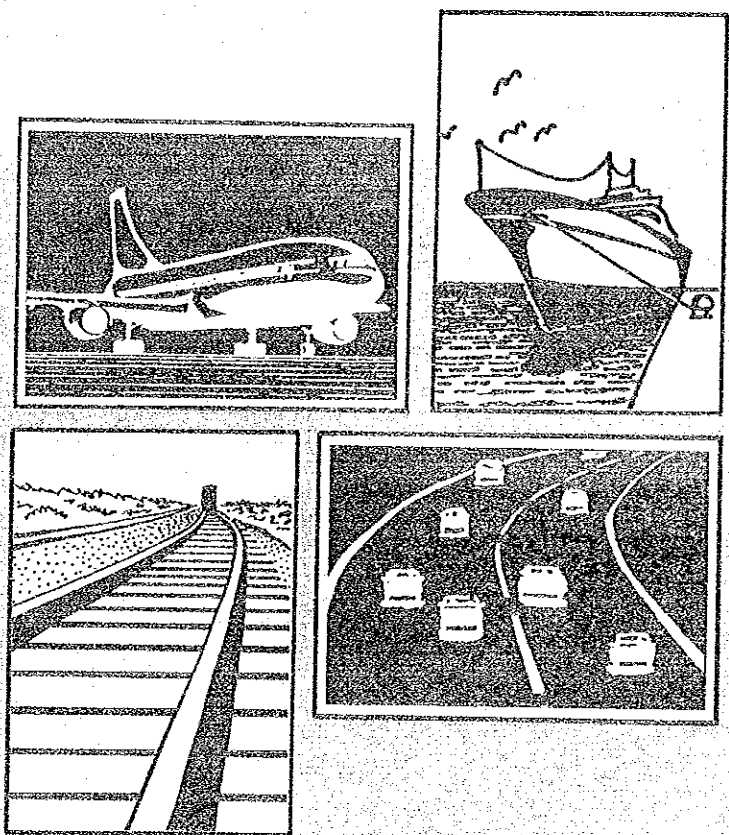


THE REPUBLIC OF POLAND
MINISTRY OF TRANSPORT AND MARITIME ECONOMY

STUDY
ON
THE NATIONAL TRANSPORT PLAN
IN THE REPUBLIC OF POLAND

FINAL REPORT

VOLUME 3
PRESENT SITUATIONS



DECEMBER 1992

JAPAN INTERNATIONAL COOPERATION AGENCY

SSF
JR
92-129

RY

The following foreign exchange rates are applied in the study:

1989	US\$1.00 =	1,446.31 Zloty
1990		9,500
1991		11,100
1992		13,500 (as of June 1992)

JICA LIBRARY



1101858171

2469

**THE REPUBLIC OF POLAND
MINISTRY OF TRANSPORT AND MARITIME ECONOMY**

**THE STUDY
ON
THE NATIONAL TRANSPORT PLAN
IN THE REPUBLIC OF POLAND**

FINAL REPORT

VOLUME 3

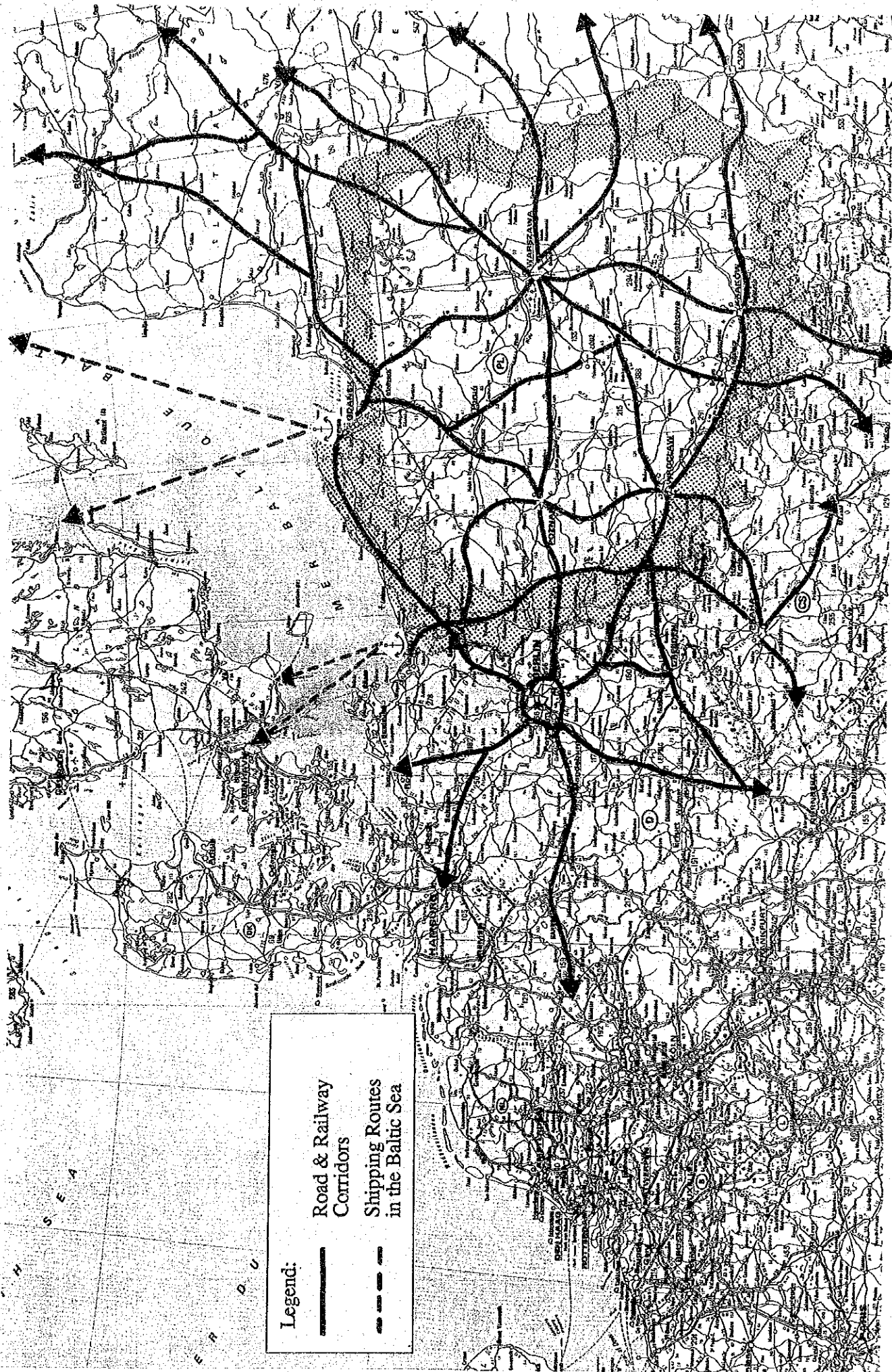
PRESENT SITUATIONS

DECEMBER 1992

JAPAN INTERNATIONAL COOPERATION AGENCY

国際協力事業団

24469



INTERNATIONAL TRANSPORTATION CORRIDORS CROSSING POLAND

Table of Contents

	<u>Page</u>
List of Tables	
List of Figures	
List of Important Abbreviations	
 CHAPTER 1 INTRODUCTION	
1.1 Objectives of the Study-----	1
1.2 Implementation of the Study-----	1
1.3 Participants of the Study-----	3
 CHAPTER 2 NATIONAL CONDITIONS	
2.1 Centrally Planned Economy and its Legacies-----	6
2.1.1 Poland's Centrally Planned Economy-----	6
2.1.2 Market and Price Mechanisms-----	6
2.1.3 Development Impediments-----	7
2.2 Changing International Surroundings-----	8
2.2.1 Poland at a Strategic Location-----	8
2.2.2 European Community (EC)-----	8
2.2.3 Commonwealth of Independent States (CIS)-----	9
2.2.4 The Baltic League Countries-----	10
2.2.5 Countries to the South to Poland-----	10
2.3 Transformation of Polish Economic System-----	11
2.3.1 Declining Economic Performance-----	11
2.3.2 The Economic Transformation Program (ETP)-----	14
2.3.3 Agriculture Sector-----	16
2.3.4 Industry Sector-----	20
2.3.5 International Trade-----	23
2.4 Energy-----	26
2.4.1 Profile of the Energy Sector-----	26
2.4.2 Future Prospects-----	28
2.5 Spatial Organization-----	30
2.5.1 Regional Development in the Past-----	30
2.5.2 Spatial Organization Plan-----	33
2.5.3 Future Prospects-----	36
2.6 Tourism-----	37
2.6.1 Tourism Resources and Facilities-----	37
2.6.2 International Visitors' Arrival to Poland-----	39
2.6.3 Tourism Promotion-----	40

CHAPTER 3 GENERAL TRANSPORT SITUATIONS

3.1	Outlook of the Polish Transport System -----	41
3.2	Transport Network-----	41
3.2.1	General Characteristics of Transport Network -----	41
3.2.2	International Transport Network-----	42
3.3	Present Transport Demand-----	45
3.3.1	Cargo Transport Demand -----	45
3.3.2	Passenger Transport Demand -----	46
3.3.3	International Vehicle Traffic -----	48
3.4	Transport Policy and Legal Institutions -----	50
3.4.1	Transport Policy -----	50
3.4.2	Legal Institutions-----	52
3.5	Budget and Finance-----	56
3.5.1	Budget and Budgeting Procedures-----	56
3.5.2	Subsidies and Taxation-----	61
3.5.3	Financial Situation of Transport Enterprises-----	62
3.6	Organization and Management-----	65
3.6.1	Ministry of Transport and Maritime Economy (MTME) -----	65
3.6.2	Management of State-Owned Enterprises (SOEs) and Their Restructuring -----	68
3.7	Traffic Safety and Environment-----	70
3.7.1	Traffic Safety-----	70
3.7.2	Environment-----	73

CHAPTER 4 TRANSPORT SUB-SECTORS

4.1	Railway Transport -----	76
4.1.1	Railway Network -----	76
4.1.2	Railway Transport Demand-----	78
4.1.3	Railway Infrastructure-----	80
4.1.4	Rolling Stock-----	82
4.1.5	Railway Operation -----	83
4.1.6	Polish Railway Company (PKP) -----	87
4.1.7	Integration with the EC Railway Systems -----	92
4.2	Road Transport-----	94
4.2.1	Road Infrastructure -----	94
4.2.2	Road Transport Demand -----	100
4.2.3	Road Maintenance -----	101

4.2.4	Road Development Plans	104
4.2.5	Project Evaluation System	110
4.2.6	Vehicles	110
4.2.7	Road Administration	115
4.2.8	Road Transport Industry	118
4.2.9	Integration with the European Community	123
4.3	Water Transport	125
4.3.1	Sea Transport Network	125
4.3.2	Sea Transport Demand	126
4.3.3	Sea Ports	128
4.3.4	Ocean Going Shipping Services	133
4.3.5	International Integration of the Polish Maritime Sector	137
4.3.6	Inland Water Transport	138
4.4	Air Transport	145
4.4.1	Air Transport Network	145
4.4.2	Airports	150
4.4.3	Air Traffic Volumes	157
4.4.4	Institution and Organization of Air Transport	160
4.4.5	Airspace and Air Traffic Services (ATS)	163
4.4.6	Airlines	165
4.4.7	Integration of Polish Air Transport System with the EC	171
4.5	Container Transport	172
4.5.1	Change of Economic System	172
4.5.2	Present Situation of Container Transport	173
4.5.3	Development of Combined Transport	175
4.6	Urban Transport	176
4.6.1	Urban Transport in General	176
4.6.2	Warsaw Urban Transport	179

CHAPTER 5 PROBLEM STRUCTURE OF THE TRANSPORT SECTOR

5.1	Summary of the Issues	181
5.1.1	General Issues and Constraints	181
5.1.2	General Issues of the Transport Sector	181
5.1.3	Main Issues of Each Mode of Transport	181
5.2	Specific Features of the Polish Transport Sector	186
5.2.1	Comparison with Other Countries	186
5.2.2	Influence of Polish Geographic Conditions on Transport	187

5.3	Problem Structure of the Polish Transport Sector-----	188
5.3.1	Legacies Succeeded from the Centrally Controlled System -----	190
5.3.2	Transition in a Market Economy -----	191
5.3.3	International Integration-----	192
5.3.4	Financial Constraints -----	192
5.3.5	Implications for Preparing the National Transport Plan-----	193

List of Tables

Table 2.3.1	NMP Growth 1971-1990 -----	11
Table 2.3.2	Selected Macro Indicators -----	12
Table 2.3.3	Major Budgetary Aggregates 1986-1990-----	13
Table 2.3.4	Balance of Payments in Convertible Currencies, 1988-1991-----	13
Table 2.3.5	Size of Farms -----	17
Table 2.3.6	Growth of Agricultural Production -----	17
Table 2.3.7	Production of Selected Agricultural Products-----	18
Table 2.3.8	Production of Selected Livestock -----	18
Table 2.3.9	Polish Foreign Trade -----	24
Table 2.3.10	Major Trading Partners of Poland-----	24
Table 2.3.11	Commodity Structure of Polish Export-----	25
Table 2.4.1	Key Energy Indicators and Data for Poland -----	27
Table 2.4.2	Energy Consumption and Direct Demand in Poland by Kind of Fuel -----	29
Table 2.4.3	Energy Consumption and Direct Demand in Poland by Sector-----	29
Table 2.5.1	Population and Employment Changes, 1946-1990 -----	31
Table 2.5.2	Population Changes of Major Cities, 1950-1989 -----	32
Table 3.3.1	Freight Transport by Transport Mode -----	45
Table 3.3.2	Passenger Transport by Transport Mode-----	47
Table 3.3.3	Registered Number of Vehicles -----	48
Table 3.3.4	Historic Vehicle Traffic at Polish Border Crossings -----	49
Table 3.5.1	1991 Budget in the Ministry of Transport and Maritime Economy -----	57
Table 3.5.2	Results of MTME Budget Expenditure -----	58
Table 3.5.3	Financial Results of Major State-Owned Enterprises 1989-91 -----	63
Table 3.5.4	Financial Results of Budget Units in the Transport Sector-----	64
Table 3.7.1	Comparison of Polish Regulations on Exhaust Gas Emission -----	75
Table 4.1.1	PKP Railway Network -----	76
Table 4.1.2	International Comparison of Railways in 1989-----	76
Table 4.1.3	Railway Passenger Transport-----	78
Table 4.1.4	Railway Passengers by Kind -----	79
Table 4.1.5	Railway Freight Transport -----	80
Table 4.1.6	Railway Freight Transport by Commodity in 1991 -----	80
Table 4.1.7	Track Materials Supplied in 1981-1990 -----	81
Table 4.1.8	Capacity Shortage of Telephone Trunk Line-----	82
Table 4.1.9	Rolling Stock in 1990 -----	83
Table 4.1.10	Average Train Speed in 1990-----	86

