform was the halting of the collectivization drive in the Polish countryside. But in the sphere of economic planning, much remained the same.

The new Five Year Plan (1956-60) was essentially a stop-gap policy aimed at completing the overambitious tasks begun in the previous planning period. Practically no new large industrial location was undertaken in this period. Industrial investment in the first two years of the Plan was held at similar levels to that of the previous Plan i.e. approximately 31 billion zlotys annually. Only in 1958 was this

increased and by 1960, it had risen to approximately 150 per cent of the 1957 total (Lijewski,1978:156).

The second half of the 1950s was more important for the work which was initiated toward the future spatial development of Poland. In relation to this, one of the most important occurrences was the creation of the Committee for National Spatial Development (Komitetu Przestrzennego Zagospodarowania Kraju). The Committee was established through the Polish Academy of Sciences in Warsaw and aimed at

the proper organization and coordination of spatial studies in Poland, chiefly in the sphere of perspective national development and the correct distribution of production and the settlement network (Zawadzki,1969:97).

Policies for the development of the weakly industrialized regions were now subject to analysis. It was now asserted that the aim of these policies was not the assurance of uniformity in the distribution of economic activity, but rather the optimal development of each region based upon its conditions and resources (Winiarski, 1976:116). This shift in policy goals - from uniformity to optimalization - represented a compromise between the objectives of obtaining the maximum yield from investments and that of reducing regional disparities in developmental levels (Wrobel & Zawadzki,1966: 438).

Accompanying this policy shift was a transfer of attention away from location to economic regionalization and the distribution of industry (Dziewonski,1962:47). For Opallo (1969) the relative emphasis placed upon location or distribution reflects an inherent distinction between socialist and capitalist nations. The latter, he claims, stress the location of productive forces as it relates to economic

laws and, more particularly, the economics of work, time and the minimization of costs. As such, location first of all refers to particular places, then centers. In contrast, the socialist economies are more concerned with distribution since this relates to the proportional size of regional economies. Through the optimal utilization of economic resources in individual regions of the nation, the distribution of economic activity may be suitably modified.

The form of the optimal distribution of economic activity was laid out in the perspective plans which were initiated in the late 1950s. Through the elaboration of these plans it was hoped to achieve an arrangement of the spatial economy that would ensure the maximum effectiveness from the social point of view (Winiarski, 1976). Thus the plans addressed both the question of the need to liquidate the underdevelopment of certain regions and the improvement of the structure of the economy in regions containing large agglomerations. The analysis undertaken on the development of the economy was incorporated into the perspective plans and also led to the guiding principles for the subsequent Five Year Plan (1961-65).

Extension of the Resource Base

By 1960 the Polish economy had been rebuilt and attention was now turned to the extension of the resource base. It was believed that such an extension would further not only national economic development, but also foster the development of weakly-industrialized regions.

At the Twelfth Plenum of the Party, the principles for subsequent development of the Polish economy were outlined (Dziewonski, 1959). It was stated that in undertaking new investment and the

extension of existing industrial establishments, the following should be observed:

- i) the full utilization of natural resources occurring in individual parts of the nation,
- ii) limiting excessive migration and the localization of new industrial establishments in order that surplus labor may be employed locally, and
- iii) the diminishing of the variations in development between individual regions and the equalization of levels of settlement, communications and services between regions.

Although specific mention of regional development warranted only third place, it is immediately apparent that the realization of the first two propositions could go some way to ameliorating the spatial imbalance in development levels.

The desire to link industrial development to the exploitation of natural resources is clearly restricted by the fact that such resources are not uniformly distributed. In an attempt to broaden the resource base, considerable emphasis was placed upon the detection and development of new resource bases (Secomski, 1959). For example, the plan forecast the development of Tarnobrzeg based upon newly discovered sulphur deposits, as well as Labaczow (gas), Zebca (sand), Leczyzy (iron ore) and Konin and Tarnow (both coal) (Dziewonski, 1959:28). The extension of the resource base was furthered by the construction of an oil pipeline from the Soviet Union, via Poland, to the German Democratic Republic. This enabled the introduction of a chemical complex in Plock, a region otherwise devoid of resources (Winiarski, 1976:118).

The reserves of labor in under-developed, largely agricultural regions were treated as part of the resource base. This was particularly important for regions which did not possess natural resources. Manpower represented their potential for economic development. It is also noteworthy that it was seriously questioned whether it might not be better to adjust population levels to the distribution of economic activities by means of migration (Dziewonski, 1962:47).

Simultaneously, the economic planners were considering the economies of time and costs, and the dominance of these aspects impeded the diffusion of economic development (Opallo,1969). By 1962, expansions of existing plant were absorbing 75 per cent of all industrial investment and this necessitated the introduction of measures aimed at ensuring the dispersion of industrial growth to weakly developed regions. With some refinements the following measures, introduced in 1962, were still in operation in 1980 (Hamilton,1982:130; emphasis in original):

- (a) extending central control of all investments in new capacity, both more important additions to existing plant and to all plant on virgin sites;
- (b) introducing studies of locational alternatives for 'footloose' industries...and
- (c) requiring that studies outline the costs of alternatives.

More specifically, these measures led to the adoption of the following policies: limiting the size of industry in the Katowice voivodship and the provincial capitals of other voivodships; developing further the Northern and Western voivodships; accelerating the development of the overpopulated agricultural regions of the South-East; and developing medium-size towns (Opallo, 1969:97).

Several Polish authors have questioned the efficacy of the initial measures and the policies derived from them. For example, Gruchman (1967/8) suggested that in order to regulate excessive concentration in production, these measures needed to be supplemented by the introduction of differential incentives with regard to transportation tariffs, the charges and costs for land-use in towns and the costs of communal services and maintenance costs in industrial centers. Strong incentives, Gruchman (1967) proposed, would facilitate the regulation of industrial development in the desired direction.

Although the proposals of Gruchman and others went unheeded, the second Five Year Plan (1966-70) prescribed deglomeration of the largest industrial centers. But it conspicuously failed to amplify the means by which this was to be achieved. No specific policies were outlined for the creation of the infrastructure in weakly developed regions which was imperative for decentralization to proceed. In particular, there arose an internal conflict in the plan between its spatial conceptions and the branch-division means of investment (Winiarski, 1976:120). The latter favored continued agglomeration because of the perceived advantages in the economies of production in large-scale industrial complexes, spatial cooperation, internal economies and so forth (Lissowski, 1965). Industrial investment may be considered as a marginal increment in relation to the total fixed assets present in an industrial center. As such, the larger the center, the more marginal capital investment in industry will be. This notion further encouraged agglomerative tendencies.

There was, certainly, some deconcentration. Immigration

restriction and some deglomeration of industry facilitated this. In many cases, however, the movement of industry took place only from the inner city areas to the peripheral districts where extensive housing development was occurring along with the creation of suburban shopping centers (Jerczynski,1977). Winiarski (1976:120) concluded that the overall result of deglomeration policies was not a reduction in the strains between the productive and infrastructural spheres, rather these strains showed a marked tendency to increase.

The Perspective Period

Toward the conclusion of the 1960s serious deficiencies in the Polish economy became apparent. In particular, the emphasis placed upon heavy industry, no matter the cost, had led to a neglect of consumer goods, housing and services (Lijewski,1978:165). An explosive situation arose from consumer dissatisfaction and the reaction against the repression which accompanied demands for greater intellectual freedom in 1968. The spark was provided by Gomulka's decision to raise meat prices by 30 per cent in 1970. The resultant strikes and army action - officially the death toll was 45 - brought down Gomulka. On December 19th, 1970 he was replaced as First Secretary by Edward Gierek.

The arrival of Gierek was accompanied by an acceleration of the economic development of Poland. Intensive investment in industry, particularly the heavy sector, was continued; on average, industrial investment grew by 22 per cent annually. By 1975, annual industrial investment stood at 239 billion zlotys, a rise of 169 per cent over 1970 (Lijewski,1978:167). Some attempt was also made to expand the consumer industries, but there remained considerable shortages. The

perception of consumer shortages was exacerbated by the wage increases which had been granted in 1970. Personal income now far outstripped market supplies (Ascherson,1981:164).

The expansion of the Polish economy which was undertaken by Gierek was primarily financed by Western creditors. With the development of detente policies Poland was able to obtain massive loans. Table 3 illustrates the growth of the Polish hard currency debt to the West in the course of the 1970s. By 1979, Poland owed \$21 billion to the West. In addition, Poland had obtained credits from the Soviet Union and had participated in the construction of industrial plant abroad (Lijewski,1978:180). The massive injection of foreign capital resulted in a considerable expansion of the Polish industrial capacity; more than half of Poland's capital has been formed since 1970 (Macshane, 1981:38).

Concomitant with the policies of industrial expansion was the stress placed upon the need for large-scale, efficient plants in or near major urban centers (Hamilton,1982:131). Spatial policies sought an appropriate balance between dispersion and concentration, between containment of the largest urban-industrial centers and the application of growth pole concepts of a moderate form.

These new policies were embodied in the Perspective Plan for Spatial Development to 1990. This plan foresees the future spatial configuration of Poland as one of "tempered, polycentric concentration" (Jagielski,1973:652). By this means it is hoped that a holistic approach to economic, social and spatial factors may be forged in order to obtain the most advantageous results in all spheres (Secomski,

Table 3

Polish Gross Hard Currency Debt to the West,
1971-1979 (million US dollars)

1971	1,138
1972	1,564
1973	2,796
1974	4,643
1975	8,014
1976	11,483
1977	13,967
1978	17,844
1979	21,000

Source: Estimating Soviet and East European Hard Currency Debt,
Washington, National Foreign Assessment Center, June 1980.

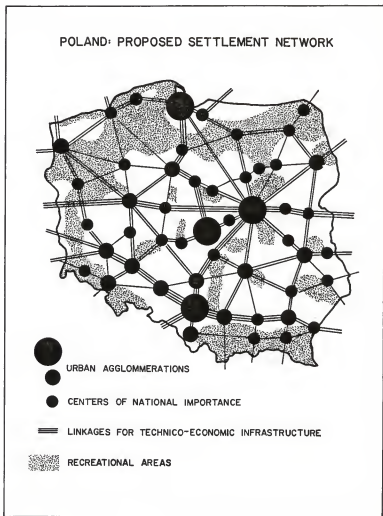
1980:13).

The plan proposes the creation of 23 agglomerations and 20 large urban centers of "national importance" (Kawalec,1978:146). The following strategic goals are also outlined: the acceleration of development in the Northern and Eastern regions, strengthening the position of the central regions, particularly the Warsaw agglomeration and the complex reconstruction and modernization of the Southern agglomerations through the development of modern growth factors (Pinkowski,1974:494).