Table 4.1.11	Train Delays-----	86
Table 4.1.12	Energy Consumption for Railway Traction-----	87
Table 4.1.13	Railway Accidents and Casualties-----	87
Table 4.1.14	Profit and Loss Statement of PKP-----	90
Table 4.1.15	Composition of PKP Cost Items-----	91
Table 4.1.16	Investment Financing of PKP-----	91
Table 4.2.1	Length of Road by Class at End of 1991-----	94
Table 4.2.2	Designed Capacity by Road Class-----	95
Table 4.2.3	International Comparison of Road Density, 1987-----	100
Table 4.2.4	Vehicle Registrations 1980-1991-----	101
Table 4.2.5	Road Budget in 1990/1991-----	102
Table 4.2.6	Driving Age and Examination Fees-----	112
Table 4.2.7	Road Traffic Related Taxes-----	113
Table 4.2.8	Changing Road Cargo Transport, 1990-1991-----	121
Table 4.2.9	International Road Cargo Transport by Polish Carriers, 1990-1991-----	121
Table 4.2.10	Market Share of Cargo Transport in Twelve EC Countries by Mode in 1989-----	124
Table 4.2.11	Growth Rates of Truck Transport in the Twelve EC Countries for 1986-1989-----	124
Table 4.2.12	Truck Operators in the EC Countries-----	124
Table 4.3.1	Total Turnover Foreign Trade by All Modes and by Sea in 1989-----	126
Table 4.3.2	Passenger Traffic in Commercial Sea Ports-----	128
Table 4.3.3	Quays owned by Each Port Authority in 1991-----	129
Table 4.3.4	General Cargo in Containers-----	129
Table 4.3.5	Comparison of Number of Containers per 1,000 Population-----	130
Table 4.3.6	Handling Efficiency of General Cargo in 1989-----	131
Table 4.3.7	Concentration of Rare Metals in the Bay of Gdansk-----	133
Table 4.3.8	Sea Transport Fleet under Polish Flag-----	134
Table 4.3.9	Age Composition of the Fleet-----	134
Table 4.3.10	Cargo Transport by Liners and Trampers-----	135
Table 4.3.11	Polish and Foreign Cargoes Transported by the Polish Fleet-----	135
Table 4.3.12	Vessel Fleet by Shipping Companies-----	136
Table 4.3.13	Financial Situation of the Shipping Industry-----	137
Table 4.3.14	Investment Outlays of the Shipping Industry-----	137
Table 4.3.15	Classification of Inland Waterways in Poland-----	139
Table 4.3.16	Turnover of Cargo Handled by Inland Water Transport-----	141
Table 4.3.17	Floating Stock of Polish Inland Water Transport-----	142
Table 4.3.18	Inland Water Ports-----	143

Table 4.4.1	LOT's Domestic Air Services-----	148
Table 4.4.2	Main Features of Eight Major Airports-----	152
Table 4.4.3	Annual International Air Passengers at Warsaw International Airport-----	158
Table 4.4.4	Annual International Air Passengers at Other Four Airports-----	158
Table 4.4.5	Domestic Air Passengers by Airport-----	159
Table 4.4.6	LOT Fleet-----	166
Table 4.4.7	1989 Staffing Level Comparisons: Selected International Airlines-----	168
Table 4.4.8	1989 Fleet Utilization Comparisons: Selected International Airlines-----	168
Table 4.6.1	Rolling Stocks for Urban Transport-----	177
Table 4.6.2	Urban Transport Service Network-----	177
Table 4.6.3	Operational Achievement of Urban Transport-----	177

List of Figures

Fig. 1.2.1	General Flow of the Study -----	2
Fig. 2.4.1	Total Energy Consumption / GDP Ratios for 1989 -----	26
Fig. 2.5.1	Metropolitan Areas -----	34
Fig. 2.5.2	Major Industrial Areas -----	34
Fig. 2.5.3	National and International Integration by Major Transport Corridor -----	35
Fig. 2.6.1	Preservation Areas -----	38
Fig. 2.6.2	Tourism Potential Areas -----	38
Fig. 3.2.1	Railway and Road Transport Network -----	44
Fig. 3.6.1	Administration of Polish Transport Sector -----	66
Fig. 3.6.2	Organization of the Ministry of Transport and Maritime Economy -----	67
Fig. 4.1.1	Railway Network of Poland and Neighboring Countries -----	77
Fig. 4.1.2	Organization of PKP -----	88
Fig. 4.2.1	Major Road Network -----	97
Fig. 4.2.2	Long Term Plan for Motorways and Express Roads (Toward 2015/2020) -----	106
Fig. 4.2.3	International E Road Network -----	108
Fig. 4.2.4	TEM Network (1991) -----	109
Fig. 4.2.5	Current Organization of Pubic Road Administration (June, 1992) -----	116
Fig. 4.2.6	Current Organization of GDDP and Local Offices (June, 1992) -----	117
Fig. 4.2.7	Classification of Truckers as of December 31, 1991 -----	119
Fig. 4.3.1	Location of Polish Seaports -----	125
Fig. 4.3.2	Major European Ports by Cargo Volume -----	127
Fig. 4.3.3	Inland Water Transport Network -----	140
Fig. 4.4.1	Regional International Air Connections -----	146
Fig. 4.4.2	International Air Connections -----	147
Fig. 4.4.3	Domestic Air Routes -----	148
Fig. 4.4.4	Commercial Airports in Poland -----	151
Fig. 4.4.5	Organization of General Inspectorate of Civil Aviation -----	162
Fig. 4.4.6	Organization of LOT Polish Airlines -----	164
Fig. 5.3.1	Problem Structure in the Transition from Centrally Planned to Free Market Economic System -----	189

List of Abbreviations

AADT	Annual Average Daily Traffic
ATC	Air Traffic Control
ATS	Air Traffic Services
BPRSD	The Office for Planning of Road Network Development [Biuro Planowania Rozwoju Sieci Drogowej]
CIQ	Customs, Inspection, and Quarantine
CIS	Commonwealth of Independent States
CMEA	Council for Mutual Economic Assistance
CMK	[Centralna Magistrala Kolejowa]
CNTK	[Centrum Naukowo-Techniczne Kolejnictwa]
CTC	Centralized Traffic Control
DODP	Regional Board of Public Roads
EAPT	Uniform Air Passenger Tariff
EC	European Community
ECAC	European Civil Aviation Conference
EFTA	European Free Trade Aviation
EIB	European Investment Bank
ETP	Economic Transformation Program
FDI	Foreign Direct Investment
GDDP	General Directorate of Public Roads [Generalna Dyrekcja Drog Publicznych]
GDP	Gross Domestic Products
GICA	General Inspectorate of Civil Aviation
GILC	[Główny Inspektorat Lotnictwa Cywilnego]
GUS	[Główny Urząd Statystyczny]
ICAO	International Civil Aviation Organization
JSC	Joint Stock Company
KERM	Economic Committee of the Council of Ministers
LOT	Polish Airlines
MTME	Ministry of Transport and Maritime Economy
NMP	National Material Products
OBET	[Osrodek Badawczy Ekonomiki Transportu]
PATA	Polish Air Traffic Agency
PBSC	Polish Baltic Shipping Company
PCAB	Polish Civil Aviation Bureau
PKP	Polish State Railway [Polenske Koleje Panstwowe]

PKS	[Panstwowej Komunikacji Samochodowej]
PMS	Pavement Management System
POL	Polish Ocean Lines
PPL	Polish Airports State Enterprises
PSC	Polish Steamship Company
SOEs	State Owned Enterprises
TEM	Trans European Motorway
VAT	Value Added Tax

CHAPTER 1 INTRODUCTION

CHAPTER 1 INTRODUCTION

1.1 Objectives of the Study

The overall objectives of the study are defined by the Scope of Work agreed upon in November 1990 between the Ministry of Transport and Maritime Economy (MTME) and the Japan International Cooperation Agency (JICA):

- 1) Prepare a Master Plan for the National Transport Plan which will effectively encourage the economic restructuring toward free market orientation and the integration of the Polish transport system into European and world systems from long term viewpoints.
- 2) Propose Priority Implementation Projects and Programs in the short and medium terms based on the above Master Plan, bearing in mind the importance of efficient and effective management and operation in the transport sector to support the economic structural transition in Poland.

Technical transfer during the course of the study forms another objective of the study. It can be construed as transfer of "know how" which would help facilitate the transformation of the transport sector from the centrally planned system to a market economy as well as help improve the efficiency of the sector based on the experience of the western world including Japan.

The Polish Steering Committee, headed by Mr. T. Kulikowski (MTME), and the Japanese Advisory Committee, headed by Prof. H. Nakamura (The University of Tokyo), guided the general directions of the study, under which the JICA Study Team and its Polish counterpart groups worked to fulfill the above objectives. The study results could form a base for the "Transport Polish Paper" which the MTME will prepare in the future on a revolving basis.

1.2 Implementation of the Study

The study is divided into four phases as shown in Fig. 1.2.1:

- (1) The First Phase (May - September 1991):
Analyses of the present situation
"Progress Report" submitted in October 1991
- (2) The Second Phase (October - December 1991):
Analysis of problems and formulation of basic strategies
- (3) The Third Phase (January - March 1992):
Preparation of the national transport plan
"Interim Report" submitted in February 1992
- (4) The Fourth Phase (April - October 1992):
Further study on projects and programs
"Draft Final Report" submitted in October 1992
- (5) The Last Phase (November - December 1992)
Finalization of the study
"Final Report" submitted in December 1992

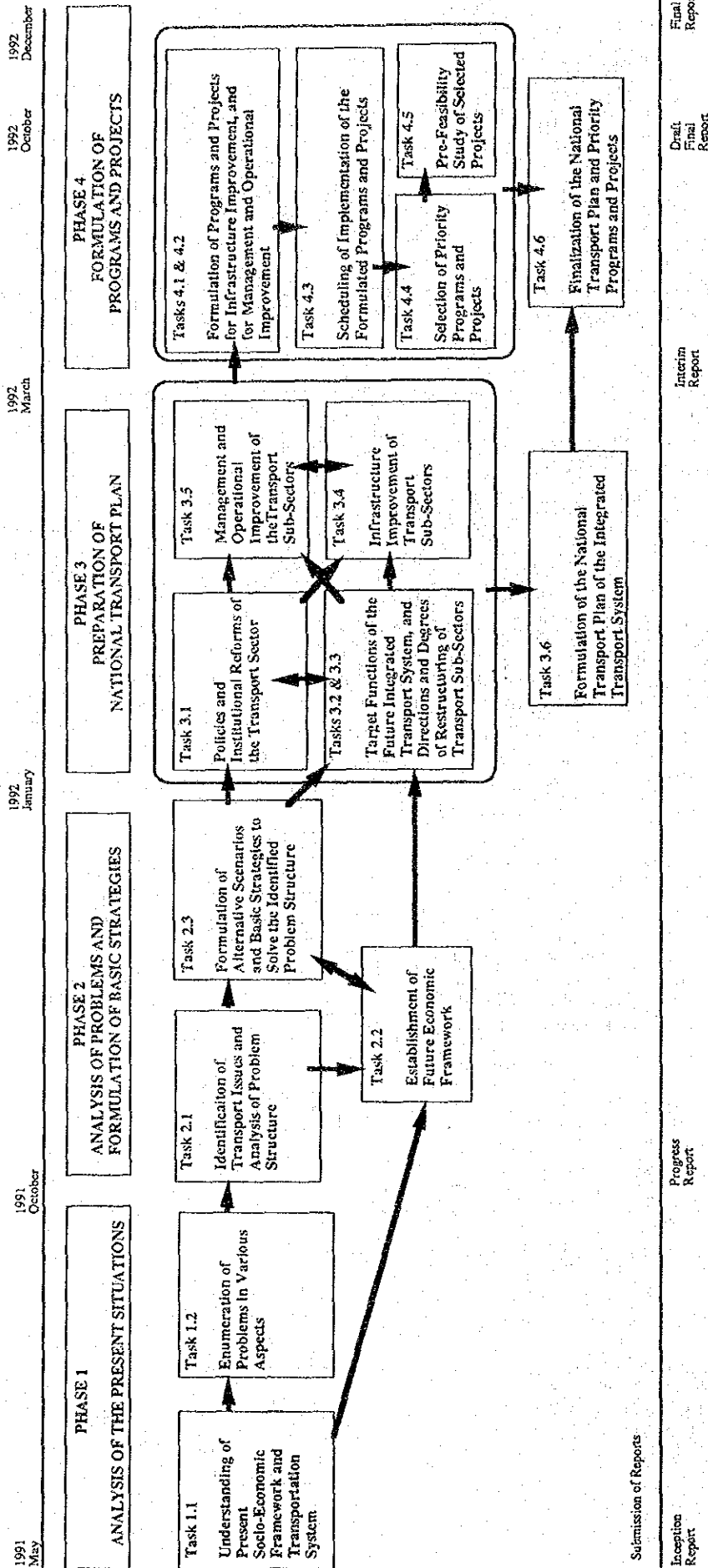


Fig.1.2.1 General Flow of the Study

The Final Report comprises four volumes:

- Volume 1 : Policy Guidelines for the Transport Sector
- Volume 2 : The National Transport Plan (Main Text)
- Volume 3 : Present Situations
- Volume 4 : Projects and Programs

1.3 Participants of the Study

Participants of the study are: (1) Polish members of the Steering Committee; (2) Japanese Advisory Committee members; (3) JICA Study Team; and (4) Polish Counterparts to the JICA Study Team.

(1) POLISH MEMBERS OF THE STEERING COMMITTEE

Chairman:

Mr. T. Kulikowski MTiGM

Members:

Mr. Z. Dereszkiwicz MTiGM
Mr. B. Grzegorzewski MTiGM
Mr. T. Kulasek MTiGM
Mr. G. Ociesa MTiGM
Mr. Z. Kowalczyk MTiGM
Mr. A. Kalinkowski MTiGM
Mr. A. Berezowski GILC
Mr. A. Koziel GDDP
Mr. T. Kozak DG PKP
Mr. J. Perenc OBET
Mr. W. Kosieradzki CNTK
Mr. H. Ruder BPRSD
Prof. dr hab. Jan Burnewicz Uniwersytet Gdanski (Expert)

(2) JAPANESE ADVISORY COMMITTEE MEMBERS

Chairman:

Prof. H. Nakamura Tokyo University

Member:

Mr. H. Kono Ministry of Transport, Japan
Mr. H. Sasajima Ministry of Transport, Japan
Mr. K. Takada Ministry of Construction, Japan
Mr. M. Takahashi JICA Expert
Mr. H. Tsujino JICA

(3) JICA STUDY TEAM

Team Leader:

M. Shibuya

Members:

N. Koyama Deputy Team Leader
N. Nagamatsu Market Economy Specialist

Y. Uchida	Development Economist
H. Sasaki	Regional Planner
J. E. Thompson	Transport Planner
H. Nojima	Road and Road Transport Planner
R. J. Crossley	Highway Engineer
F. Kure	Railway Transport Planner
A. Tamura	Railway Engineer
I. Fujita	Port Planner
N. Kishimoto	Water Transport Specialist
H. Murata	Air Transport Planner
J. Vauchar	Management Specialist
Y. Umeki	Economic and Financial Analyst
T. Wachi	Fiscal Analyst
I. Fujita	Cargo Handling Facility Specialist

(4) COUNTERPARTS

Counterpart Leader:

W. Misterka	MTiGM
-------------	-------

Integrated Transport Group:

R. Lozinski	MTiGM
K. Lesniak-Wasilewska	MTiGM
M. Bartczak	MTiGM
H. Zelichowska	MTiGM
T. Szemplinski	OBET
W. Socha	OBET
S. Romanski	OBET

Economic Group:

M. Bajurski	MTiGM
H. Matejuk	MTiGM
T. Szemplinski	OBET
W. Socha	OBET
S. Romanski	OBET

Transport Sub-Sector Group:

(Road)

M. Rolla	GDDP
S. Czajka	BPRSD

(Rail)

J. Byszczarz	MTiGM
K. Celinski	DG PKP
J. Olbrycht	DG PKP

(Sea and Inland Water)

K. Jaworski	MTiGM
M. Rusak	MTiGM
A. Tubielewicz	Instytut Morski

(Air)

P. Wieczorek	GILC
B. Dmowska	GILC
T. Kurek	GILC

(Motor Transport and Environment)

Z. Bielinski	MTiGM
J. Nawracki	MTiGM
E. Kondracki	MTiGM
St. Radzimirski	ITS

Note: MTiGM - Ministerstwo Transportu i Gospodarki Morskiej
PKP - Polskie Koleje Panstwowe
CNTK - Centrum Naukowo-Techniczne Kolejnictwa
OBET - Osrodek Badawczy Ekonomiki Transportu
GILC - Glowny Inspektorat Lotnictwa Cywilnego
BPRSD - Biuro Planowania Rozwoju Sieci Drogowej
GDDP - Generalna Dyrekcja Drog Publicznych

CHAPTER 2 NATIONAL CONDITIONS

CHAPTER 2 NATIONAL CONDITIONS

2.1 Centrally Planned Economy and its Legacies

2.1.1 Poland's Centrally Planned Economy

"Centrally planned" economies are sometimes referred to as "command", "communist", or "socialist" economies or more technically, "shortage" economies. This terminology is typically applied to the economic systems of the Soviet Union, the post-war states of Eastern Europe, and the People's Republic of China.

In Poland, this system was first introduced at the end of the 1940s, based on the Soviet model of a centrally planned command system. Earlier attempts at a more decentralized pattern of industrial organization gradually reverted to centralization during 1948-49. Subsequently, three major attempts to reform the centralized system in Poland to a more decentralized and market oriented format were abandoned or ended in partial or incomplete reform. Consequently, a complex vicious circle existed, with swings between crisis and reform and between proposals for a less regulated and more efficient system and the reassertion of central control.

Generally, the distinctive feature of this type of economic system has been the ownership of the material means of production by the state. These include land, all natural resources, all medium and large scale enterprises and farms, and their productive assets. There were some variations between socialist countries in the application of the command economy. For example in Poland, agriculture was not totally collectivized and the majority of farms has always been in private hands.

The need to control the collective, state-owned production units naturally led to an enlarged, prolific, and fragmented government structure. Under this highly centralized, authoritative, and hierarchical regime, each office or firm and each level of management within the vertically organized structures protected its own interests at the expense of others. Thus, information flowed vertically rather than horizontally. This flow of information provided only limited feedback, and this naturally affected the efficiency of overall economic activities. It resulted in a chronic shortage of available information on which to base decision making and detailed planning.

Taking the transport sector as an example, operations have been affected by the artificial segmentation of activities into separate economic sectors which should have been intrinsically linked. This has resulted in a poor horizontal flow of information. This, together with an insensitivity to cost, created excessive demands for transport services, particularly for freight.

2.1.2 Market and Price Mechanisms

The command economic system relied little on markets which, where they existed, were considerably distorted. In principle, most prices were determined centrally, with little reflection of relative scarcities. With weak price signals, structural difficulties in accountability and improper decision-making parameters, product markets were considerably distorted. Through price and trade controls, domestic prices were insulated from international ones. Moreover, divergent vested interests tended to impair efficient and balanced resource allocations.

Enterprises were forced to fulfil plans (production norms) rather than attain profitability. "Plan" directives and the associated managerial obligations (which were linked with incentives) simply stressed physical output. Ambiguous cost accounting and generally low appreciations of cost often allowed enterprises to sacrifice quality, variety, innovation and ancillary services to its customers, for sheer product quantity. This symptom was known in Poland as "Rynek Producenta" (producers-governed market), as opposed to "Rynek Klienta" (consumers' market).

Financial intermediaries were captive institutions, operating largely through the fiscal system. Thus they were allowed to ignore risk and were adapted to the credit demands of the "Plan." Real interest rates were held artificially low or allowed to be negative, in which case subsidized credits were passed on to borrowers (usually state-owned enterprises). In Poland, deposit rates were often higher than lending rates. These persistent low interest rates were not conducive to returning the economy to levels where it was capable of producing a profit.

The intermediaries, all of which were state-owned, consisted of central-cum-commercial bank servicing enterprises, savings banks accepting household deposits and lending to households largely for mortgages, a foreign trade bank handling all foreign exchange activities, and insurance companies. Risk management, pricing, and economically prudent considerations played no role in the allocation of funds. Accounting standards did not necessarily conform to generally accepted principles, and there was no in-built system of independent audit.

Labor markets were distorted by narrow administrative wage structures and the postulation or doctrine of full employment, so the movement of labor only partially responded to market scarcities. The lack of a system for determining wages and promotion based on evaluating skills, expertise, and performance resulted in low morale. Lack of incentive also contributed to a slow pace of industrial innovations, despite fairly high levels of scientific achievement in the academic sector. In spite of official exhortations, there was little improvement in the quality of services, and morale continued to suffer. This, in turn, nurtured the overall socioeconomic inertia.

Contrary to planners' desires to promote efficiency and increase productivity, the incentive framework of central planning failed to respond in both aspects. Economic growth, therefore, often required the leverage both of forced savings and high levels of investment. Furthermore, reflecting the base theory of centrally planned economies, the "Plan" overemphasized the heavy industry and energy sectors at the expense of consumer goods and services, and subsidized prices encouraged the over-consumption of their products. Severely distorted input and output prices divorced resource use from resource cost. For example, in Poland the extremely low price of energy resulted in its wasteful use. Energy consumption in Poland is comparable to that of Austria or Japan, both of which have a much higher per capita GNP.

2.1.3 Development Impediments

The accumulated microeconomic disequilibria and the resultant unsustainable macro-imbalance have finally put an end to the viability of the "command economy." However, numerous legacies created under the old regimes have been left. These stand as serious obstacles to the smooth transition to a market economy. For example, there is an absence or weakness of core market-oriented institutions, both inside and outside government. Legal and accounting systems require further development.

Most enterprises still lack much of the requisite savoir-faire in management, marketing, service to customers, and so forth. Legal titles to companies are often unclear, which makes privatization all the more contentious and complex. Monopolies need to be dismantled and conditions created for small and medium-sized competitive businesses to operate. In Poland, current price deregulation is resulting in monopolistic pricing.

With regard to the capacity of existing human resources to tackle the difficult transitional period, it is apparent that professional expertise is severely lacking in almost all key areas (accounting, taxation, senior and middle management, and in the supervision of financial institutions). In addition, the culture of the ancien regime seems to persist. We can still see the habitual ambivalence of dependence on the state for almost everything going hand-in-hand with an implicit distrust of the state's activities and capabilities. Training and education in the new concepts are essential. The success of this "sea change" will depend entirely upon whether the people are capable of breaking free from the legacies of the old system and meeting the challenge of the new one.

2.2 Changing International Surroundings

2.2.1 Poland at a Strategic Location

Poland stretches 400-600 kilometers from north to south and 560-620 kilometers from east to west. The northern part looks on the Baltic Sea, lowland predominates in central Poland and all of the mountains run along the Czechoslovak border in the south. Geographically and historically, Poland is situated in the center and at the crossroads of Europe, surrounded by the EC countries in the west, countries of the former Soviet Union (now the Commonwealth of Independent States) in the east, Scandinavian and Baltic countries which compose the Baltic League in the north, and the countries of Central Europe in the south.

Fundamental change took place in the ties of countries in the east following the collapse of the Berlin Wall in 1989 and, finally, the dissolution of the Council for Mutual Economic Assistance (CMEA) at its 46th and last session on June 28, 1991. Since then, the dichotomy to divide Europe into the east and the west became meaningless, at least in its political sense, and Poland came back to its old position of Central Europe.

Although Poland is located geographically at the crossroads of Europe, this does not necessarily assure that trade and traffic arteries connecting the European Continent will pass through Poland in the future. An efficient transport system needs to be developed to take advantage of this geographical location. Otherwise, alternative corridors might emerge which bypass Poland.

2.2.2 European Community (EC)

The Single European Act of 1986 promised the creation of a single market of the EC in 1992. From January 1993, the following major changes will take place across the EC frontiers:

- (1) Flow of goods will be free within the EC without any customs control. People will be able to buy all what they need anywhere in the Community, paying the local taxes and duties and carrying them across frontiers with no more additional charges:

- (2) Any bank anywhere in the Community will be able to open branches in any other member countries. Other services such as road haulage will also be altered and any lorry will be able to haul any load across the Community; and
- (3) The exchange controls will be ceased within the EC except in Greece and Portugal, and even their retention of controls will be abandoned by 1995.

The Maastricht Treaty of December 1991 furthered the idea of European integration. Before the Treaty, it could be said that the EC actually meant the "European Economic Community", while now the Treaty strives for realizing the "European Community". The Treaty can be characterized by the following features:

- (1) It no longer restricts itself to the ten activities listed in the Treaty of Rome. A joint foreign and security policy is created. Health, education, environment, industrial policy and consumer protection are all considered as part of the EC's activities in a similar way as national governments would concern all these activities; and
- (2) The Community is striving for a further step toward one European currency and one central bank, which would be realized before the turn of the century. In addition, the Community can intervene to a certain extent to the national economic policies of each member country, which will get stronger as the year 2000 approaches.

The above features of Maastricht might direct the Council of Ministers of the Community and its secretariat as the power center of the union. For the last thirty-four years, the EC's mission was not much tested. But the Danish rejection posed serious questions for the first time whether the Community necessitates to slow down its pace of unification because it might leap beyond the enthusiasm of its people, or more likely will continue to go through with its original scope and timetable.

2.2.3 Commonwealth of Independent States (CIS)

Among republics of the former Soviet Union, Lithuania, Latvia and Estonia along the Baltic Coast became independent in the process of transformation in the USSR. The other republics, except Georgia, constitute a Commonwealth of Independent States. Poland, now, shares its eastern border with Russia, Byelorussia and Ukraine as well as independent Lithuania.

The signs of economic decline in the CIS were insignificant in 1990. In 1991, however, all symptoms of decline appeared, and to a depth which has been unequalled in the post war history of Europe. The national income fell by 15%, the industrial output by 10%, the agricultural output by 13%, and all former republics of the Soviet Union were swept by severe shortages and unemployment as well as a price hike of 750 percent.