Each voivodship is now to be treated as a "coherent, functional unit" based upon specialized functions. In order to facilitate the achievement of regional specialization an administrative reform was undertaken in 1975, increasing the number of voivodships from 17 to 49 and replacing the previous three-tier system (voivodship, powiat, gmina) with a two-tier system (voivodship, gmina) (Czyz,1981:6). The reduction in size of the voivodships is believed to promote the creation of homogenous spatial units.

The structure of each voivodship will be based upon an urban center, with its surrounding region forming a structural unit. Outside of the central urban zone will be a zone which is to be only partially urbanized. Beyond this an 'external' zone will serve as a 'shield' or spatial reserve for subsequent urbanization that may arise from future development (Berezowski,1974:46). In addition, 'strip' or 'corridor' development will link the agglomerations (Grabowiecki,1973:114). Figure 8 illustrates the proposed settlement distribution and the linkages between each urban node. The large interstitial areas are to

FIGURE 8



be protected for farming, forestry, tourism and water supply (Hamilton, 1982:131).

Optimistic Polish authors claimed that the adoption of the Perspective Plan will result in the "quick and very rational development of both individual regions and the whole nation" (Jagielski, 1973:649), and that the realization of planned aims will succeed in reducing regional disparities in development by one half (Zawadzki, 1974:566). However, Hamilton (1982) points out that decisions taken prior to the adoption of the Perspective Plan, in the early 1970s, will serve to accentuate the growth of Southern Poland (with the establishment of Huta Katowice and the Bielsko and Tychy auto plants) and near Warsaw (through the Ursus tractor plant and the Polski Fiat car plant).

Events in the past five years serve as a reminder that the authority's path to the achievement of its planned goals is extremely precarious. In particular, the burden of an enormous foreign debt threatens to overshadow the alleviation of regional disparities. Nevertheless, some of the most intense industrial action in 1980-81 was witnessed in regions such as Bielsko, Plock, Jelenia Gora and Bydgoszcz, regions in which industrial development has been slight and the communal infrastructure remains poorly developed. It remains to be seen whether the authorities can reconcile a dire need for national economic efficiency with an exigency to overcome spatial inequality.

SUMMARY

Before proceeding to an analysis of regional development in post-war Poland it is useful to provide an overview of the discussion on

planning institutions and spatial policy.

It was noted that the position of regional planning in the Polish planning hierarchy has been subject to much flux. This would appear to reflect attempts to seek an appropriate solution to the conflicts that exist between the goals of national and regional planning. Ministerial domination of the planning process has been prevalent and, as such, regional considerations have often been subordinated to national priorities. While Polish authors have advocated an increase in the regional input in the planning process, the experience of Khrushchev's *sovnarkhozy* experiment prevents these same authors from recommending regional dominance of the planning hierarchy.

Perspective planning is recognized as a means by which these conflicts may be reconciled. Through the elaboration of long-range goals for the economy and the spatial configuration of the nation, it is hoped that an appropriate balance may be struck. This has given rise to the Perspective Plan for Spatial Development to 1990. As the latest element in post-war spatial policy, this plan proposes development based upon "tempered, polycentric concentration" in order to achieve the quick and rational development of individual regions and the nation.

Prior to the emergence of perspective planning, spatial policy had been inconsistent. Emphasis had shifted from the uniform placement of productive forces to optimization of the national economy. Once again this would appear to represent an attempt to strike an appropriate compromise between national and regional policy goals. In light of these rather abrupt changes in policy it needs to be assessed whether the Polish authorities have succeeded in reducing regional

disparities in socio-economic development. The following chapter will undertake an analysis of regional development in order to ascertain whether convergence has taken place, or whether adjustments in policy have compromised the aim of the eventual elimination of regional disparity.

CHAPTER 5

AN ANALYSIS OF SPATIAL EQUITY IN POLAND

It is the primary purpose of this chapter to undertake an analysis of regional development levels in Poland in order to ascertain whether the oft-stated goal of equality in economic, social and cultural spheres of life has been achieved. Before embarking upon this analysis, however, it is necessary to consider the notion of equity.

As an integral part of policy throughout Eastern Europe and the Soviet Union, the concept of equity is derived from the work of Marx and Engels. In their Manifesto of the Communist Party (1972:58) it was stated that the advent of socialist authority would enable "a gradual abolition of the distinction between town and country". This was interpreted by socialist authorities as an advocacy of the pursuit of equal living standards for each and every member of society. As such it formed a cornerstone of laws instituted by Lenin and the Soviet Communist Party which are now common to locational decision-making in all planned economies (Hamilton,1970:85).

Nonetheless, whereas "equality is the easiest criterion to apply to the evaluation of distributions...,the criterion of equality is not as easy to apply as might appear at first sight" (Smith,1977:132) This difficulty derives principally from the fact that the achievement of equality in results may require inequality in resource allocation.

This is further compounded by the historical aspect of regional development which may demand vast differences in expenditure in order to attain equable development levels.

Official pronouncements in Poland (as outlined in Chapter 4) would appear to suggest that the government is prepared to undertake differential investment in order to attain the equalization of living standards throughout the nation. But, as Winiarski (1972:194) points out, whilst the principle of assuring an equal chance for participation in national income for individuals in all regions of the nation is indisputable, considerable problems arise when a nation attempts to realize this principle. A particular dilemma relates to the achievement of equality without detracting from the efficient functioning and growth of the national economy. As a result, pragmatism has demanded an inevitable compromise between efficiency and equity (Mihailovic, 1975: 26).

By virtue of the centralized decision-making in the economy, socialist societies possess greater freedom to disperse both investment and consumption funds in the pursuit of regional equality. But, as Smith (1977:138) suggests

Even under socialism, inequality is to be expected as long as labor is compensated by wages; as in a capitalist system, this may compound other personal advantages.

Nevertheless, it has been argued that the socialist system overcomes the effective control of a relatively small elite and, thereby, provides a means by which more equable living standards may be obtained. This relates in particular to the sphere of social and cultural equality, with the result that the single process of regional

development has frequently been split into socio-cultural and economic processes (Mihailovic,1975:28). In light of this, one may expect to witness a gradual diminution of regional disparities in socio-cultural levels as the result of national economic development.

THE MEASUREMENT OF REGIONAL DEVELOPMENT

Concomitant with the growth of interest in social equality has been the proliferation of techniques for assessing regional development. These have adopted varying degrees of complexity in the pursuit of an adequate method. As a relative fledgling in the scientific community, no consensus has been reached as to the most appropriate indicator or indices of regional development. In addition, relatively little research has been undertaken on regional inequality in socialist countries (with the possible exception of the Soviet Union).

Perhaps the first, and certainly one of the most comprehensive, studies of regional development was undertaken by Jeffrey Williamson (1965). His empirical study of twenty-four nations is regarded as a classic. Employing a coefficient of variation, Williamson concluded that the divergence or convergence of regional inequalities are a function of national development. However, Williamson's work fails to identify the trend within particular regions. As such, Zimon (1978) concludes that Williamson's primary contribution to the field of regional development studies is derived from the stimulus he provided in that sphere.

A plethora of techniques have subsequently emerged. Single-variable measures employing, for example, regional income have been criticized as not being sufficiently comprehensive. Quite obviously

regional development is derived from a number of sources each of which requires measurement. But attempts to produce multiple-variate techniques have often suffered from a neglect of important economic indicators (Knox,1975).

Anyone who has undertaken research in the social sciences is probably aware of the numerous pitfalls which may await the researcher. This is particularly true of attempts to undertake temporal analysis extending over any length of time. The reporting of statistics frequently fluctuates and categories may even disappear. These problems are manifolded in research upon Eastern Europe and the Soviet Union.

For Poland there is a relative abundance of statistics available for the post-war period. Besides the customary Statistical Yearbook (Rocznik Statystyczny), the Central Statistical Office publishes a diverse collection of statistics. Be that as it may, when undertaking a protracted study one is often confronted with the frustration of incomplete series. This is particularly the case for regionally disaggregated statistics.

Fallenbuchl (1975:16) suggests that the most useful indicator of relative levels of development for Poland would be per capita national income produced within each region. Unfortunately, these statistics are available for only a few years. In addition, the measurement of national income in socialist nations employs the "production method"; that is, it includes only the net value added in material production branches and excludes the net value added in the service and government sectors (Koropeczyj,1972). As such these statistics may overlook considerable interregional differences in these

sectors, producing a considerable downward bias in the economic development levels of urbanized regions where the tertiary sector is particularly well-developed.

As a result of the apparent vagaries of Polish statistics, studies involving temporal series have been few (e.g. Brown & Trott, 1968; Fallenbuchl, 1975). In contrast there have been a number of "static" inquiries which consider regional differentiation at a particular moment in time (e.g. Hamilton, 1982).

Quite apart from these considerations regarding data availability, the administrative reforms undertaken in 1975 confound attempts to produce temporal studies of regional development. Some statistics have been converted to approximate the new administrative boundaries, but these are few. Consequently, it is most useful to employ cartographic representation of development levels when assessing spatial variation since this permits the researcher to identify patterns in development levels.

METHODOLOGY

It is the aim of this analysis to consider regional development levels in Poland between 1955 and 1981 in order to assess whether these levels display convergence or divergence. Against the background of the oft-stated goal of regional equity one may expect to witness the former. However, it was described in the previous chapter how policy has often been subverted by subsequent action. In this light it is necessary to consider regional development levels over a period of time so as to ascertain the results of successive policies on relative development levels.

In accordance with Marxist-Leninist theory the Polish authorities continually stress the desire to achieve "all-round" development of the Polish voivodships. In view of this it was considered most appropriate to adopt a method of analysis which would indicate overall levels of development of the voivodships. Individual indicators, for example industrial production, may display considerable increases over time, but this may obscure relative neglect of the social infrastructure. Conversely, it needs to be assessed whether a relative deficiency in economic development is associated with continued social disadvantage, or whether the socialist system has provided a means by which the benefits of national economic growth may be conferred upon regions which lag in terms of economic development.

From the data available, a number of variables have been selected in order to provide some insight into the relative disparities among the Polish voivodships. The variables, discussed below, combine both social and economic indicators. Their selection was intended to provide a comprehensive index that might reveal social and/or economic inequity. Considered over time this index may unveil whether the Polish authorities have succeeded in their aim of reducing, and ultimately eliminating, regional disparities.