In January 1991, new rules of trade within the CMEA region were introduced. The trade in the region was to be based on convertible currency settlements and current world prices. The consequential result for Poland was a substantial fall in the share of the CMEA region compared to the trade with the western countries, although the increase in the latter trade could not offset the decrease in the former trade. Even the convertible currency settlement was not fully realized and almost half of Polish exports and a third of its imports from the former CMEA countries continued to be settled in transferable rubles. The recovery of Polish export of capital goods to eastern neighbors, in which Poland has comparative advantage and thereby the recovery of the economy, greatly depends on the resurgence of CIS economies.

2.2.4 The Baltic League Countries

Members of the Baltic League are constituted of countries which face to their common water - the Baltic Sea. The Scandinavian countries which are situated north to the Baltic Sea are among the highest income countries. The complementarity of the economic structure between Poland and Scandinavian countries is at present not yet clarified but likely exists in many fields.

Poland's provision of the shortest and most efficient access through Polish ports, and from there Polish land transport to and from central and southern Europe would be one of the most important impacts of the Polish association with the League. For Poland, this possibility likely faces severe competition with other western ports and land transport services. Whether western Poland would materialize benefit from this opportunity will entirely depend on the Polish preparedness to this international competitive pressure.

2.2.5 Countries to the South of Poland

The southern border of Poland is fronted to a range of mountains, but there are several passages to the south which have been used as important trade routes for centuries.

The central and southern European countries are now facing various internal and external problems of their own. Czechoslovakia, who shares border with Poland, began economic transformation on January 1, 1991. The program is less radical with a milder approach to liberalization of prices than Poland's stabilization and adjustment program which was introduced one year earlier. Government support to state enterprises continues to be greater than in Poland, which has prevented the destruction of SOEs from bankruptcy. Nevertheless, Czechoslovakia recorded big decrease in national income, industrial and agricultural outputs and investment. Division of the country into two states will make the future of Czechoslovakia quite uncertain.

Hungary has shown a relative high degree of economic stability although its national income, industrial and agricultural outputs and investment all dropped in succession in 1990-1991. The comparatively mildness of the recession in Hungary was brought by its long experience of market economy and the exposure of its economy to the west, which effected the difference in the health of enterprises and made opportunities of foreign investment from the west more attractive compared with those in the other former CMEA countries.

Bulgaria and Romania have not dismantled the old institutions and are at the stage of gradually introducing market economic rules to their societies. Their economies were hard hit in the last two years and future prospects are obscure. Yugoslavia has split into several independent states. Future economic achievement will totally depend on when and how the present war comes to an end. Transformation in Albania is also expected to be a long and difficult task and leaves future prospects full of uncertainties. In any case, stronger economic links with Poland can be expected up to the Austria-Hungary line and links with countries further south are expected to be weaker and obscure.

2.3 Transformation of Polish Economic System

2.3.1 Declining Economic Performance

The latter half of the 1970s was characterized by a slow-down in growth rates of net material product, investment and real incomes, and a stagnation in exports to the convertible currency areas. This was accompanied by a growing debt burden with the West and worsening shortages. During the decade, the growth of exports to the West did not keep pace with the growth in imports and the increase in the hard currency debt. The \$1.3 billion debt owed in 1970 to Western commercial banks and governments had snowballed to \$25.5 billion by 1981.

A socio-political and economic crisis was deepening, which led to the declaration of Martial Law at the end of 1981. Economic performance continued to suffer and large declines in output were recorded between 1979 and 1982. National Material Products (NMP) collapsed to an average annual rate of -6.5% between 1979 and 1982 (taking net NMP in 1978 as 100, that of 1982 was only 76.5) as shown in Table 2.3.1. The systemic origins of the crisis were widely recognized and the resultant program of economic reform was adopted by the Party Congress during the Martial Law period. The broad objectives of the reform were codified to achieve once again an extensive decentralization of decision-making authority aimed at improving the efficiency of the economic reform. However, implementation of the reform was still not completed.

Table 2.3.1 NMP Growth 1971-1990

Period	NMP	unit: % pa
		Import
1979-82	-6.5	-8.7
1983-86	5.0	6.6
1987-90	-3.4	0.9

Source: Rocznik Statystyczny

Central plans had become indicative only, and no longer set production and delivery targets, but there remained a substantial residual core of central planning. The allocative influence of market forces was severely restricted by a range of regulations (e.g. central allocation of roughly half the total volume of fuel and major materials, government contracts to confer privileged access to supplies, controlled prices, and licenses including imports).

A recovery in economic performance began in late 1982, reflecting a prices-and-incomes policy which aimed at reducing imbalances between consumption and investment and shifting financial resources to enterprises. In the period 1983-87, NMP grew at an average annual rate of 4.3%. The growth of NMP increased to 4.8% in 1988, and 4.9% in 1989, reflecting strong growth in all sectors except agriculture. However, the net NMP in 1988 had only climbed back to the 1978 level, and that of agriculture was still below the 1978 level. This meant that 1978 living standards had still not been restored even in 1989 (Table 2.3.2).

Table 2.3.2 Selected Macro Indicators

	1985	1988	1989	1990	1991
Real GDP Rate (%pa)	5.1	4.0	0.3	-11.8	-8.0
Agriculture	1.1	1.5	1.0	-0.3	na
Industry	3.8	4.1	-2.1	-22.0	na
Service	2.4	1.1	1.4	na	na
Construction	4.1	6.0	-0.3	-14.5	na
BOP (billion US\$)					
Imports	10.8	12.2	11.3	8.7	12.7
Exports	11.5	14.0	12.9	10.6	12.8
Current Account	-0.5	-0.6	-1.9	0.7	-1.4
Capital Account	-2.1	-3.9	-3.1	-4.0	-2.1
External Debt	29.3	34.2	40.8	48.5	49.4
Export Growth (%)	0.3	9.4	2.6	15.1	0.3
Other Indicators					
Inflation (%)	15.1	60.0	251.1	585.8	70.3
Savings (% of GDP)	26.5	33.1	40.3	36.5	na
Real Wage Index (1987=100)	100.4	115.2	123.2	86.5	na

Source: Roczniak Statystyczny
EEC Economic Survey

There was one ironic outcome of this limited devolution of power to individual enterprises and to the worker's council. As decentralization progressed, workers gained enough influence to push for increasingly higher wages. This contributed to soaring wages rises during 1987-89, which resulted in shortages, inflation and a rising budget deficit.

Around the middle of 1989, Poland fell into a remarkable combination of explosive inflation and massive shortages. While excess demand was largely created by large wage increases, shortages were exacerbated because official prices were kept below market-clearing levels. Serious shortages weakened the domestic currency, especially given the widely used market in foreign currency, which offered huge premiums over official rates. This had a negative effect on work effort, and large incentives were required to increase working time.

Economic performance sharply deteriorated as a result of disruptions in the supply of imported inputs and lower domestic output of some key raw materials. The contribution of the trade balance to growth turned negative as imports from the non-ruble area sustained their growth but exports faltered. The price hikes led to labor unrest, culminating in June 1988 with strikes and the resurgence of Solidarity.

With respect to the government's budget position, following a sharp deterioration at the beginning of the 1980s, it improved significantly in 1982-83 as a result of a reduction in budgetary subsidies and a streamlining in the system of enterprise taxation. The position was in broad balance in 1984-88 (less than 2% of GDP at an annual average). However, the budget position sharply worsened to -7.4% of GDP in 1989 from the balanced position in 1988, reflecting a steep fall in revenue (Table 2.3.3).

The current account deficit in convertible currencies rose sharply between 1988 and 1989, reaching about US\$1.8 billion. This deterioration was largely due to a steep decline in the trade balance, but also higher interest obligations and a decline in net private transfers (Table 2.3.4).

Most recently, GUS data have shown that in the first nine months of 1992, industrial production increased by 1.2% and building activities by 1.4%. Some sources predict that the recession hit the "bottom" at the end of 1991.

Table 2.3.3 Major Budgetary Aggregates 1986-1990

	unit: % of GDP at current prices			
	1988	1989	1990	1991
Revenue	35.6	24.0	32.2	23.2
turnover tax	10.8	7.4	6.9	6.6
income tax	12.1	8.5	12.4	5.9
others	12.7	8.1	12.9	10.7
Expenditure	36.9	28.2	32.0	27.8
wages	4.0	5.7	7.0	6.8
subsidies	16.0	9.1	5.8	3.2
others	16.9	13.4	19.2	17.8
Balance	-1.3	-4.2	0.2	-4.6

Source: GUS, World Bank

Table 2.3.4 Balance of Payments in Convertible Currencies, 1988 - 1991

	unit: million US\$			
	1988	1989	1990	1991
A. Current account	-580	-1,843	668	-2,223
Exports, f.o.b.	7,248	7,575	10,863	12,760
Imports, f.o.b.	6,307	7,335	8,649	12,709
Trade balance	941	240	2,214	51
Services: credit	963	1,149	1,908	na
Services: debit	3,917	4,464	5,387	na
Transfers (net)	1,433	1,232	1,933	353
private	1,433	1,144	1,676	na
official	-	88	257	na
B. Medium/long-term capital account (net)	-3,559	-2,834	-428	786
C. Short-term capital and other items (net)	-354	-203	-124	-2,025
D. Overall balance (Items A through C)	-4,493	-4,880	-1,682	-10,177
E. Change in net international reserves (-, increase)	-561	-122	-4,442	1,300
F. Debt relief	4,500	1,665	9,054	4,382
Principal	2,943	1,520	na	na
Interest	1,557	145	na	na
G. Change in arrears	554	3,337	-2,920	4,478
new arrears	700	3,337	na	na
settlement of arrears	146	-	na	na

Source: the Polish Authorities

2.3.2 The Economic Transformation Program (ETP)

1) Objectives and Components

From the last quarter of 1989, the government first began to tighten macroeconomic management to stabilize seriously untenable macroeconomic disequilibrium. At the same time, it prepared a highly comprehensive reform program, the Economic Transformation Program (ETP), with the support of IMF and the World Bank. The Polish government has been strongly committed to the rapid creation of a market economy.

The ETP pursues three broad objectives:

- (1) stabilization;
- (2) structural reform, and
- (3) the progressive restoration of credit worthiness.

Stabilization was the most urgent policy, in the face of Poland's move to the brink of hyperinflation, aiming to rectify the fundamental imbalances related to excess demand. The stabilization components rested on three major pillars:

- (1) reducing demand pressures and strengthening financial discipline;
- (2) implementing a monetary policy; and
- (3) using the exchange rate and wages to break the momentum of inflation.

The Structural Reform which was formulated with the strong support of the World Bank, aimed at systemic transformation to establish a decentralized market economy to improve resource allocation and restore growth. Therefore, the Reform program embraces essential and wide-ranging microeconomic pillars:

- (1) enterprise restructuring, privatization and private sector development;
- (2) financial sector reform; and
- (3) a social safety net to mitigate dislocations and ease transition.

2) Progress during 1990 - 1991

It seems still premature to evaluate the results of this stabilization policy, however, the IMF tentatively assessed the results of 1990 that Poland's adjustment program in 1990 achieved notable success on a number of fronts: (1) hyperinflation was counteracted and the rate of inflation was greatly reduced; (2) shortages were noticeably eliminated; (3) foreign exchange reserves rose markedly; and (4) the financial accounts in 1990 were strong.

The state budget benefitted from a sharp increase in income tax payments by enterprises and tight expenditure control, and recorded a surplus of 1% of GDP in 1990. On the other hand, the IMF analyzed that output dropped sharply, and employment fell substantially for the year as a whole with the implementation of a tax-based incomes policy. However, the 1991 figures by preliminary estimates of GUS show a considerable change for the worse: net balance of the state budget amounts to -30.6 trillion zlotys compared with +2.4 trillion zlotys in 1990 due to higher increase of expenditures than that of revenues.

There was a marked improvement in the balance of payments in 1990, with the current accounts in both convertible and nonconvertible currencies recording surpluses. However, this improvement could not continue into 1991 due to a conspicuous decline of exports to both convertible and nonconvertible currency countries. Poland received substantial debt relief from Paris Club creditors, but accumulated arrears to commercial bank creditors. Gross official external reserves in convertible currencies multiplied during 1990.

The adjustment measures have been harder-hitting than generally anticipated. Prices were hiked in the course of 1991 and continued rising. Monetary growth was tightly repressed and interest rates shot up. Government spending was sharply cut, creating serious problems in providing social welfare services.

The process of privatization is certainly difficult and complicated. With respect to small scale services and the retail trade, privatization took off in Poland on a large scale. However, privatization of the main bulk of state-owned industries is a complex issue; asset valuations are difficult under any conditions.

Furthermore, political aspects render the formidable hurdles more difficult. Democracy movement has accelerated the diversification of opinions, particularly as to the desirable balance and/or trade-off between improvement of efficiency and maintenance of social equity. The Solidarity has decomposed into several political parties, any one of which seems to have no strong leadership for the economic transformation at the moment. The fragile bases of the coalition governments likely impede timely introduction of legal as well as fiscal policies, which likely tend to prolong the economic transformation process.

3) Future Prospects

The Polish economy in the economic transformation process is now at a crucial point. It slid deep into recession. The situation was aggravated by the political jolts. Since the unprecedented operation of returning from the centrally planned command system back to the market system was launched, it has certainly achieved a lot. But there are gaps in what each sector has achieved. The most successfully adjusted sector is the commerce and services, which has made the most pronounced headway. In this sector the Polish market does not basically differ much from markets in the west. The market has deregulated prices and demand is no longer held down by restriction or rationing schemes. Supply is also deregulated and free from administrative constraints.

The reform so far, however, has not delivered growth and improved standards of living for the majority of the population. The success of structure reforms depends particularly on the point whether a macro economic policy package can be devised that minimizes the short term decline in GDP without causing any unsustainable debt or resurgent inflation.

The fundamental issues observed for the last two years are:

- (1) The performance of the SOE sector was disappointing and has failed to respond adequately to the new market opportunities. It has resulted in a rapidly deepening public sector crisis and an overall dim economic performance. Solving the SOE problems in the core of the current economic issues and measures to reverse the deterioration are to be urgently sought and implemented.

- (2) Since the government's main source of fiscal revenue still depends on the SOE sector, the deterioration of performance in the sector has affected the fiscal accounts and macro economic stability. The government avoided a major cash deficit by running arrears and postponing planned expenditure, which would further tighten the government's fiscal situation in successive years. While restoring the profitability of SOEs, establishment of a modern tax system including a value-added tax (VAT) and the administrative machinery to operate such a system effectively are prerequisites for the design of a viable fiscal stability.
- (3) The increasing disintegration of the former Soviet Union led a sudden and substantial shrink of export market for Polish commodities and services, disrupted energy supplies, and brought the decline in demand for Polish goods and current recession. The revitalization of the Polish industrial sector depends on the sharpened competitive edge with goods produced in the west through modernization of production systems, but resurgence of the CMEA trade will be vitally important.

The Polish private sector has displayed dynamic and substantial progress, which stands in sharp contrast to the performance of the SOE sector. Future prospects for the economic transformation process, at least in the short term, will be the restructuring of the ailing SOE sector through:

- (1) Identification of internationally competitive sectors with lower energy and material intensity and reallocate resources toward them.
- (2) Emphasis on marketing strategies which will bring the changes in market orientation and products mix.
- (3) Reduction of employment to the levels compatible with the new market situation.

Although these changes are not yet generalized in the SOE sector, reallocation of resources towards Poland's comparative advantage is an inevitable historical process for the restructured and prosperous industrial sector of future Poland.

2.3.3 Agriculture Sector

1) Profile of the Agriculture Sector

Agriculture is a crucial sector in Poland and will hold one of the keys to the success of Poland's transition to a market-based economy. The sector is far more important to the Polish economy than it appears even though about 38% of the population lives on farms and agriculture in Poland produces only 12% of GDP. Despite this relatively low figure, the country depends on agriculture for 87% of its food, and 20% of industrial output derives from agriculture-based industries, which depend on agriculture for 90% of their raw materials.

Farms are predominantly private (75% of the area, employing 85% of the active agricultural population), with state farms accounting for only 18% of land holdings. Many farms are small by European standards: the average farm size is 6 hectares, with 24% of farms holding 0.5-2.0 ha and only 20% exceeding 10 ha in size (Table 2.3.5). The Polish rural population, at 15 million, has been relatively stable since 1950, but its composition has gradually changed. At the present time, only 20% actively derive their income exclusively from farming.

Table 2.3.5 Size of Farms

	Size of farms	% of farms
State Farms		20 %
Very small	0.5 - 2 ha	24
small	2 - 5	27
Medium	5 - 10	28
Large	10 -	1

Source: Rocznik statystyczny

As mentioned earlier, political fluctuations between centralization and decentralization were particularly true for agriculture. In 1974, the government passed a law on farmers' retirement benefits which required elderly farmers to surrender their land to the State Land Fund in exchange for a pension. This led to an increase in the transfer of private land to the Fund. At the same time, the regime began to discriminate against private farming in the allocation of agricultural inputs, and promoted a policy of expanding livestock farming in the socialized sector.

This policy entailed large and costly investment for the construction and maintenance of large-scale socialized livestock farms. However, the deteriorating economy in the latter half of 1970s did not allow the government to continue a high cost policy of accelerated socialization for agriculture. At the end of the 1970s, the severe economic crisis led to a deep cut in imports of industrial raw materials from the West, contributing to a considerable fall in the rate of output and supply of key agricultural inputs, such as fertilizers, agricultural equipment, etc. This affected agricultural output adversely. Agricultural policy was reintroduced to boost agricultural output, by exploiting the potential of private farmers, particularly those with larger than average farms, specializing in certain products (Tables 2.3.6, 2.3.7, and 2.3.8).

Table 2.3.6 Growth of Agricultural Production

	1970 = 100.0			
	1975	1980	1985	1988
Gross Agricultural Production	119.8	110.1	122.1	126.8
Value Added	97.3	78.6	102.9	98.2

Source: Rocznik Statystyczny

Table 2.3.7 Production of Selected Agricultural Products

unit: 1,000 tons

	Share of Average Gross Output	Yearly			
		1981-85	1988	1989	1990
Cereals	17.2	22,224	24,509	26,787	28,014
Wheats	6.1	5,263	7,582	8,399	9,026
Rye	3.6	1,089	5,501	6,216	6,044
Barley	2.7	3,618	3,804	3,874	4,217
Oats	1.2	2,600	2,222	2,174	2,119
Potatoes	10.9	36,594	34,707	35,227	36,313
Sugar Beets	2.6	15,606	14,069	13,535	16,721
Fodder	na	10,798	9,867	na	na
Meadow Hay	1.6	14,557	14,809	13,890	14,384
Vegetables	5.4	4,709	5,576	5,332	5,628
Tree Fruits	4.6	1,853	1,670	1,549	979

Source: Rocznik Statystyczny

Table 2.3.8 Production of Selected Livestock

unit: 1,000 tons

	1985	1988	1989	1990
Cattle	1,376	1,365	1,244	1,428
Calves	63	55	73	105
Pigs	1,889	2,318	2,330	2,341
Sheep	75	88	84	96
Horses	100	49	37	37
Poultry	392	496	517	474
Cow Milk(mil.lit)	15,955	15,177	15,926	15,371
Hen Eggs(mil.)	8,636	8,220	8,032	7,597
Wool(greasy, ton)	17,143	16,406	15,944	14,783

Source: Rocznik Statystyczny

2) Performance in 1990-1991

While all the productive sectors recorded a sharp decline of production in 1990, only agriculture did not show much decline from the production level achieved in 1989. The relatively good results largely depended on favorable weather conditions in 1990. The agricultural production in 1991 recorded a decrease by 2%. The livestock production remained the same level as in 1990, but the crop production contributed overall decrease. Further, early crop prospects in 1992 indicate the possibility of the substantial decrease in crop production because of the estimated severe drought in the north-western region.

The above the performance of agriculture sector is far from satisfactory, not to mention the bad crop prospects in 1992. Since it is the sector with the highest share of private ownership, the sector's contributions to the overall growth were much needed and expected as the key elements to activate the national economy. Agricultural production was poor in 1990-1991 despite the price liberalization measures which were expected to

work as incentives in agriculture and bring about higher productivity and modernization in the sector.

Guaranteed farm gate prices and input subsidies have been eliminated and prices liberalized, but transmission of international prices to the farm level has not been taking place because of the existing inefficiencies in marketing and processing operations which are largely dependent on SOEs. Those SOEs have responded to liberalization by increasing margins rather than by reducing costs through increased efficiency. The result was that the prices paid to farmers grew at a far lower rate than those paid by them for purchasing inputs, resulting in a considerable decrease in farm incomes and a growth of indebtedness of farmers.

In order not to repeat the above mentioned situation, the removal of the factors that have constrained agriculture in the past two years is essential. It should be achieved not through the subsidized credit programs for agriculture but through increasing the efficiency of agricultural marketing and processing industries, strengthening the role of state in fostering better land utilization and support services for farmers including research and extension services and agricultural education.

3) Future Prospects

Under the above political environment for Polish agriculture, private sector production (80% of the total) was hindered by a lack of inputs: fertilizers, insecticides, animal feed, machinery and spare parts, and seeds. On the other hand, an undue proportion of these inputs were allocated to socialized sector farms, and the marketing and processing of agriculture which was highly monopolized by socialized sector agents severely diminished the benefits of free market prices.

A private farm was completely dependent, for the procurement of all inputs and services and for the sale of all production, on an omnipotent state and cooperative sector that enjoyed monopolistic and monopsonistic privileges. Producers were tied to cooperatives that enjoyed territorial monopolies. All marketing systems, whether for grains, milk or animals, were still largely vertically integrated. The producers still had only limited access to markets above the level of their cooperatives, which in general they did not control.

Most probably, inefficiency in the agribusiness sector is one of the most critical issues in the development of Polish agriculture. The causes of the present agricultural crisis are to be found there, rather than on the farms themselves.

Although economic reform has started, the state and cooperative agribusiness sectors still follow the same pre-reform incentives, having no incentive to maximize return on capital invested. Thanks to their monopolistic privileges, they are allowed to keep their margins constant by manipulating prices, rather than by increasing efficiency through a reduction in costs. Farmers find it difficult to sell their products; consumers see no decrease in food prices; dairies are unable to purchase milk; and buying prices are not being announced by purchasing agencies.

As can be seen from the above, the major obstacles to development in Polish agriculture primarily relate to the structure rather than the management skills or agricultural know-how. Prices of agricultural products were freed in August 1989, and subsidies were eliminated on all but a very small number of items. State procurement of agricultural products, and minimum guaranteed procurement prices, were abolished in the autumn of 1989.

Dispersion of the monopolistic agricultural industries is a priority for the authorities. The Anti-Monopoly Office, which was established early in 1990, has been working for the de-monopolization of some agribusiness sub-sectors. Early in 1990, the unions of cooperatives, which previously had monopoly power in food procurement and distribution, were disbanded. Later in the year, meat-processing enterprises were split up, while some sugar producing firms were divided into about 80 independent producers.

For the future, agriculture in Poland must be allowed to be driven by market forces, and agricultural production should be on land that is essentially held in private hands. Prices will be determined by market forces. Agriculture should be free to use all trade opportunities, both domestic and international, since this is the only way it can fully exploit its likely price advantage over competitors with higher costs.

With respect to access to European Community (EC) markets, tariff quotas are unlikely to be modified to accommodate Poland. The possibilities of significant expansion into EC markets do not seem great in the total sum, although Poland could negotiate special agreements allowing privileged access for Polish products that have a comparative price advantage, such as berry fruits and flowers. Polish agricultural products may prove to be competitive in the EFTA markets of Scandinavia and Austria.

Medium and long term prospects for exports to the CISs and other Eastern European countries will be better. Opportunities in the CIS market look favorable over the long term, given the current domestic economic problems. But these markets are unlikely for some time to offer prices higher than, or even equal to, those of free world markets.

2.3.4 Industry Sector

1) Profile of the Industry Sector

Polish industry now accounts for half of the GDP. State-owned and cooperative industry accounted for around 90% of all industry before 1990. Industrial production is heavily concentrated, with enterprises employing over 1,000 workers accounting for more than two-thirds of industrial employment. The structure of manufacturing is strongly biased towards heavy industry.

Engineering represents a third of total industrial employment and a quarter of total industrial output (including fuel and energy). Private industrial activities account for about 5% of industrial net production, mostly in handicrafts, engineering, and light industries. Quite a few private enterprises are owned by non-residents (the so-called "Polonia" firms). Recent further deregulation has accelerated this trend.

Efficiency levels in industry are highly variable across and within sub-sectors. 30% of industrial output is estimated to be internationally competitive under current conditions (Poland - Competitiveness of Industrial Activities, World Bank, 1988). These cover a wide range of activities including textiles, engineering, precision engineering, chemicals and light industry. Some types of electrical engineering are anticipated to be competitive despite their severe distortion. On the contrary, the heavy, traditional industries (ferrous metallurgy, transport equipment, etc.) and some parts of the food processing industry are unlikely ever to be competitive. In general, the overall development potential in Polish industry is still deeply hampered by the socialist legacy.

Under the command economy system, improvements in industrial efficiency and the related expansion of efficient exports were somewhat obstructed. Firstly, the salient characteristics of the industrial environment were the systemic distortions, e.g. in pricing, subsidies, taxation and wage policies. These distortions have long limited the

incentives for improving performance. Polish industry was characterized by a high degree of concentration and little competition. This contributed to various impediments to further development, which is a most urgent issue for Poland.

Secondly, industrial policies grossly favored large-size state-owned enterprises in accordance with the base theory of the command economy. However, central allocation of materials such as energy, inputs for production or for the physical construction of new facilities, normally led to substantial delays in deliveries of goods and services. This was often exacerbated by complex planning and monitoring systems built in to the socialistic bureaucratic structure. Shortages and delays in the supply of parts and intermediate products led to more strengthened vertical integration of a large-size enterprise, to ensure the supply of those products. This structure and the lack of a sound market mechanism failed to ensure smooth horizontal flows of information, contributing to inefficient services to associated industry sub-sectors.

On the other hand, socialist industrial policy neglected the development of small and medium-size enterprises and discriminated against the private sector. This policy naturally led to constraints against the associated development of a multifaceted and demand-responsive industrial structure, thereby limiting reliable supplies of spare parts, minute items and intermediate goods.

Thirdly, on an individual enterprise level, financial management has always been a big bottleneck to efficient business management. Most Polish state-owned enterprises have no concept of a cost-center and a profit-center. Financial management is generally poor. Even though enterprises have good accounting records of their past performance, they have little or no cost accounting. Naturally, financial analysis is normally weak, resulting in poor corporate business planning and strategy, including such matters as production costing, optional product mix, market strategy, productivity improvement, etc.

The rigidities of the command economy contributed to inhibiting Polish managers and engineers from best exploiting their relatively high levels of skills and know how. Old and obsolete technology is widespread in most of the industrial sector. The obsolescence of technology affects the design, the quality of production, and production cost, which conspires against efficient exports. Furthermore, the lack of quality control has worsened the situation.

Lastly, the chronic lack of export marketing practice and its expertise is a common feature across the industry. Poor marketing both for domestic and international sales, has compounded weaknesses in the sector and has inhibited enterprise managers from making the best use of their plants and export opportunities.

2) Performance in 1990-1991

With the introduction of the stabilization and adjustment program, economic activity fell sharply in 1990. This reduction in demand was felt mainly by industry and construction, where value added fell by 20% and 12% respectively. Production fell in all branches of industry, with the consumer goods industry less adversely affected than heavy industry. For example, clothing and leather fell by 7% in 1990, while the average drop in production in heavy industry was 20%.