Although some constraints were encountered in the selection of variables because of data availability, the variables arrived at do, I feel, provide an adequate index for regional development. A brief description of the variables, and the reasons for their adoption, follows.

The variables of employment, investment and industrial

production in socialized industry are obviously economic in nature. They were selected in order to divulge the relative levels of economic development among the voivodships. In Chapter 4 the primacy accorded to economic development in Polish regional and national policy was discussed. As such one would expect to observe relative increases in these indices among the least developed regions if any headway were to be made toward eliminating regional inequity.

For the consideration of social development the following indicators were selected: residential space, retail sales, kindergarten enrollment, students in higher education, radio and television ownership, number of doctors and number of hospital beds. It was felt that this combination of variables would provide good insight into relative levels of social development.

Residential space was felt to provide an important guide to the relative development of the social infrastructure. Since the immediate post-war period of reconstruction the Polish authorities have deemed it fundamental to provide adequate housing for each member of society. Although the norm of minimum personal housing space has been successively revised downward, this remains a fundamental goal. Early policy statements, which reflect subsequent stances, outline the need to develop housing as a prelude to economic development.

When a new region is to be established around a new centre, the development of that centre is prerequisite. The direct consequence of this is the need of two plans for regional division: the first, based upon existing urban centres, is called the possible (short-term); the second, based on existing and proposed urban centres, is the postulated (long-term) plan.

The transition from the possible to the postulated plan depends on appropriate building policies (Ministry of Reconstruction, 1948:73; emphasis in original)

It is apparent that the extension of economic development throughout the nation is seen as demanding adequate expansion of the housing stock. The index of residential space will provide an indicator of this.

In the course of the past forty years, the industrialization of Poland has taken an extensive character. This involves the absorption of quantitative factors of growth by means of setting in motion the increased exploitation of natural resources and an increase in employment through the creation of new work-places in previously weakly-developed regions (Winiarski,1976:273). The introduction of women into the labor force has been an integral part of this policy. This fact lay behind the selection of kindergarten enrollment as an indicator of development. The provision of pre-school facilities releases women from domestic responsibilities in order that they may partake in industrial expansion. Kindergartens are, thus, an important component of the social infrastructure which may, in turn, exert a considerable influence upon economic development.

Both retail sales and radio and television ownership were selected for their utility in indicating relative consumption levels among voivodships. They may be considered as indicators of living standards and may reveal whether redistribution of income has been undertaken to a suitable degree. Intimately linked to living standards is the notion of health and welfare. In order to discern spatial variation in welfare provision, the indexes of doctors and hospital beds were chosen.

The higher education index may be considered as a further

component of living standards. Advanced education is almost universally accepted as desirable in itself, and so the possession of a large student body may be thought to indicate development. But, perhaps more importantly, this variable includes not only universities, but also technical and agricultural training schools. Many such schools draw upon the local population and are therefore likely to benefit their region of location. Personal experience has also suggested that graduate student research may be incorporated into local policy decisions and, as such, further benefits may accrue.

In addition to these variables a further indicator, urban population, was adopted. This variable assumes both an economic and a social character. In terms of the latter, urban residence can provide improved access to housing and relatively scarce goods and services. A high degree of urbanization is also associated with economic development since the urban areas possess the infrastructure necessary for economic advancement.

It has already been noted that the collation of data pertaining to the regional divisions of Poland is fraught with difficulties. As a result of limited data availability the process of variable selection was curtailed. It is certainly recognized that the eleven variables may not represent the most appropriate indicators of regional development. Each may be subject to influences extraneous to the regional development process. For example, a lack of kindergarten enrollment may arise from the persistence of traditional family care rather than neglect of a region's social infrastructure. And radio and television ownership may be more reflective of availability than explicit government policy

aimed at redressing imbalances in regional living standards.

While I recognize these shortcomings in the variables employed it is necessary to emphasise the lack of alternative indicators. As such one must be prepared to accept the eleven variables as the best possible measures.

In each case the original data have been transformed into per capita scores through division by the population of the region. This provides more comparable observations for regional development levels since it eliminates the source of possible disproportions arising from large, or small, regional populations. In the study of regional disparities it is more suitable to compare such ratio data because it is the relative "rate" that one is seeking to observe rather than the absolute value.

The primary method employed for the analysis of this data is the computation of z-scores or standard scores. These scores transform the original data such that its mean becomes zero and its standard deviation unity. The z-score is thus:

$$z_i = \frac{X_i - \bar{X}}{S}$$

where z_i is the standardized score for the i th observation,

X_i is the original score,

\bar{X} is the mean for all values of X_i

and S is the standard deviation of X .

Thus the original data are expressed in terms of their dispersal (positive or negative) around the mean. This has instant advantages

since the signs are such that for each variable, positive is "good" and negative "bad" (Smith,1975:159).

In addition to providing a measurement of the relative level of incidence of a particular variable, a composite score may be obtained by summing the standard scores for each region. Once again the signs may connote "good" or "bad". There are, as with any model, conceptual limits in the production of a 'Standard Score Additive Model':

It requires a gross assumption to define the function which determines the level of social well-being as the summation of standard scores on a set of variables. But in the absence of superior knowledge, the additive model at least provides a starting point for geographical description (Smith,1973:86).

Mapping of the composite scores further enhances their utility as indicators of spatial variation in development levels.

INTERPRETATION OF DATA

The z-scores for the selected variables are presented in Tables 4 to 9. In addition to the scores for individual variables, combined scores are presented for the economic variables (employment, investment and industrial production), for the social variables (the remainder) and for the combined economic and social variables.

Between 1955 and 1970 the regions obtaining the highest and lowest composite scores remained broadly similar. Katowice, Gdansk and Warsaw exhibited extremely high positive scores, whilst Bialystok, Kielce, Lublin and Rzeszow registered high negative composite scores. The latter group are located in the eastern regions of Poland and the concentration of negative values in this area can be observed in Figures 9 to 12. That these regions exhibited consistently high negative scores would appear to suggest that any governmental policies

Table 4
F-Scores, 1995

	Urban Population	Employment	Environment	Industrial Production	Residential Space	Retail Sales	Highschool Enrollment	Students in Higher Education	Public and Professional Overseas	Success	Hospital Beds	Outward F-Scores	Outward Social F-Scores	Total F-Scores
Blacksburg	-1.06	-1.42	-0.73	-1.22	-0.16	-2.44	0.56	-0.74	-1.08	-1.02	-1.33	-3.37	-4.27	-9.44
Hyden	0.24	-0.28	-0.47	0.13	-0.90	0.17	-0.22	-0.74	0.16	-0.69	-0.43	-0.82	-2.45	-3.27
Glenn	1.41	0.75	0.38	0.29	0.33	1.34	0.36	1.46	1.47	1.47	0.99	1.43	0.82	10.25
Kelso	1.89	2.16	2.35	2.80	2.50	2.06	0.63	0.22	1.29	0.48	0.85	7.31	9.26	18.57
Radford	-0.21	-1.23	-1.25	-0.36	-0.90	-1.41	0.19	-0.49	-0.78	-1.27	-1.83	-2.84	-9.10	-12.14
Roma	-0.11	0.22	-0.25	-0.49	0.15	0.06	-1.31	-1.06	0.42	-0.90	0.15	-0.72	-1.29	-2.21
Roanoke	-0.27	-0.32	1.69	0.37	1.60	-0.24	0.32	1.20	-0.20	0.85	-0.15	1.45	1.38	2.83
Lynch	-1.44	-1.37	-1.14	-1.13	-0.83	-1.49	0.75	-0.19	-1.12	-0.69	-0.97	-2.84	-5.89	-6.73
Lees	0.58	0.28	-0.72	1.15	-0.45	0.31	0.71	0.45	0.28	0.48	-0.57	0.71	1.77	2.46
Quantico	-0.02	-0.26	-0.19	-1.05	0.72	-0.70	-0.96	-0.42	-0.53	-0.94	0.97	-1.50	-2.88	-4.48
Opolis	-0.65	0.49	0.25	0.57	-0.41	0.38	-0.38	-0.32	0.31	-0.15	0.25	1.41	-1.15	0.04
Parsons	0.15	-0.27	-0.77	0.05	-0.82	0.13	-0.06	0.76	0.19	0.05	-0.24	-0.99	-0.24	-1.23
Parsons	-1.38	-1.18	-0.54	-0.51	-0.19	-1.43	1.33	-1.06	-1.21	-1.06	-0.24	-2.23	-5.54	-2.77
Shenandoah	1.12	1.00	0.79	-0.41	0.32	0.84	-1.46	0.56	1.27	0.72	1.46	1.39	4.82	6.21
Warner	0.45	0.83	1.38	-0.23	1.05	0.83	2.31	2.06	0.43	2.05	-0.50	1.14	3.08	10.44
Winchester	0.97	1.16	-0.10	0.98	-1.19	0.83	-0.99	0.93	0.73	0.85	2.03	2.64	4.13	6.17
Woolfords	0.62	3.45	-0.29	-0.27	-0.78	-0.12	-1.14	-1.06	0.57	-0.46	0.25	-0.22	-2.66	-2.87

Table 5
z-scores, 1967

Neighborhood	Urban Population	Employment	Investment	Industrial Production	Residential Space	Retail Sales	Kindergarten Enrollment	Students in Higher Education	Radio and Television Ownership	Doctors	Hospital Beds	Combined Economic z-scores	Combined Social z-scores	Total z-scores
Highpark	-1.06	-1.49	-1.31	-1.30	-0.34	-1.22	-0.41	-0.69	-1.22	-0.66	-0.96	-4.19	-4.36	-10.96
Hydross	0.14	-0.24	-0.44	0.09	0.21	0.10	-0.15	-0.71	-0.02	-0.81	-0.61	-0.79	-1.34	-2.73
Glenn	1.36	0.02	1.56	0.65	0.71	1.43	0.37	1.43	0.34	1.43	0.19	3.95	8.44	11.49
Kenwood	1.95	2.28	1.85	2.40	1.87	1.89	-0.20	0.05	2.60	0.35	1.13	6.53	9.13	15.66
Madison	-1.25	-1.22	-1.20	-0.73	0.03	-1.45	0.05	-1.06	-1.73	-1.25	-1.24	-3.15	-7.02	-10.97
Normalin	-0.08	-0.06	-0.55	-1.09	-1.26	-0.19	-1.28	-1.10	-0.27	-0.53	0.78	-1.89	-1.82	-6.61
Kenwood	-0.28	-0.06	1.26	0.36	0.15	-0.09	0.55	1.24	-0.32	0.72	-0.44	1.98	1.63	3.29
Larkin	-1.40	-1.40	-1.14	-1.08	-0.45	-1.31	0.42	-0.05	-1.34	-0.53	-0.82	-3.80	-5.68	-9.49
Lake	0.44	0.41	-0.31	1.43	0.04	0.30	1.26	0.23	0.45	0.72	-0.56	1.53	3.78	5.21
Clayton	-0.65	-0.48	-0.82	-1.07	-1.22	-0.53	-1.24	-0.60	-0.58	-0.21	0.17	-2.47	-5.54	-6.81
Quincy	-0.53	0.55	0.41	0.26	0.29	0.13	-1.07	-0.63	0.73	-0.39	1.13	1.72	-0.33	1.41
Peasant	0.07	-0.17	-0.34	-0.05	-0.32	0.53	0.30	0.68	0.48	-0.07	-0.21	-0.56	2.08	1.97
Kenwood	-1.46	-1.08	-0.10	-0.85	0.15	-1.24	0.01	-1.10	-1.19	-1.06	-1.13	-2.23	-6.32	-8.55
Stearns	1.07	0.72	0.44	-0.20	-0.08	0.73	-1.14	0.44	0.33	0.31	1.09	1.26	2.55	3.81
Marzani	0.53	0.24	0.97	-0.23	1.00	1.03	2.24	2.04	0.89	2.36	-0.23	6.89	10.74	11.62
Woodrow	1.01	1.05	0.31	0.87	-1.31	0.68	-0.50	0.07	0.83	0.31	1.71	2.23	3.72	5.65
Madison Oaks	0.24	0.14	-0.24	-0.05	-1.07	-0.25	-1.01	-1.10	0.09	-0.51	0.37	0.85	-3.44	-2.20

Table 6
Z-Scores, 1965

	Unemployment	Urban Population	Employment	Investment	Industrial Production	Amusement Space	Retail Sales	Kindergarten Enrollment	Students in Higher Education	Ratio and Percent Ownership	Doctors	Hospital Beds	Continued Enrollment	Real Estate
Allypuck	-0.98		-1.54	-1.75	-1.36	0.37	-1.49	-0.33	-0.84	-1.24	-0.08	-0.43	-4.57	-5.69
Applouson	0.10		-0.34	0.03	0.03	0.24	0.09	-0.68	-0.58	0.07	-1.02	-0.76	-0.29	-2.56
Clarend	1.34		0.84	0.37	0.39	2.28	1.26	0.15	1.16	1.03	1.48	4.66	2.20	9.26
Arrows	1.93		2.13	2.07	2.60	1.20	1.39	-1.03	0.05	2.02	0.14	1.31	6.46	7.21
Blaine	-1.24		-1.24	-1.16	-0.77	-0.30	-1.64	0.38	-1.11	-1.66	-1.49	-2.12	-3.17	-9.09
Bonham	-0.75		-0.66	-0.08	-1.09	-0.33	0.23	-0.27	-1.23	-0.35	-0.37	0.40	-1.23	-2.07
Brake	-0.30		-0.01	0.79	0.68	0.05	-0.34	0.28	1.29	-0.25	0.73	-0.64	1.37	3.16
Lucas	-1.41		-1.54	-0.57	-1.66	-0.45	-1.30	-0.16	0.03	-1.13	-0.55	-0.83	-1.17	-5.91
Luck	0.44		0.25	-1.01	0.65	0.92	0.18	1.84	0.79	0.36	0.40	-0.49	-0.01	4.14
Clayton	-0.73		-0.60	-0.76	-1.14	-1.54	-0.40	-0.65	-0.38	-0.53	-0.78	-0.11	-2.50	-7.79
Opala	-0.51		0.31	0.21	0.89	-0.69	0.15	-1.56	-0.95	0.68	-0.28	1.33	1.41	-1.53
Peters	0.00		-0.19	0.10	-0.15	-0.04	0.33	0.37	0.66	0.18	-0.22	-0.41	-0.34	1.25
Russow	-1.50		-1.08	-0.28	-0.45	-0.04	-1.47	0.01	-1.03	-1.29	-1.21	-1.01	-1.79	-5.62
Armadillo	1.12		0.90	1.63	-0.12	-0.52	1.64	0.27	0.46	0.17	1.05	0.62	2.41	4.43
Morris	0.53		0.20	0.74	-0.16	1.23	1.16	2.13	1.90	0.87	2.30	0.14	6.91	10.34
Meadow	1.82		1.04	-0.13	0.94	-1.27	0.84	-0.82	0.95	1.02	0.36	1.70	1.87	2.74
Elkhorn Gate	0.22		0.48	-0.68	0.17	-1.28	-0.08	-0.22	-1.19	0.08	-0.46	4.43	-0.03	-2.66

Table 7
F-scores, 1970

Neighborhood	Urban Population	Employment	Investment	Industrial Production	Residential Space	Retail Sales	Entrepreneurial Employment	Students in Higher Education	Ratio and Proportion Generalship	Doctors	Hospital Beds	Combined F-scores	Combined F-scores	Weighted F-scores
Birmingham	-0.31	-1.29	-1.52	-1.25	0.26	-1.29	0.29	-0.31	-1.27	0.02	-0.60	-4.16	-4.20	-4.84
Chicago	0.03	-0.45	0.81	0.37	0.11	0.03	-1.09	-0.67	0.29	-0.06	-0.80	0.75	-1.09	-2.16
Cleveland	1.37	0.73	0.62	0.56	1.01	1.16	0.26	1.09	0.90	1.41	0.24	1.81	1.54	9.45
Detroit	1.07	2.09	1.26	2.39	1.25	1.19	-0.84	0.15	1.02	0.09	1.66	5.75	6.34	12.07
Kansas City	-1.24	-1.09	-0.86	-0.28	0.47	-1.62	0.79	-1.12	-1.59	-1.25	-1.86	-2.33	-1.61	-9.94
Los Angeles	-0.04	0.11	0.41	-1.13	-0.39	0.56	-0.52	-1.29	-0.13	-0.58	0.44	-0.81	-1.05	-2.56
Los Angeles	-0.35	-0.13	-0.35	-0.47	-0.15	-0.39	0.07	1.76	-0.56	0.43	-0.58	-0.95	0.43	-0.52
Los Angeles	-0.26	-0.68	-1.12	-0.74	0.06	-1.20	-0.16	0.24	-1.19	-0.67	-0.73	-3.54	-5.01	-8.55
Los Angeles	0.49	0.39	-0.75	-0.99	1.72	0.11	1.43	0.20	0.59	0.51	0.06	-1.35	5.32	3.07
Los Angeles	-0.64	-0.56	-0.65	-0.99	-1.23	-0.22	-0.63	-0.94	-0.50	-0.82	-0.19	-2.29	-4.77	-8.37
Los Angeles	-0.53	0.43	-0.79	1.20	-0.23	-0.23	-1.25	-0.64	0.54	-0.43	1.13	0.85	-1.71	-0.86
Los Angeles	0.00	-0.26	-0.45	-0.72	-0.23	0.45	0.44	0.79	0.45	-0.14	-0.27	-1.43	1.54	0.15
Los Angeles	-1.02	-0.95	0.09	0.07	-0.72	-1.39	0.10	-1.00	-1.69	-1.25	-1.06	-0.79	-6.09	-7.48
Los Angeles	1.15	0.94	2.46	-3.10	-0.83	1.22	1.17	0.51	0.42	1.19	0.35	3.10	5.38	8.08
Los Angeles	0.53	0.19	0.01	0.24	1.44	1.25	1.56	1.51	0.93	2.42	0.17	0.54	10.11	10.68
Los Angeles	1.04	1.23	0.56	1.37	-1.78	0.59	0.29	0.96	0.77	0.31	1.06	2.64	4.03	6.47
Los Angeles	0.28	0.50	0.94	0.36	-1.04	-0.10	-0.01	-1.19	0.01	-0.53	0.19	1.70	-3.19	-4.49