Despite the recession, it is interesting to note that industrial output in the socialized sector declined by 25% in 1990, while in the private sector, although still comparatively small, it increased by 8%. This suggests a shift or a reclassification of some activities from the socialized sector to the private sector.

In 1991, industrial output sold fell by 11.9% compared with the previous year, an overall decrease made up of a 19.5% drop in the public sector (state enterprises) and a 25.4% increase in the private sector. Although a significant drop in the public sector, this sector's share of total industrial output remains high and in 1991 amounted to 75.6%. The worst affected industries in 1991 were producers of capital and intermediate goods, among them electrical engineering (26.1%) and metallurgy (22.4%) in spite that the biggest fall in output in 1990 was recorded in consumer goods production ("Poland: International Economic Report 1991/92" by the World Economy Research Institute).

3) Future Prospects

Polish industry has been characterized by a high degree of concentration and little competition. However, laws aiming at introducing some degree of competition have been passed, covering the creation of new enterprises, anti-monopoly regulation, joint ventures between enterprises and private investors and direct foreign investments. In addition, a move towards the privatization of certain enterprises has been initiated with such activities as conversions into joint-stock companies, leasing to the private sector, the sale of assets, etc. A share of the private sector in total industrial output was increased from 17.3% in 1990 to 22.1% in 1991. These activities are expected to be intensified over the coming years.

Foreign direct investment has been increasing based on the law on foreign direct investment (FDI) adopted in December 1988 as well as the new joint venture law approved by the Sejm in June 1991. Joint venture operations in Poland increased from 3,696 companies in June 1991 to 5,286 companies in December 1991, involving total foreign capital of 683 million dollars.

The small and medium scale industry (S&M) sector will have a key role to play in Polish industrial development. In the short term, the development of this sector can help the absorption of labor shed by the restructuring of the state-owned enterprises and make a quick supply response, particularly of consumer goods and services. In the long run, the development of a strong and competitive private S&M sector is a requisite condition for the linkage between the S&M sector and the larger enterprises in Poland. Otherwise, it will be difficult to correct the socialistic vertical integration of the Polish industrial sector. In the service sector, the development of the S&M sector will improve the quality and efficiency of services provided.

2.3.5 International Trade

1) Profile of the International Trade

The distorted price structure was sustainable for a long time because of the policy of autarchy of these economies within their protected Council for Mutual Economic Assistance (CMEA or COMECON) market area. The CMEA was established in 1949 "to achieve the goal of socialist economic integration through specialization among member countries on specific lines of production in order to reap economies of scale and develop comparative advantages in 'research and development' and production on the basis of medium-term inter-governmental contracts."

The CMEA was a closed market in comparison with the outside market economies, and featured not only excessive specialization, but also artificially favorable terms of trade in manufactured products vis-a-vis raw materials. Because of this distorted trade structure as well as retarded technological improvement, which inevitably failed in developing international competitiveness, ex-CMEA countries have been experiencing considerable shock in their attempt to trade with market economies in the outside world.

Over the past ten years, Polish industrial goods have consistently made up a predominant share of exports, accounting for about three-quarters of total exports. Industrial exports are highly concentrated in a few industries, with electrical engineering, chemicals and processed food products representing about 60% of the total. However, in the last decade, nearly 60% of industrial products were exported to non-convertible currency areas. More than 70% of electrical engineering exports were for these areas. Therefore, it is very uncertain whether Polish industrial products could be competitive in world markets, following the abolition of the closed CMEA market.

2) Performance in 1990-1991

Poland's performance in foreign trade featured completely different shape in 1990 and in the following 1991. In 1990, good performance in foreign trade was considered a major success of the Polish economy. Following the devaluation of the zloty and abolition of the state monopoly on trading, coupled with the economic crisis in most of the CMEA countries and depressed domestic demand, convertible currency exports to western countries grew by 43.4% in 1990, but the growth of imports from them was much lower compared with the export performance (Table 2.3.9).

On the contrary to the favorable results of foreign trade with western countries, values of trade with the CMEA countries suffered substantial losses. This has brought a change of geographic structure of Polish trade, and Germany became the Poland's largest trading partner in 1990 instead of the USSR in 1989. Shares of the other CMEA countries for Polish trade also diminished (Table 2.3.10).

Table 2.3.9 Polish Foreign Trade

	1989	1990	1991
Trade in Convertible Currencies (mil. US\$)			
Export	7,575	10,863	12,760
Import	7,335	8,649	12,709
Trade Balance	240	2,214	51
Trade in Transferable Rubles (mil. TR)			
Export	11,320	13,493	1,175
Import	10,342	6,885	793
Trade Balance	978	6,608	882
Bilateral Agreement (mil. US\$)			
Export	538	1,166	313
Import	652	753	211
Trade Balance	-114	413	102

Source: GUS

Table 2.3.10 Major Trading Partners of Poland

1989		1990		1991		
Country	Share	Country	Share	Country	Share	Import
1. USSR	29.8	1. Germany	23.0	1. Germany	29.4	26.5
2. FRG	15.2	2. USSR	17.2	2. USSR	11.0	14.1
3. Czecho	5.6	3. U.K.	6.6	3. U.K.	7.1	4.0
4. U.K.	5.5	4. Switz	5.2	4. Holland	5.2	4.9
5. Austria	4.6	5. Italy	4.7	5. Austria	4.5	6.3
6. GDR	4.4	6. Austria	4.5	6. Czecho	4.5	3.3
7. Switz	3.7	7. Czcho	3.9	7. Switz	4.5	3.4
8. Yugo	3.4	8. France	3.2	8. Italy	4.1	4.5
9. Italy	3.2	9. Holland	3.0	9. France	3.8	3.6
10. Holland	2.8	10. Sweden	2.4	10. U.S.A.	2.5	2.3
11. Others	21.8	11. Others	26.3	11. Others	23.4	27.1
Total	100.0	Total	100.0	Total	100.0	100.0

Source: GUS

However, mounting recession throughout the economy in 1991 had an adverse effect on export performance and reduced import demands. In comparison with 1990, the year 1991 was characterized by the sharp reduction of foreign trade in transferable rubles. This is chiefly due to the introduction of convertible currency settlements between the CMEA countries from January 1, 1991.

The results were that the CMEA countries which suffered shortage of foreign currency reserves accounted for only about 17% of Polish exports and about 20% of imports in 1991 compared with the respective shares with 28 and 33% in the previous year. The share of the USSR further declined while it inversed for Germany and other EC member states. The commodity structure of trade indicates that products of the electro engineering industry, which had been the traditional major export items of Polish trade, decreased substantially (Table 2.3.11).

Table 2.3.11 Commodity Structure of Polish Export

	unit: %				
	1989		1990		1991
	C.C.	T.R.	C.C.	T.R.	Total
Electro Engineering	61.4	23.9	63.0	23.4	22.2
Metallurgy	3.1	15.6	1.8	17.8	15.8
Chemical	9.8	11.2	10.7	12.5	11.4
Light Industries	3.7	6.5	2.0	6.9	5.7
Food Processing	1.4	13.6	1.4	11.3	9.5
Fuels and Energy	7.1	12.1	7.3	11.2	10.8
Agricultural Products	2.2	5.2	2.1	4.7	6.3
Others	11.3	11.9	11.7	12.0	18.4
Total	100.0	100.0	100.0	100.0	100.0

Note: "C.C." stands for Convertible Currencies.

"T.R." stands for Transferable Rubles.

Source: GUS

3) Future Prospects

The future prospects of Polish trade will be determined by several factors as mentioned below:

- (1) The depressed domestic market caused by the general economic recession will reduce the demand for imports and may generate possible incentives for export drive.
- (2) Export capacities will be limited due to outdated production facilities and underdeveloped management systems with high production costs and the low quality of products.
- (3) Various advantages and disadvantages will possibly arise in due course toward the integration with the European Community and closer ties between the EC and the EFTA countries.
- (4) In a longer term, markets of the former CMEA countries will recover.
- (5) The Polish private sector will gradually develop its foreign trade with an increasing emphasis on export.

2.4 Energy

2.4.1 Profile of the Energy Sector

The salient characteristics of Poland's use of energy are a high dependence on coal and an extremely high level of energy consumption per GDP. Overall, energy is inefficiently used, not only because of heavy subsidies and under-pricing, but also due to Poland's natural resource endowments, and the structure of the Polish economy with its disproportionate reliance upon heavy industry (Fig. 2.4.1 and Table 2.4.1). (This high level of energy consumption relative to GDP is typical of all post-socialist command economies in Central and Eastern Europe.)

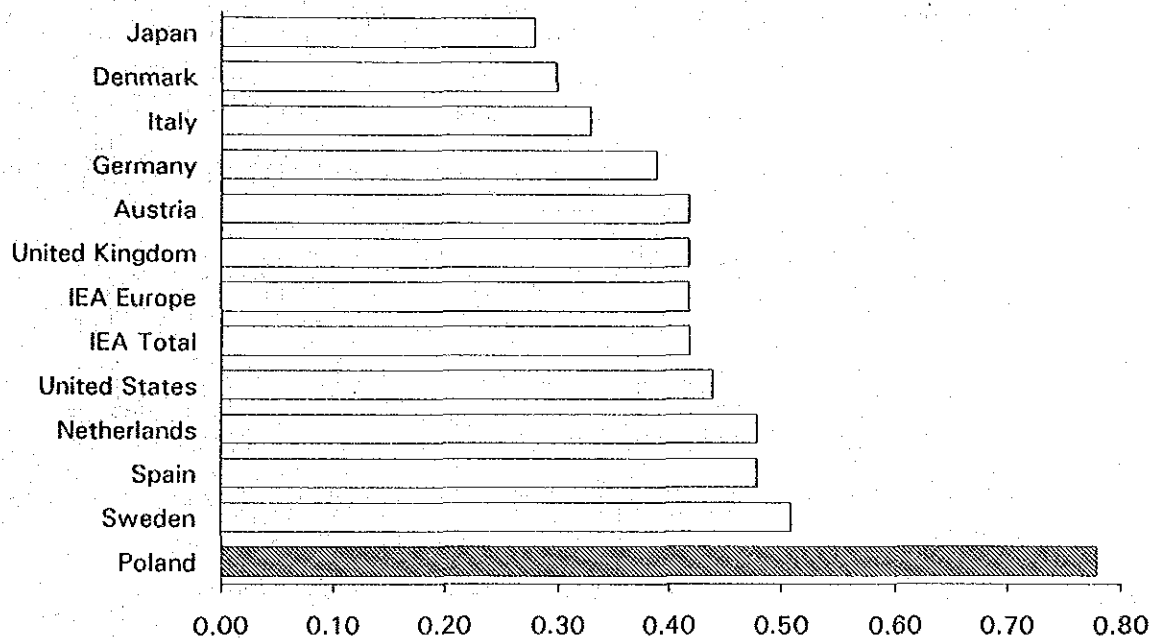


Fig. 2.4.1 Total Energy Consumption/ GDP Ratios for 1989

Units: Toe. per \$1000 of GDP at 1985 prices and exchange rates.

Sources: OECD Data Base (for Polish GDP); IEA, energy Policies and Programmes of IEA Countries, 1989 Review, 1990.

Note: The comparison made in this table should be viewed as indicative only, as there is no single, generally accepted, methodology for calculating GDP in the European Economics in Transition.

Table 2.4.1 Key Energy Indicators and Data for Poland

(unit: 1000 tons coals-equivalent)

		1971	1980	1985	1986	1987	1988	1989
PRODUCTION								
Coal		88,605	115,117	118,680	120,921	122,685	121,938	113,099
Oil		402	335	196	165	148	157	160
Gas		3,873	4,491	4,520	4,040	4,102	3,366	3,117
Nuclear		-	-	-	-	-	-	-
Hydro/Geothermal		165	282	335	325	349	370	333
TOTAL PRODUCTION		93,045	120,225	123,731	125,451	127,284	125,831	116,709
TRADE								
Coal	Exports	18,706	18,776	21,306	20,477	18,286	20,865	19,070
	Imports	688	549	742	812	771	762	650
	Net Imports	-18,018	-18,227	-20,564	-19,665	-17,515	-20,103	-18,420
Oil	Exports	1,019	1,638	364	302	365	603	1,013
	Imports	10,300	20,557	17,212	17,672	17,496	18,202	18,442
	Bunkers	-	-	-	-	-	1,467	1,405
	Net Imports	9,281	18,919	16,848	17,370	17,131	16,132	16,024
Gas	Exports	-	-	-	-	1	-	1
	Imports	1,072	3,872	4,363	5,171	5,454	5,417	5,727
	Net Imports	1,072	3,872	4,363	5,171	5,453	5,417	5,726
Electricity	Exports	201	378	651	670	748	686	883
	Imports	195	358	469	674	896	1,071	1,037
	Net Imports	-6	-20	-182	4	148	385	154
TOTAL NET IMPORTS (including bunkers)		-7,671	4,544	465	2,880	5,217	1,831	3,484
STOCK CHANGES		-1,846	94	2,454	245	320	-1,532	833
TPES (including electricity trade)								
Coal		68,845	97,551	100,577	101,508	105,590	100,472	95,536
Oil		9,557	18,755	17,088	17,564	17,236	16,170	10,433
Gas		4,945	8,294	8,835	9,177	9,500	8,731	8,570
Nuclear		-	-	-	-	-	-	-
Hydro/Geothermal		165	282	335	325	349	370	333
TOTAL TPES		83,506	124,862	126,653	128,577	132,822	126,128	121,025

Source: Energy Policies, 1990 Survey, OECD/IEA

Poland's energy sector consists of four sub-sectors: two energy producing sub-sectors (hard coal/lignite and oil/gas) and two energy conversion sub-sectors (electric power and district heating). Hard coal accounts for 84% of primary energy production in Poland, lignite for 11% and natural gas for 3%. Corresponding consumption figures are 68% for hard coal, 11% for lignite and 8% for gas. The remaining 13% is made up by imported oil. As of the end of 1990, the bulk of crude oil imports and almost all natural gas imports come from the USSR.