TABLE 9
R Scores, 1961

Vocationality	Urban Population	Employment	Treatment	Industrial Production	Residential Space	Retail Sales	Manufacturing Enrollment	Suburban Higher Education	Spillover and Overlap	Business	Hospital Beds	Combined R-scores	Head R-scores
Mean	2.26	1.74	6.53	6.45	1.14	2.86	6.02	1.82	2.04	3.56	2.34	2.72	15.79
Black Pool table	-1.18	-1.27	-0.19	-0.26	-0.27	-0.58	-1.45	-0.45	-0.57	-0.63	-1.23	-1.02	-0.56
Black Pool table	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51
Black Pool table	-0.12	0.44	-0.67	1.56	0.47	0.18	1.22	-0.15	-0.04	-0.05	1.15	-1.21	0.81
Black Pool table	0.67	0.47	-0.26	0.45	0.07	0.78	0.45	0.38	0.76	-0.46	-0.62	0.68	2.51
Black Pool table	-0.71	-0.13	-0.03	-0.31	-0.04	-0.85	-0.19	-0.75	-0.30	-0.46	0.88	-1.08	-1.64
Black Pool table	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25
Black Pool table	0.40	0.28	1.27	-0.69	-0.49	0.99	0.59	-0.59	0.36	-0.54	-0.50	0.75	-0.77
Black Pool table	0.53	0.68	0.12	0.20	-0.12	0.75	0.27	-1.13	0.96	1.28	1.24	0.21	7.42
Black Pool table	0.78	1.12	0.64	1.45	-1.72	0.18	0.36	-0.48	0.59	-0.16	1.04	2.13	0.99
Black Pool table	-0.40	-0.40	-0.32	0.98	-0.18	0.16	0.67	-0.64	-0.06	0.49	-0.70	-0.64	-1.84
Black Pool table	-0.45	0.15	-0.45	1.12	2.19	0.97	-0.13	-0.19	0.30	0.34	1.28	8.11	3.51
Black Pool table	-0.78	-1.05	0.31	-0.27	0.04	-0.32	-1.04	-0.69	-0.33	-0.85	-1.05	-1.61	-1.62
Black Pool table	0.56	0.93	0.09	-0.94	-0.23	1.35	0.28	-0.23	0.38	-0.22	-0.40	0.18	1.52
Black Pool table	-1.12	0.02	-0.57	0.94	0.93	-1.20	0.67	-0.51	-0.87	-0.71	0.72	-0.59	-1.13
Black Pool table	0.38	1.18	1.36	1.93	0.93	0.77	0.71	-0.81	0.48	-0.34	0.14	4.45	2.76
Black Pool table	-0.38	-0.34	0.03	-0.13	1.54	0.75	-1.18	-0.72	0.48	-0.72	-0.32	-0.64	-0.43
Black Pool table	-1.04	-1.96	-0.51	-1.12	0.47	-1.12	-1.28	-0.70	-0.48	-0.72	-0.71	-0.79	-0.74
Black Pool table	2.38	1.96	-0.89	1.45	-0.06	1.36	-0.82	1.57	2.69	2.09	1.37	2.52	10.39
Black Pool table	-0.89	-0.86	-1.05	-1.22	0.13	-0.28	0.95	-0.67	-2.31	-0.02	0.59	-1.33	-0.50
Black Pool table	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Black Pool table	-0.63	0.15	0.15	0.95	1.55	0.43	1.54	-0.21	0.62	-0.37	1.13	1.68	1.81
Black Pool table	-1.25	-1.67	-1.38	-1.68	0.44	-1.53	-0.08	-0.89	-1.41	-0.96	-1.46	-1.13	-0.66
Black Pool table	0.13	0.09	-0.41	-0.51	0.25	-0.10	0.45	-0.65	0.59	-0.64	-0.59	-0.67	-0.59
Black Pool table	-0.38	-0.50	-0.28	2.83	-0.57	-0.43	-0.49	-0.51	0.13	-0.31	0.20	-0.37	-0.34
Black Pool table	1.09	0.71	0.57	0.68	0.47	1.46	-0.51	2.02	1.27	1.64	1.15	1.34	6.61
Black Pool table	-0.45	-0.42	-1.08	-1.22	-0.33	-0.32	-0.60	-0.60	-1.29	-0.68	-0.82	-2.02	-0.47
Black Pool table	-0.85	0.01	-0.19	-0.08	0.25	-0.43	1.35	0.63	-0.19	-0.19	-0.49	-0.23	-0.30
Black Pool table	-1.40	-1.77	-1.82	-1.77	-0.61	-1.43	-1.18	-0.42	-0.95	-0.99	-1.19	-1.16	-1.17
Black Pool table	-0.54	-1.00	-0.51	-1.18	0.40	-0.79	-1.05	-0.72	-1.16	-0.42	-0.41	-0.47	-0.57
Black Pool table	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68
Black Pool table	-0.17	-0.35	-0.13	-0.06	-0.51	-0.39	1.35	-0.69	-0.78	-0.89	-0.36	0.16	0.10
Black Pool table	-1.03	-0.49	0.76	0.44	-0.12	1.29	-0.23	1.23	-1.25	-1.07	0.36	3.64	7.19
Black Pool table	-1.03	-0.88	-0.78	-0.03	-1.26	-1.34	0.47	-0.62	-1.33	-0.69	-1.17	-0.67	-0.78
Black Pool table	0.36	0.13	-0.38	0.45	-0.36	0.29	0.89	0.44	0.77	-0.64	-0.51	0.10	1.89
Black Pool table	-0.74	-0.74	-0.74	-0.74	-0.74	-0.74	-0.74	-0.74	-0.74	-0.74	-0.74	-0.74	-0.74
Black Pool table	1.28	1.23	0.80	1.62	-0.70	1.90	0.99	2.43	0.99	2.03	2.54	2.15	10.44
Black Pool table	-1.40	-1.27	-1.06	-1.27	0.38	-1.04	-1.04	-1.04	-1.04	-1.04	-1.04	-1.04	-1.04
Black Pool table	0.64	0.69	-0.13	0.18	-1.13	0.73	-0.34	0.18	0.59	-0.16	0.80	1.22	1.17

FIGURE 9

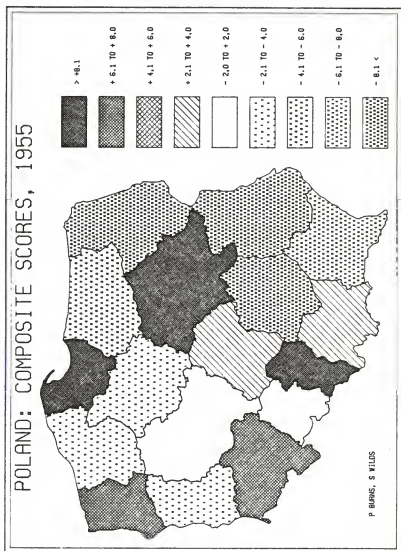


FIGURE 10

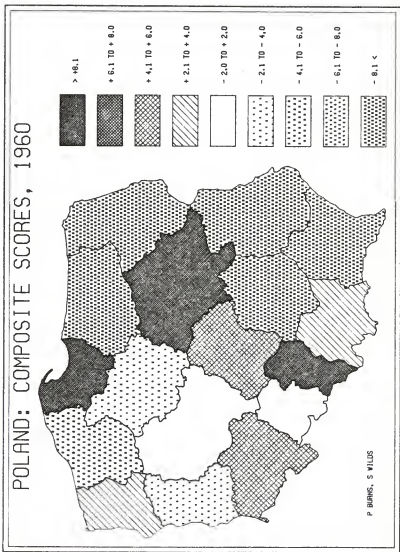


FIGURE 11

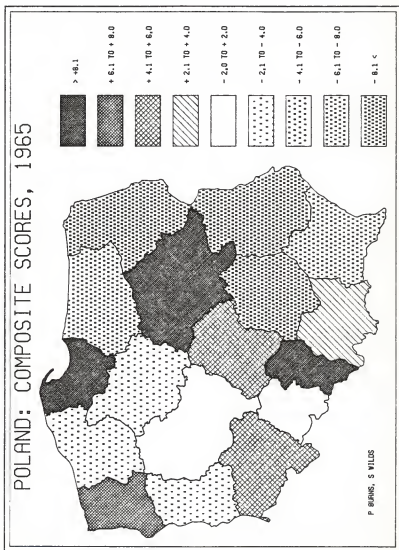
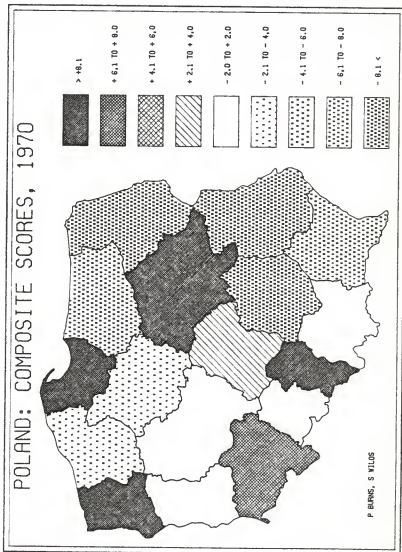


FIGURE 12



aimed at alleviating discrepancies in regional development levels failed to accomplish their goals. For the most part, these poorly developed regions manifested relatively high negative scores in each variable which combine to produce high negative composite scores. In the investment variable, however, Rzeszow's score approached the mean over time and was slightly above the mean (0.09) in 1970. This was accompanied by an increase in that region's industrial production. But in spite of these advances, the remainder of the scores combined to produce a high negative score. This suggests that increased investment failed to bring about a concomitant raising of overall development. Consequently, in the case of Rzeszow, the reliance placed upon industrial development to foster regional development, as discussed above, seems misplaced.

For the regions exhibiting the highest positive scores between 1955 and 1970 (Katowice, Gdansk and Warsaw), the scores for individual variables exhibited considerable differences. Katowice scored highly on the economic indices and also in sales and radio and television ownership. These variables are intimately associated with levels of income derived from the considerable industrial development which has taken place in that region. Katowice's high score in residential space gradually diminished during this period. This was apparently the result of the extension of housing construction to hitherto weakly developed regions such as Lublin and Bialystok. There was a considerable increase in the region's prominence in terms of hospital beds. In absolute numbers, the number of hospital beds in Katowice per 10,000 population rose from 54.2 in 1955 to 69.8 in 1970. This

represented the highest hospital bed/population ratio in 1970, a level also attained by Wroclaw. Given the dominance of heavy industry in the Katowice region - particularly coal-mining and steel-making - one cannot help but feel that the growth in medical facilities was prompted by demand for such services. Such a situation would represent what Smith (1977:133), drawing from Aristotle, terms "proportional equality"; that is, some less than equal distribution can be justified by special considerations or criteria. In this case demand for medical care created by hazardous occupations may represent the special criterion.

Somewhat surprising in the case of Katowice voivodship is the negative score for kindergarten enrollment. One may have expected a highly-industrialized region to possess greater pre-school facilities. A possible explanation may lie in the nature of the industrial development in Katowice. As noted above, this is primarily in the heavy industrial sector. This may discourage the employment of many women in the labor force, thereby reducing the necessity for kindergartens. By way of contrast, other regions have sought to resolve their lack of natural resources by undertaking "extensive" industrialization whereby manpower represents their greatest asset. In these regions the attraction of women into the labor force may have been accompanied by greater provision of kindergarten facilities.

In contrast to the Katowice region where the population of higher education institutions is close to the Polish mean, the Warsaw region exhibited a very high positive value in this category. This is, perhaps, expected of a capital city and, in particular, a capital city in Eastern Europe where academic functions tend to concentrate in such

cities. Other regions, notably Poznan, Krakow, Wroclaw and Gdansk, also displayed high positive scores. Krakow's traditional association with higher education is particularly evident. The existence of regional centers of higher education can be of considerable importance. Students at such centers often undertake research connected with the surrounding region. This research is frequently submitted to local authorities and, particularly in the case of locational, settlement and other spatial studies, may favorably influence local policy.

Besides its high positive score in higher education, Warsaw maintains high positive scores in each social variable. In economic terms, however, Warsaw's scores do not significantly surpass the Polish mean. This may be explained by two important facts. First, the economic indicators relate to the socialized industrial sector. As the capital, and largest, city of Poland, Warsaw obviously has a considerable tertiary sector involved with government, administration (a particularly large sector in any socialist economy) and services. These are not included in the economic variables. Second, the city of Warsaw lies in an extensive, predominantly rural, voivodship. Agrarian employment is also excluded from the economic variables. These same provisos may also account for the relatively average composite scores for regions such as Lodz and Poznan in which there are also located large cities.

The relative advantages demonstrated by the western regions is further enhanced by the levels of national income in 1960 (Table 10). Particularly evident is the huge contrast between Katowice and the eastern regions which all exhibit levels of per capita income below the

Table 10
National Income, 1960

Region	Million zlotys	Million zlotys per 1000 population
Poland	321055.8	10.77
Warsaw	45161.7	12.87
Bydgoszcz	21914.6	12.63
Poznan	32987.9	13.56
Lodz	35599.0	15.27
Kielce	18202.8	9.93
Lublin	18424.2	10.10
Bialystok	9808.5	8.90
Olsztyn	8602.4	9.61
Gdansk	17102.9	13.78
Koszalin	6691.6	9.57
Szczecin	10038.1	13.00
Zielona Gora . . .	9717.1	12.25
Wroclaw	31636.2	13.93
Katowice	58826.2	17.74
Krakow	33729.1	13.51
Rzeszow	16610.8	10.35
Opole	13079.1	13.81

Source: *Dochod Narodowy Polski według Wojewodztw, 1960-61*, KPZK PAN, GUS Warsaw, 1963

national average. The considerable differences in the net value added in industry in 1960 further underline these variations, and go some way to explaining them (Table 11).

The composite scores for each region are mapped in Figures 9 to 12. Mapping such composite scores enables spatial variation to be assessed with relative ease. Clusters of high or low composite scores become readily apparent and variation over time may be observed.

The most apparent pattern in these figures is one of an east/west dichotomy in composite scores. Among the eastern regions (comprising the voivodships of Olsztyn, Bialystok, Lublin, Kielce and Rzeszow) there is no evidence of a reduction in the relative disadvantage occurring in these regions. In fact, there would appear to have been a consolidation of the west's relative advantage. Moreover, this east/west division may be traced to the pre-war division of the nation into Poland 'A' (highly developed) and Poland 'B' (largely undeveloped).

It was previously mentioned that the administrative reform of 1975 precludes the direct comparison of development levels for the entire post-war period. The mapping of z-scores can assist in overcoming the barriers imposed by the reform since it enables spatial patterns to be identified.

The composite scores for 1975 and 1981 are mapped in Figures 13 and 14. It is possible to still identify a broad east/west distinction. Several eastern regions, for example Bialystok and Lublin, have now secured positive composite scores, whereas Suwalki, Rzeszow and Kielce hover about the mean. For these regions the administrative

Table 11
 Net Value Added in Industry, 1960

Region	Million zlotys	Million zlotys per 1000 population
Poland	201957.4	6.77
Warsaw	21977.8	6.26
Bydgoszcz . . .	9110.8	5.25
Poznan	15241.3	6.26
Lodz	22669.3	9.72
Kielce	7861.8	4.28
Lublin	4413.7	2.42
Bialystok . . .	2357.3	2.13
Olsztyn	1888.2	2.10
Gdansk	8613.9	6.94
Koszalin	1479.7	2.11
Szczecin	3787.2	4.90
Zielona Gora . .	4161.8	5.24
Wroclaw	17978.3	7.91
Opole	6657.3	7.02
Katowice	46031.8	13.88
Krakow	20694.3	8.29
Rzeszow	7032.7	4.38

Source: *Dochód Narodowy Polski według Wojewodztw, 1960-61*, KPZK PAN, GUS Warsaw, 1963

FIGURE 13

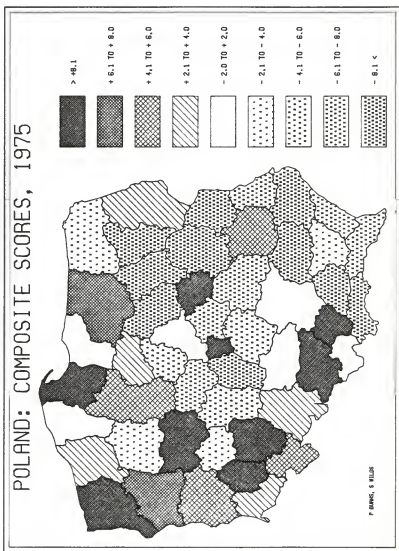
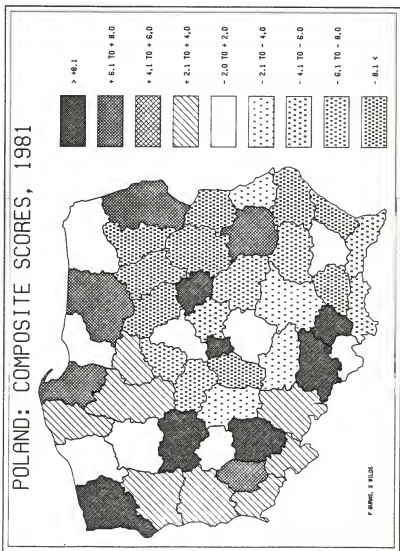


FIGURE 14



reform, which produced smaller, functional regions, is likely to have been of considerable advantage in their attaining positive scores. Relatively large cities such as Lublin and Bialystok were formerly surrounded by large agricultural regions, but these regions are now dominated by the large urban centers and their composite scores have risen accordingly. A similar trend may be observed in the case of Lodz. Prior to 1975 the voivodship of Lodz incorporated parts of the contemporary voivodships of Piotrkow, Skierniewice, Plock, Konin and Sieradz. In 1975 and 1981, three of these voivodships display relatively high negative composite scores: Sieradz, Skierniewice and Konin. Piotrkow also had a negative score in 1975. When it incorporated these voivodships, Lodz maintained a relatively low composite score, reaching its highest value in 1975 (5.31). Since 1975, however, the voivodship of Lodz is dominated by the city of Lodz with an urban population of 91.4 per cent in 1981. Concomitant with this has been an increase in its composite score to 20.30 in 1975 and 12.91 in 1975.

Throughout the period under consideration it becomes apparent that urbanization is almost synonymous with high development as measured by these indicators. Prior to 1975, the regions exhibiting high negative scores - Bialystok, Kielce, Lublin and Rzeszow - also had high negative scores in the urban population component. This relationship is still apparent after the administrative reform in voivodships such as Zamosc, Biala Podlaska and Lomza. Conversely, highly urbanized voivodships such as Warsaw, Szczecin and Wroclaw register high positive composite scores.

In some respects this may reflect a certain bias in the

variables selected for the analysis. With urban population included in the composite scores this obviously influences results. Other variables, such as housing space and hospital beds, are also likely to be a function of urbanization. This highlights the problems associated with the construction of an index that suitably depicts regional development. At the same time it emphasizes the dilemma facing the Polish authorities in accomplishing their avowed aim of the elimination of differences in living standards between town and countryside.

A comparison of the composite scores for 1975 and 1981 (Tables 8 and 9) reveals a reduction in the scores for most voivodships during this period. The majority of the scores are approaching the mean. In the absence of data for additional years it is difficult to assess whether the general decline in spatial variation results from deliberate government policy, or whether it is symptomatic of the crisis experienced in Poland since late 1979.

Retail sales is one component which would appear to have been particularly affected by the crisis. The general trend would appear to be as follows: regions which experienced high positive scores in retail sales in 1975 have, by 1981, had their scores considerably reduced e.g. Szczecin, Zielona Gora and Koszalin. In comparison, some of the regions experiencing very low levels of retail sales in 1975 have subsequently fallen in their scores e.g. Tarnow and Ostroleka. It is possible that the following explanations may go some way to explaining this trend. First, the crisis was accompanied by considerable shortfalls in consumer goods and foodstuffs. This precipitated the introduction of rationing for scarce goods. By this means, relative equality in

distribution was achieved and this may explain the general reduction in retail sales nationwide. The lack of consumer goods particularly affected the larger urban areas where these goods had previously been more readily available. Second, in the countryside the onset of the crisis was accompanied by a return to an 'exchange economy'. With no consumer goods to purchase, Polish farmers frequently exchanged produce rather than sell it for money. This would particularly affect the level of retail sales in rural voivodships.

One is tempted to subscribe to the explanation that the crisis was the predominant factor in reducing relative regional disparity. The reduction in investment by 1981, detailed in Table 2 (Chapter 4), was experienced principally in the largest industrial centers. The outcome was a dramatic decline in industrial production for the nation as a whole (Table 12). Other sectors of the economy experienced similar declines. The effect of these reductions on the relative indexes provided by z-scores is to produce a 'tightening' of values around zero since the large values which formerly influenced the results have been dramatically reduced.

It is apparent from Table 12 that some sectors of the economy increased their output in spite of the crisis. Particularly noticeable are the increases in the communal, housing and health and welfare sectors. A comparison of the scores for housing space in 1975 and 1981 would appear to suggest that the less developed voivodships, such as Zamosc, Bialystok and Konin were the beneficiaries of increased housing construction; in comparison the relative advantages of the large urban-industrial centers declined significantly, for example Warsaw, Lodz and

Table 12

Poland: GNP by Sector of Origin, 1965-1983
(at 1977 adjusted factor cost; 1975=100.0)

Sector	1965	1970	1975	1976	1977	1978	1979	1980	1981	1982	1983
Industry	51.3	69.4	100.0	101.7	103.5	105.5	104.4	102.9	90.0	88.0	92.2
Agriculture	95.5	94.8	100.0	101.7	102.2	110.8	104.4	95.1	99.2	103.7	107.6
Forestry	82.7	82.1	100.0	98.9	100.6	97.3	100.3	107.3	108.1	119.5	122.5
Construction	40.5	58.6	100.0	105.6	105.1	104.7	99.8	94.8	80.0	73.6	76.3
Transport, Communications	40.6	55.1	100.0	107.1	113.1	119.1	118.6	121.0	105.2	98.5	103.4
Trade	48.3	63.6	100.0	104.1	107.5	107.7	108.1	107.1	100.5	92.0	97.0
Communal, other material production	68.0	78.5	100.0	102.6	105.2	108.7	112.7	117.3	122.2	123.8	123.1
Housing	74.1	87.3	100.0	102.9	106.0	108.7	111.4	114.4	116.9	119.1	121.3
Financial, other nonmaterial services	90.4	94.7	100.0	96.0	97.8	99.5	101.4	103.5	105.4	106.6	106.6
Government	74.3	84.0	100.0	101.4	103.6	104.7	106.8	108.0	110.1	111.1	114.1
a. education, culture	70.9	85.5	100.0	101.3	101.6	102.7	104.5	106.0	110.8	115.7	120.7
b. science	33.1	48.3	100.0	100.0	99.3	100.0	99.4	98.6	95.6	78.3	70.6
c. health, welfare	65.7	77.9	100.0	103.6	108.3	110.8	114.3	117.2	122.3	125.6	130.2
d. admin., justice	109.1	108.5	100.0	100.6	100.1	100.6	102.2	101.4	100.8	99.7	99.7
e. military personnel	86.4	76.9	100.0	99.2	108.3	107.6	110.6	110.6	105.0	107.8	113.9
TOTAL GNP	60.0	73.0	100.0	102.5	104.4	108.1	106.2	103.6	98.1	97.5	101.2

Source: Economic Growth in Eastern Europe, 1965, 1970 and 1975-1983

Research Project on National Income in East Central Europe, Occasional Paper No. 80, 1984

Krakow. Again, unaccessible data for more recent years precludes the possibility of drawing a conclusion as to whether the apparent development of smaller, regional centers constitutes the outcome of premeditated government policy, or whether their relative progress is due to temporary lessening of the advantages enjoyed by the highly developed regions. Given that the Perspective Plan for Spatial Development to 1990 calls for the rapid development of regional centers one may conclude that it is indeed the result of conscious policy.