Poland is the fourth largest coal producer in the world and the fourth largest coal exporter. Reform of the energy sector is critical to the structural adjustment aspect of the Polish program because of its share of foreign trade (energy represents about 25% of total exports), and new investment and capital stock (over 10% of all investment). Increased coal exports could generate foreign currency to service the external debt and lay the foundations for long term growth.

Because of distortions in energy prices (under-pricing of most fuels), it is still difficult to rectify the prices of different forms of energy (coal, oil/gas, lignite, power and heat/steam) relative to each other. This is a major obstacle to energy conservation. Absolute price levels should be raised in order to encourage energy conservation, enhance the supply of energy, and ensure the financial viability of energy sector enterprises without reliance on subsidies.

As well as discouraging energy conservation, the heavy reliance upon coal as the primary source imposes heavy environmental costs on the economy and the country as a whole. The coal mining industry discharges large quantities of waste water into the two main river basins, while the burning of coal leads to very poor levels of air quality in major population centers. Upper Silesia, which is the center of the mining industry, is one of the most polluted regions in Europe.

The current reforms in Poland are having a major impact on the way in which energy is allocated and on the incentives influencing both the choice of fuel and the level of fuel consumption in industries. The pricing of crude oil and petroleum products has been free from subsidies since early 1989 when gasoline rationing was abandoned. Reflecting the higher costs of oil imports, average domestic retail prices soared by 350% between January and June, 1989, and thereafter continued to rise.

2.4.2 Future Prospects

It is very uncertain how the reform of energy markets will be linked to the ongoing economic reforms. Given the prevalence of cost-plus pricing in the Polish economy, there is an enormous risk that raising energy prices would result in an increase in inflation as well as leading to more efficient energy use. To reform the overall pricing system, direct intervention by the government is required in keeping a proper balance of price incentives. Increased energy prices would also threaten the financial viability of energy-intensive or financially weak enterprises. While the long term aim is to restructure these enterprises and enable them to operate competitively, it might be necessary, in the short term, to devise measures to avoid large scale disruption or an upsurge in imports.

The International Energy Agency has suggested the following energy policy for Poland:

- (1) to reshape the energy balance by reducing dependence on coal, increasing the share of gas and oil in energy supply, and in the longer term introducing nuclear energy;

- (2) to diversify imports of gas and oil by introducing sources of supply additional to the former Soviet Union;
- (3) to improve the efficiency with which energy is used; and
- (4) to reduce pollution through achievement of these objectives and through specific measures for the protection of the environment.

Future energy consumption and direct demand in Poland are projected to the year 2000 by the Polish Academy of Science Mineral Materials Management Committee (Tables 2.4.2 and 2.4.3). Consumption of gaseous and liquid fuels are projected to grow at higher rates than others by 2000 while consumption of solid fuels will almost keep the present level. The industry sector will continue to be the largest energy consumption sector for the future, maintaining about 40 % of total energy consumption.

Table 2.4.2 Energy Consumption and Direct Demand in Poland by Kind of Fuel

	unit: 1,000 trillion J					
	1990		1995		2000	
		(%)		(%)		(%)
Solid Fuels	870	(30.0)	920	(29.4)	850	(24.1)
Gaseous Fuels	390	(13.4)	420	(13.4)	540	(15.3)
Liquid Fuels	390	(13.4)	460	(14.7)	610	(17.3)
Electricity	350	(12.1)	390	(12.5)	480	(13.6)
Heat	840	(29.0)	890	(28.4)	1,000	(28.3)
Other Fuels	60	(2.1)	50	(1.6)	50	(1.4)
Total	2,900	(100.0)	3,130	(100.0)	3,530	(100.0)

Source: Proceedings of the 7th Conference of the Polish Academy of Science Mineral Materials Management Committee, June 1991

Table 2.4.3 Energy Consumption and Direct Demand in Poland by Sector

	unit: 1,000 trillion J					
	1990		1995		2000	
		(%)		(%)		(%)
Industry	1,160	(40.0)	1,190	(38.0)	1,400	(39.7)
Construction	50	(1.7)	60	(1.9)	80	(2.3)
Agriculture	60	(2.1)	80	(2.6)	110	(3.1)
Transportation	150	(5.2)	190	(6.1)	230	(6.5)
Other Fuels	1,480	(51.0)	1,610	(51.4)	1,710	(48.4)
Total	2,900	(100.0)	3,130	(100.0)	3,530	(100.0)

Source: Proceedings of the 7th Conference of the Polish Academy of Science Mineral Materials Management Committee, June 1991

2.5 Spatial Organization

2.5.1 Regional Development in the Past

The progress of urbanization in Poland after World War II had been closely related to the industrialization program of the country. The industrialization program which was accompanied with urbanization was executed by establishing state enterprises at each site. As a result, the urbanization was a process of accommodating the increasing number of urban residents, most of whom were managers and workers of the enterprises.

This type of urbanization, however, lacked a dynamic process in which the established urban concentration attracts enterprises and individual entrepreneurs, which, in turn, increase the benefits of scale in the urban concentration. The reason for this is the lack of free market dynamism with less importance given to the service sector.

Industrialization in the 1950s concentrated in major cities and their vicinities where urban facilities destroyed during World War II had been reconstructed. Such cities include Warsaw, Katowice, Krakow, Wroclaw, Gdansk/Gdynia, Lodz, Szczecin and Poznan. These cities grew into large cities with a population of more than 100,000 by absorbing more than half of the nation's urban population increment during the period of 1950 - 1979.

The Central Planning Office introduced a decentralization policy in 1972 which aimed to raise the urban function of middle-sized cities with a population of 50,000 - 70,000. However, what actually happened in the 1970s was a continued growth of major cities. In particular, the Katowice metropolitan area absorbed the largest share (more than 15%) of the urban population increment. This situation could be attributed to the industry modernization program with a focus on large state enterprises which were located in major cities. In the 1980s, a serious economic recession struck the Polish economy, resulting in lower industrial production in major cities. The rapid growth of urban population in large cities has stopped since then (Tables 2.5.1 and 2.5.2).

The regional economies and spatial organization established under the previous regime have features which might constitute an impediment against the transformation of the Polish economy.

- (1) Regional development in Poland had been pursued by introducing large-scale industrial investments until the end of the 1970s. As a result, the investments concentrated in a particular area tended to create a regional imbalance of employment, energy consumption, material supplies, land use and so on. The enormous burden caused by these investments often deteriorated local living conditions and the natural environment to a considerable extent.
- (2) Investment decision-making had significantly been affected by sectoral view points rather than regional or local view points. Due to the centrally planned allocation of goods and services, each sector or state enterprise was forced to procure its materials through strengthening vertical integration within a sector or enterprise rather than through extending horizontal relations with other sectors or local enterprises in a region.

Table 2.5.1 Population and Employment Changes, 1946-1990

		1946	1950	1960	1970	1980	1990
Population	(million)	23.64	25.04	29.80	32.66	35.74	38.20
(1950=100)		94	100	119	130	143	153
Urban Population	(million)	8.04	9.24	14.40	17.09	20.98	23.60
(1950=100)		87	100	156	185	227	255
Rural Population	(million)	15.60	15.80	15.40	15.57	14.76	14.60
(1950=100)		99	100	97	99	93	92
Percentage of Urban Population		34%	37%	48%	52%	59%	62%
Employment	(million)	-	10.19	12.40	15.18	17.33	16.50
(1950=100)		-	100	122	149	170	162
Employment in Industry	(million)	-	2.62	3.97	5.52	6.59	5.84
(1950=100)		-	100	152	211	252	223
Employment in Agriculture	(million)	-	5.46	5.37	5.21	5.15	4.42
(1950=100)		-	100	98	95	94	81
Employment neither in Ind. Agr.	(million)	-	2.11	3.06	4.45	5.60	6.24
(1950=100)		-	100	145	211	265	296

		'46-50	'50-60	'60-70	'70-80	'80-90
Population	(million)	1.40	4.76	2.86	3.08	2.46
Annual Increase Rate (%)		1.45	1.76	0.92	0.91	0.67
Urban Population Increase	(million)	1.20	5.16	2.69	3.89	2.62
Annual Increase Rate (%)		3.54	4.54	1.73	2.07	1.18
Rural Population	(million)	0.20	-0.40	0.17	-0.81	-0.16
Annual Increase Rate (%)		0.32	-0.26	0.11	-0.53	-0.11
Urban Population Increase due to Administrative Changes		0.00	1.54	0.08	0.39	0.17
Employment Increase	(million)	-	2.21	2.78	2.15	-0.83
Annual Increase Rate (%)		-	1.98	2.04	1.33	-0.49
Industrial Employment Increase	(million)	-	1.35	1.55	1.07	-0.75
Annual Increase Rate (%)		-	4.24	3.35	1.79	-1.20
Agricultural Employment Increase	(million)	-	-0.09	-0.16	-0.06	-0.73
Annual Increase Rate (%)		-	-0.17	-0.30	-0.12	-1.52
Empl. Increase except Ind. Agr.	(million)	-	0.95	1.39	1.15	0.64
Annual Increase Rate (%)		-	3.79	3.82	2.33	1.09

Source: Podstawowe Dane Statystyczne o Polsce 1946-1990, GUS (1991), Demografia 1990, GUS (1991)

Table 2.5.2 Population Changes of Major Cities, 1950-1989

CITY	POPULATION (1,000)					INCREASE OF POPULATION (1,000)					ANNUAL INCREASE RATE (%)				
	1950	1960	1970	1980	1989	1950-60	1960-70	1970-80	1980-89	1950-60	1960-70	1970-80	1980-89		
VOJVODSHIP															
BIALYSTOK	69	121	169	224	268	52	48	55	44	5.70%	3.40%	2.86%	2.01%		
BIELSKIE	73	87	106	164	180	14	19	58	16	1.77%	1.99%	4.46%	1.04%		
BYDGOSZCZ	163	232	282	349	380	69	50	67	31	3.59%	1.97%	2.15%	0.95%		
CZESTOCHOWA	112	165	188	235	257	53	23	47	22	3.95%	1.31%	2.26%	1.00%		
CZESTOCHOWSKIE	48	77	90	110	125	29	13	20	15	4.04%	1.57%	2.03%	1.43%		
GDANSK	195	287	366	457	465	92	79	91	8	3.94%	2.46%	2.25%	0.19%		
GDANSKIE	103	148	192	238	251	45	44	44	15	3.69%	2.64%	2.09%	0.69%		
TOTAL OF GDANSK METROPOLITAN AREA	290	435	558	693	716	137	123	135	23	3.85%	2.52%	2.19%	0.36%		
GORZOW WIELKOPOLSKI	33	59	75	106	123	26	16	31	17	5.90%	2.43%	3.52%	1.67%		
KALISZ	56	70	82	99	106	14	12	17	7	2.26%	1.59%	1.90%	0.76%		
KATOWICKIE	174	183	188	234	230	9	5	46	-4	0.51%	0.27%	2.21%	-0.19%		
CHORZOW	129	147	152	150	133	18	5	-2	-17	1.31%	0.34%	-0.13%	-1.33%		
DABROWA GORNICZA	32	56	62	141	136	24	6	79	-5	5.76%	1.02%	6.56%	-0.40%		
GLIWICE	133	150	172	198	222	17	22	26	24	1.21%	1.30%	1.42%	1.28%		
JASTRZEBIE-ZDROJ	2	3	25	98	103	1	22	73	5	4.14%	23.62%	14.64%	0.55%		
KATOWICE	225	270	305	355	367	45	35	50	12	1.84%	1.23%	1.53%	0.37%		
KATOWICKIE	110	132	143	159	170	22	11	16	11	1.84%	0.80%	1.07%	0.75%		
RUDA SLAKA	27	34	44	123	143	7	18	79	20	2.33%	2.61%	10.83%	1.69%		
RYBNIK	96	132	145	246	259	36	13	101	13	3.24%	0.94%	5.43%	0.57%		
SOSNOWIEC	13	50	72	167	190	37	22	95	23	14.42%	3.71%	8.78%	1.44%		
TICHY	6	9	26	106	111	9	17	80	5	4.14%	11.19%	15.09%	0.51%		
WODZISLAW SLASKI	172	190	197	196	203	18	7	-1	7	1.00%	0.36%	-0.05%	0.39%		
ZABRZE	119	156	1531	2,173	2,267	237	175	642	94	1.94%	1.22%	3.56%	0.47%		
TOTAL OF KATOWICE METROPOLITAN AREA	1,119	1,356	1,531	2,173	2,267	237	175	642	94	1.94%	1.22%	3.56%	0.47%		
KIELCE	51	90	127	185	219	29	37	50	28	3.77%	3.50%	3.83%	1.59%		
KOSZALIN	19	44	65	94	108	25	21	29	14	8.76%	3.98%	3.76%	1.55%		
KRAKOW	344	481	590	716	748	137	109	126	32	3.41%	2.06%	1.95%	0.49%		
LEGNIA	39	64	76	104	104	25	12	14	14	5.08%	1.73%	1.71%	1.62%		
LODZ	620	710	763	836	852	90	53	73	16	1.36%	0.72%	0.92%	0.21%		
LUBLIN	117	181	239	304	350	64	59	65	46	4.46%	2.82%	2.43%	1.58%		
OLSZTYN	44	60	96	133	161	24	28	37	28	4.45%	3.51%	3.31%	2.15%		
OPOLE	39	64	87	117	128	25	23	20	11	5.08%	3.12%	3.01%	1.00%		
PLOCK	33	44	72	103	122	11	28	31	19	2.92%	5.05%	3.65%	1.90%		
POZNAN	321	408	472	553	589	87	64	81	36	2.43%	1.47%	1.60%	0.70%		
RADOM	60	130	160	191	226	50	30	31	35	4.97%	2.10%	1.79%	1.89%		
RZESZOW	28	63	83	121	151	35	35	38	30	8.45%	2.80%	3.84%	2.49%		
M. ST. WARSZAWA	804	1,139	1,316	1,596	1,655	335	177	280	59	3.54%	1.45%	1.95%	0.40%		
SZCZECIN	179	269	338	388	412	90	69	50	24	4.16%	2.31%	1.39%	0.67%		
TARNOW	37	71	86	105	120	34	15	19	15	6.73%	1.94%	2.02%	1.49%		
TORUNSKIE	45	65	77	90	101	20	12	13	11	3.75%	1.71%	1.57%	1.29%		
TORUN	81	105	130	174	201	24	25	44	27	2.63%	2.16%	2.96%	1.62%		
WALBRZYCH	94	117	125	134	141	23	8	9	7	2.21%	0.65%	0.70%	0.57%		
WLOCLAWSKIE	52	63	78	107	121	11	15	19	14	1.94%	2.16%	3.21%	1.38%		
WROCLAW	309	431	526	618	642	122	95	92	24	3.38%	2.01%	1.62%	0.42%		
ZIELONA GORA	32	54	74	101	113	22	20	27	12	5.37%	2.20%	3.16%	1.26%		
TOTAL OF POPULATION OF MAJOR CITIES	5,349	7,263	8,661	10,909	11,680	1,914	1,398	2,248	771	3.11%	1.78%	2.33%	0.76%		
TO THE TOTAL URBAN POPULATION	586	508	516	526	508	37%	52%	52%	32%						
TOTAL OF URBAN POPULATION	9,243	14,401	17,088	20,979	23,415	5,150	2,687	3,891	2,436	4.53%	1.73%	2.07%	1.23%		