INDICATIONS OF CONVERGENCE

By means of the z-scores the relative levels of regional development were assessed. While some considerable disparities were indicated, it would appear that, in relative terms, the levels of disparity are diminishing somewhat. In order to ascertain whether this is in fact the case the data were analyzed by employing Lorenz curves and Gini coefficients.

Lorenz curves are a widely used measurement in the study of inequality. Regions are ranked according to their ratios of advantage, and the cumulative percentages of the attribute to be measured are plotted against the cumulative percentage of regions. Perfect equality would produce a 45 degree diagonal line; the greater the inequality the greater the departure from this line.

The difference between the plotted curve and the line of perfect equality may be defined as the "area of inequality". By relating the "area of inequality" to the total area below the diagonal line one may derive a Gini coefficient - sometimes known as the "index of dissimilarity". For this coefficient, values range from 0 to 1; a

value of 0 would represent perfect equality, whilst 1 would indicate total concentration of the attribute in one place.

In the computation of the Gini coefficients for this analysis the data employed were standardized into per capita statistics. This departs from the absolute values normally employed in such measurements. As I previously mentioned, this analysis seeks to uncover relative advantage or disadvantage, not absolute. Thus per capita data are more appropriate.

A glance at the Gini coefficients (Table 13) reveals that in the variables selected for this analysis there has been a consistent reduction in the inequality of their distribution. This is graphically illustrated by the Lorenz curves (Figures 15 to 25) where the plotted curve displays a gradual convergence upon the line of perfect equality. This trend was interrupted in 1975 following the administrative reform, but has since continued.

A closer examination of the Gini coefficients reveals several important facts. Whilst the trend has been one of diminishing inequalities, several coefficients suggest that considerable disparity still exists. In employing per capita data one creates coefficients in which the values are likely to be smaller. Thus even a small value (i.e. close to zero) can conceal considerable regional diversity in absolute values of an attribute. One should refrain, therefore, from concluding that regional disparity in Poland has been practically eliminated. The economic indicators, in addition to urban population, higher education, doctors and hospital beds, suggest that relatively high levels of regional inequality among these variables still exist.

Table 13
Gini Coefficients, 1955-1981

Variable	1955	1960	1965	1970	1975	1981
Urban Population . . .	0.202	0.179	0.173	0.156	0.214	0.188
Employment	0.165	0.138	0.124	0.109	0.137	0.110
Investment	0.175	0.169	0.128	0.127	0.230	0.131
Industrial Production	0.314	0.255	0.235	0.218	0.222	0.198
Residential Space . .	0.150	0.140	0.115	0.076	0.121	0.091
Retail Sales	0.128	0.113	0.099	0.083	0.099	0.085
Kindergarten Enrollment	0.117	0.114	0.081	0.065	0.097	0.062
Students in Higher Education	0.512	0.492	0.446	0.375	0.717	0.643
Radio and Television Ownership	0.131	0.126	0.125	0.107	0.097	0.084
Doctors	0.215	0.195	0.171	0.161	0.251	0.200
Hospital Beds	0.161	0.147	0.127	0.110	0.230	0.131

FIGURE 15
LORENS CURVE, URBAN POPULATION

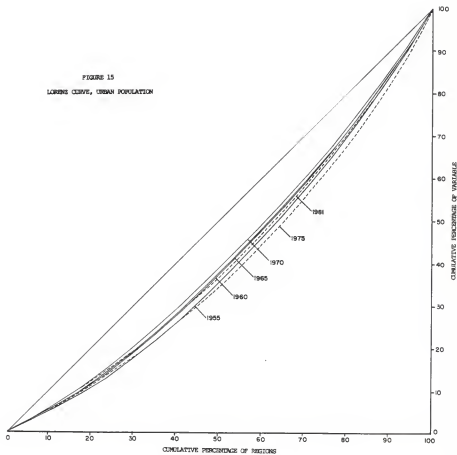


FIGURE 16
LORENZ CURVE, EMPLOYMENT

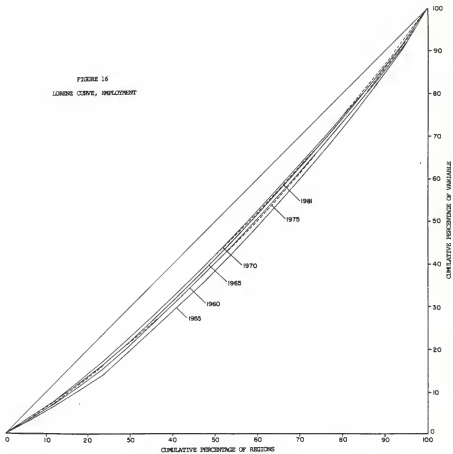


FIGURE 18
LORNTZ CURVE, INDUSTRIAL PRODUCTION

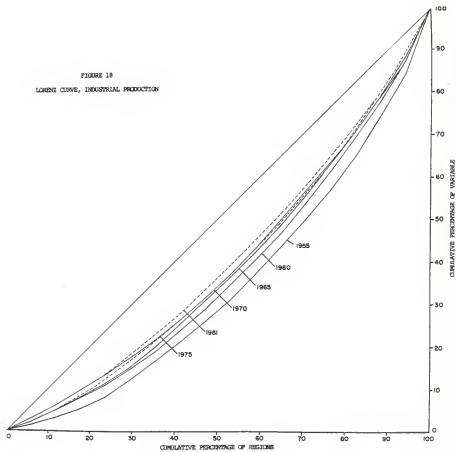


FIGURE 19
LORENTZ CURVE, RESIDENTIAL SPACE

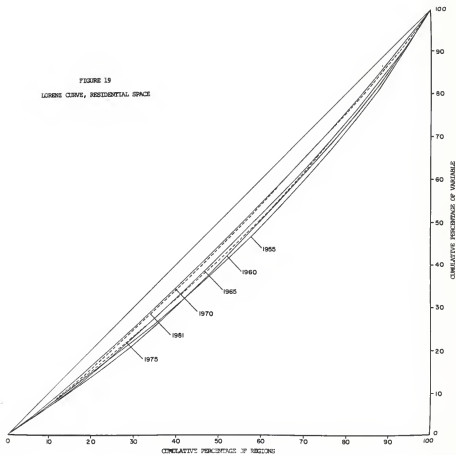


FIGURE 20
LORENZ CURVE, RETAIL SALES

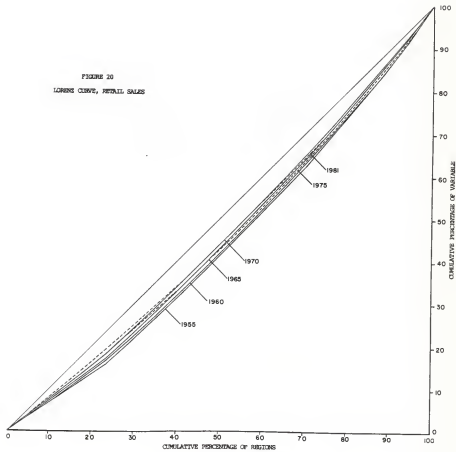


FIGURE 21
LORENZ CURVE, KINDERGARTEN ENROLLMENT

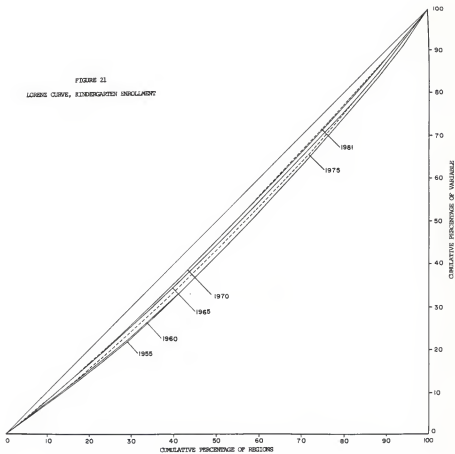


FIGURE 22
LOBINE CURVE, STUDENTS IN HIGHER EDUCATION

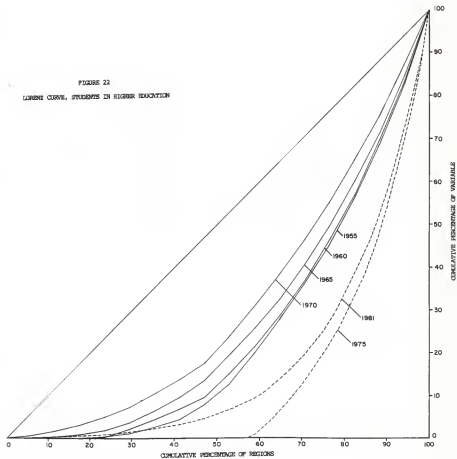


FIGURE 23
LORENZ CURVE, RADIO AND TELEVISION OWNERSHIP

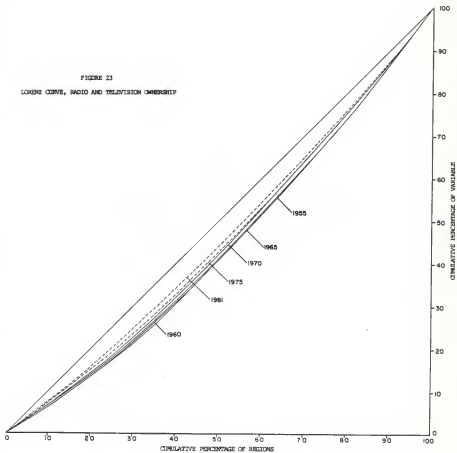


FIGURE 24
LORENE CURVE, DOCTORS

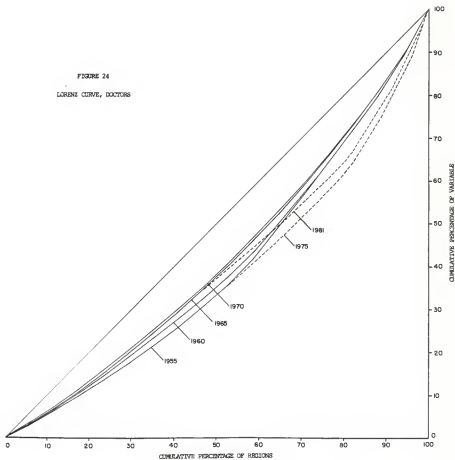
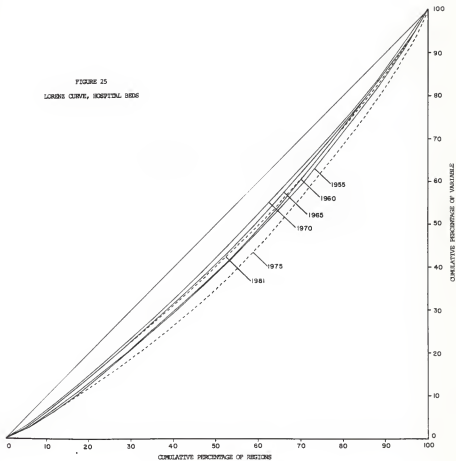


FIGURE 25
LORENZ CURVE, HOSPITAL BEDS



Consequently, the Polish authorities must continue to address the disparity in these indicators.

Nevertheless, the general trend of the Gini coefficients is suggestive of convergence in levels of regional development. Particularly noticeable is the reduction in disparity among residential space, retail sales, kindergarten enrollment and radio and television ownership. Although one must bear in mind that these are by no means a comprehensive indication of relative social development, the continued reduction in their values is highly suggestive that central management of the economy has provided a major vehicle for the spatial redistribution of wealth. And, as Hamilton (1982:126) suggests

such a conclusion would lend some support to those in Poland who argue that the location of productive activities *per se* is not absolutely essential, while still being very important, in the regional development and interregional equalization processes.

SUMMARY

In attempting to delineate postwar regional development trends in Poland, one is hindered by statistical discontinuities and inadequacies. The administrative reform of 1975 also confounds spatial-temporal studies. Despite these impediments the analysis undertaken above has illustrated a number of important facts in relation to regional development trends in Poland in the post-war period. In addition, it has highlighted some of the crucial problems which may arise in the assessment of regional equality.

The selection of adequate indicators for measuring regional development is a highly problematical process. Statistical inadequacies aside, the researcher is faced with an extremely subjective task in

order to select objective variables. This dilemma is compounded by the need to adequately define equity. In this analysis the notion of arithmetic equality was considered as a basis from which to assess regional inequity.

The results of the analysis pointed toward a gradual process of regional equalization taking place in Poland between 1955 and 1981. This was interrupted in 1975, as a result of the administrative reform, but it has since continued. That gradual elimination of regional inequality is occurring concurs with an analysis undertaken by Koropeczyj (1977:126) who concludes that there has been "truly impressive gains towards inter-regional equalization [in Poland]." Such an optimistic claim mirrors conclusions reached by Polish authors such as Misztal and Kaczorowski (1980) and Zawadzki (1974). It is necessary, however, to point out that Fallenbuchl (1975) and Zimon (1978) cite conflicting conclusions which suggest that convergence is not taking place.

In view of the lack of consensus on methodological questions one may suggest that the variety of methods employed may account for the differences in results. Fallenbuchl (1975) employs a ranking procedure in order to obtain crude development measures. Zimon (1978), in contrast, attempts to design a sophisticated framework of analysis by combining a number of indexes. Williamson's (1965) coefficient of variation was the starting point for Koropeczyj (1977). This variety of methodology and the variables employed may contribute to the lack of concurring results.

For the analysis undertaken in this paper a relatively simple approach was taken. Since the main concern was for the identification

of regional development levels among regions, the employment of z-scores was felt to be an adequate - albeit simple - method. And in seeking to identify trends in development the Lorenz curve and Gini coefficient are admirable methods.

By means of the z-scores it was possible to produce a Standard Score Additive Model which indicated relative levels of regional development in terms of eleven indices. The mapping of these scores enabled spatial patterns to be observed. From these maps the eastern regions were identified as lagging in terms of development. More recently it would appear that the level of disparity between these regions and the remainder of the nation has been diminished. Unfortunately, more recent data is unavailable and so it is not possible to assess whether this trend has continued.

The extension of urban development would appear to be particularly important in the process of regional equalization. Whilst it is accepted that the indices employed may have been biased toward urban centers, it is nevertheless relatively apparent that regional development prospers from urban development. This would appear to conform with the ideas of Poland's spatial planners who, through the Perspective Plan for Spatial Development to 1990, have advocated the extension of urban development through the creation of urban agglomerations and other large urban centers.

In relation to the regional convergence observed in this analysis mention was made of the crisis that has recently befallen Poland. It is possible that this has affected regional development trends in a number of ways. Until the early 1970s Poland was able to

exploit the considerable surpluses of labor in the eastern regions in particular. This method of "extensive" development resulted in a buoyant economy that grew very rapidly. More recently, however, the Poles have had to turn to "intensive" development methods. Although considerable Western credit was provided in the past fifteen years, much of the capital was squandered on the purchase of equipment which could not be used and in constructing luxurious offices for the Party and security police (Macshane,1981:39). As a result, the rate of national economic growth has precipitously declined. In the absence of continued credit - and a massive foreign debt - the Poles are experiencing great difficulties in modernizing their economy in order to re-establish high growth rates. The relative decline of the large urban-industrial centers that was outlined above may be considered indicative of these problems. At the same time the weakly-developed regions have displayed some growth. I would suggest that this may be due to the continued 'extensive' development of these regions as the authorities seek to exploit the last vestiges of surplus labor.

It remains to be seen whether the apparent trend toward regional equalization continues. The Polish authorities must now tackle the considerable problems facing the nation. In their efforts to repay their massive foreign debt - along with western pressure for them to do so - the Poles may find it impossible to undertake the modernization of the economy that is so fundamental for future growth. This may enable continued convergence in regional development levels, but it may well be that equal, regional shares will be of a very small pie.

CHAPTER 6

CONCLUSION

It seems inevitable that questions of regional development and, more specifically, regional equity will become increasingly fundamental issues in both developing and developed nations. All too often the pursuit of efficiency in economic development can eclipse the notion of an equitable distribution of a nation's wealth. Those living in the areas left behind do not always accept their plight. Sporadic outbreaks of violence - in inner cities or in impoverished regions - are patent reminders of the duty of governments to address the question of spatial inequity.

In socialist nations the need to redress inequitable living standards and levels of economic development among regions is accorded additional urgency by the ideological imperative. Prosecution of Marxist-Leninist ideology binds these nations to seeking to eliminate interregional disparities in socio-economic development.

This paper has examined the theory and practice of regional development in one such socialist nation, Poland. In its pursuit of regional equity the Polish authorities, in common with many other socialist nations, have placed considerable faith in the system of regional planning. An examination of inter-war regional planning in Poland revealed important continuities with the post-war period. Many

of the methodological advances made in the 1930s were subsequently adopted by Polish, and other, regional planners.

In discussing the regional planning system in Poland it was observed that questions of national economic development have frequently impaired attempts to achieve regional equality. This precedence is reflected in the structure of the planning hierarchy in which regional planning is subordinated to national economic planning. Considerable attention has been paid to ways in which this relationship may be improved to obtain mutually beneficial results but, as yet, no significant reforms have been undertaken.

Although a commitment to the achievement of regional equality has persisted, it was shown that the policies adopted in the past forty years have been far from consistent. In the 1950s, under the influence of Stalinism, policies were aimed at a uniform distribution of productive forces throughout the nation. This approach was subsequently rejected in favor of policies of rational distribution. More recently the elaboration of the Perspective Plan for Spatial Development to 1990 has called for the creation of functional regions, each with an economic specialization, and based upon urban centers in a pattern of moderate, polycentric concentration. In spatial terms, the Perspective Plan represents the principle policy. But it remains to be seen how the Polish government will reconcile the aim of controlled regional growth with the need to maximize production in the very short term in order to maintain payments of its enormous foreign debts. At the same time, the spectre of Solidarnosc and the social policy embodied in the independent trade union's demands, will require considerable attention to be placed

upon the adequate provision of social and economic facilities in each region.

The analysis of regional development levels among voivodships between 1955 and 1981 revealed that there is an apparent trend toward convergence in socio-economic terms. Several considerable disparities were shown to remain, however. It was speculated that whilst government policy was important in achieving this convergence, the nature of development in Poland may have been the prime cause. Extensive development has succeeded in putting into motion quantitative factors of the Polish economy, such as manpower and resources. This mode of development has continued in hitherto weakly developed voivodships. In the urban-industrial centers, however, considerable problems have emerged as the Poles attempt to modernize the economy.

Through the analysis it emerged that while urban development is intimately linked to overall levels of development, considerable success has been achieved in the re-distribution of wealth to voivodships lacking the resources for industrial development. This may illustrate an advantage of a centrally-managed economy in securing equable living standards of living and well-being.

In sum, I believe that this paper has raised some important questions relating to spatial equity. Whilst providing some answers, many more remain, such as the most appropriate method for measuring regional inequality. However, through the exposure of theory and practice of regional development in Poland, it is hoped that this paper has contributed to the understanding of regional development in general and the nature of regional development in a socialist nation in

particular.

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SPATIAL INEQUALITY IN POLAND, 1945 - 1981

by

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AN ABSTRACT OF A MASTER'S THESIS

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ABSTRACT

The question of spatial equality, the equable distribution of a nation's wealth, is one that has recently commanded much attention. Serious imbalances in levels of socio-economic development have been identified in both developing and developed nations. For some authors the occurrence of spatial inequality derives from flaws inherent in the capitalist system. Many of these same authors propose that mature socialist nations may possess a greater capacity for establishing more equable levels of living standards and well-being. It is the object of this paper to examine post-war regional development in one such socialist nation, Poland.

Regional planning is viewed by the Polish authorities as a means by which inequitable levels of socio-economic development may be redressed. The evolution of regional planning in the inter-war period is examined as it is apparent that continuities exist between this period and subsequent, post-war, practice.

Despite a continued commitment to the diminution, and eventual elimination, of regional disparities, the policies adopted by the Polish government have not been consistent. These variations in policy are assessed, together with the institutions of regional development which are instrumental in the elaboration and implementation of such policy.

In order to assess whether the Polish authorities have been successful in the pursuit of their declared aims, an analysis of regional levels of socio-economic development is undertaken. It is shown

that while considerable disparities exist, there has been a consistent lessening of disproportions in the indicators employed. Results suggest that the centrally-managed economy has provided an important vehicle for the redistribution of wealth within the nation. The 'extensive' mode of development was also felt to be a significant factor in reducing spatial inequality in socio-economic development.