SOURCE: DEMOGRAPHIA 1990, GUS (1991)

- (3) The economic development policy centered on heavy industrial production had not necessarily satisfied local needs including housing, education, health care, and consumer goods and services. The shortage of housing has limited geographical mobility of population.
- (4) Because of the above, production had not satisfied local needs and various regional service sectors were kept underdeveloped. Therefore, intra-regional economic transactions had not been encouraged. The same situation applied to the economic interaction among surrounding regions, resulting in under-development of multifaceted economic connections among regions.
- (5) Preference given to large-scale investments had inevitably led to a negligence of small local resources, such as minerals, water resources, manpower, food processing and tourism. This preference, at the same time, had limited business opportunities for small-scale enterprises.
- (6) The responsibilities entrusted to regional and local governments were so limited that local communities or regions could hardly realize any projects essential for the local needs.

2.5.2 Spatial Organization Plan

Poland seems to have a balanced distribution pattern of urban centers which includes:

- (1) one city with a population of more than one million;
- (2) four cities with a population of 500 - 1,000 thousand; and
- (3) five cities with a population of 300 - 500 thousand.

Some of these urban centers form urban agglomerations by absorbing surrounding cities and towns. Poland presently has no excessive concentration to a particular city, which is rather common in a growing economy, with exception of the Katowice urban agglomeration (Figures 2.5.1 and 2.5.2).

The transport network connecting regions of the country is relatively well structured. The existing transport system does not seem to have any lack of important links to sustain the national socio-economic activities. Poland has quite an extensive railway network, the road network is relatively extensive, and sea ports and airports are adequately located.

The three international transport corridors are likely to provide two kinds of opportunities for the regional development of Poland (Fig. 2.5.3). An opportunity would be in the development along the international corridors and at their intersections while another would be in an enhanced economic interaction of border regions with neighboring countries crossing the national boundaries.

The Central Planning Office has recently published a new version of "Regional Policies in Poland" which basically inherited the concept of decentralization. Compared with the former version, more emphasis has been given to environmental problems including air and water pollution in heavily concentrated areas of industry.

The current regional policy identifies nine developed metropolitan areas, nine developing metropolitan areas, and three major transport corridors as important areas and corridors for development in the national and international context. These areas constitute major elements of the national spatial organization. Potential areas for agricultural development and environmentally sensitive areas including mountainous areas, lowlands and forests are also focused on.

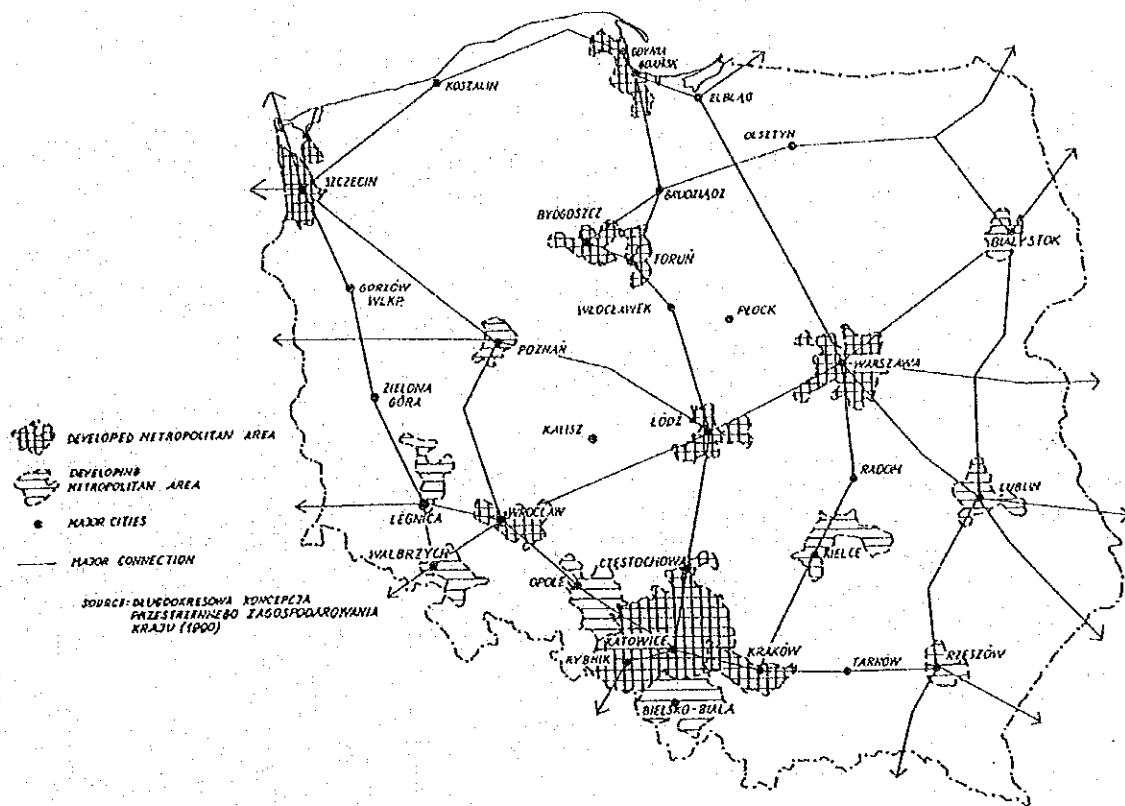


Fig. 2.5.1 Metropolitan Areas

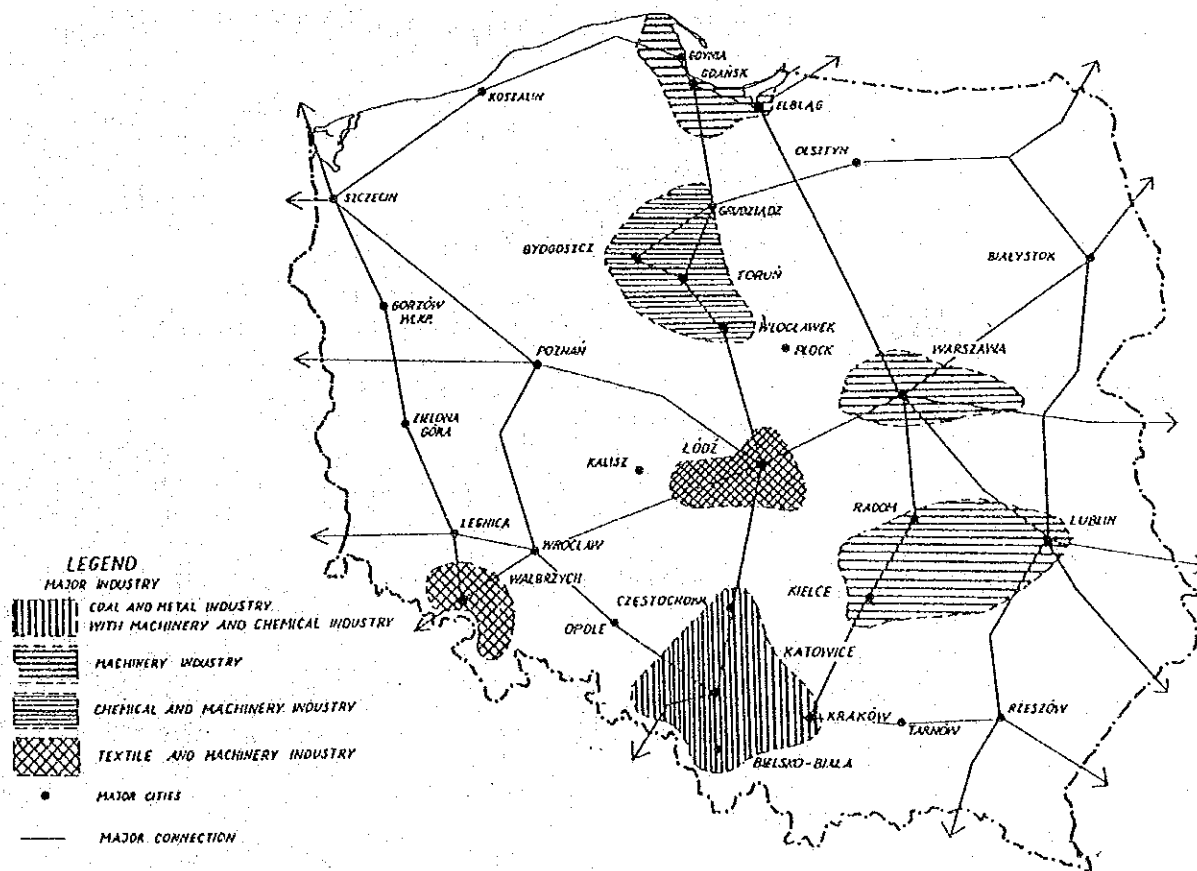


Fig. 2.5.2 Major Industrial Areas

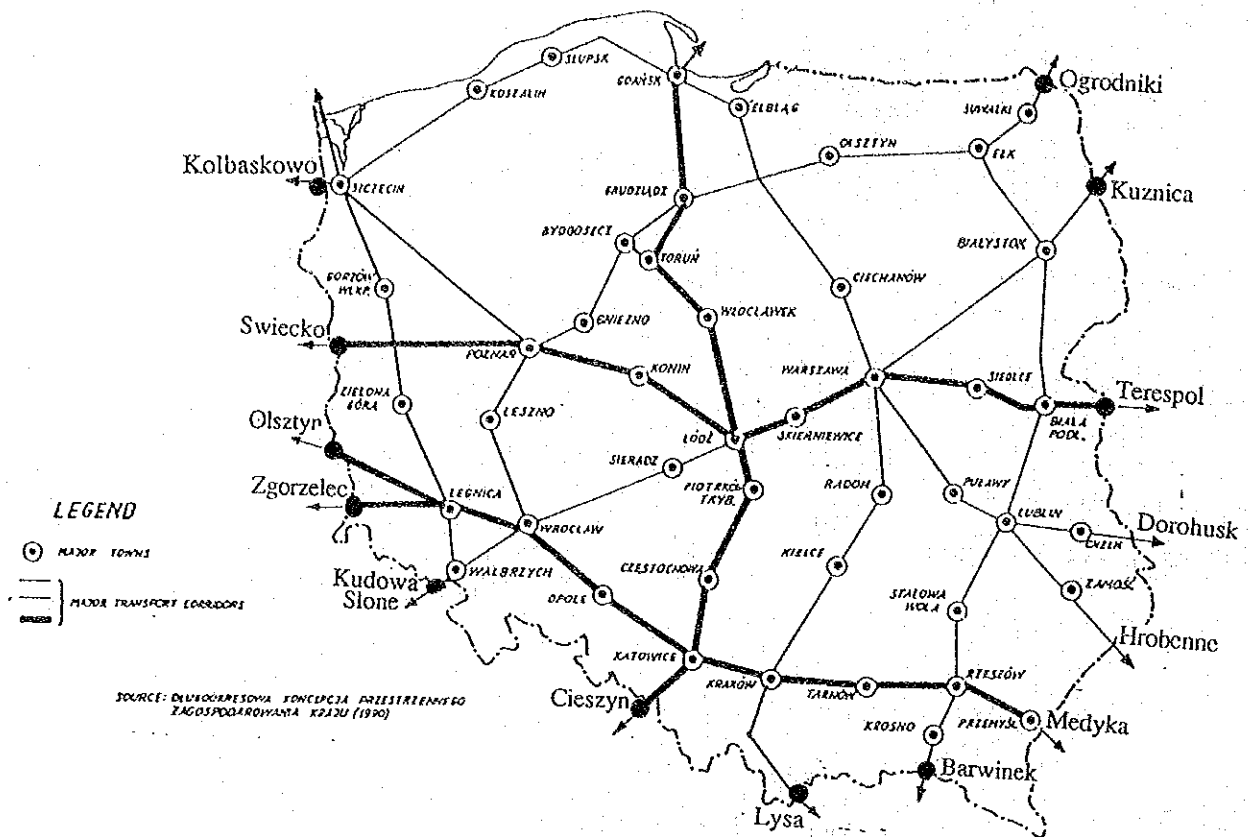


Fig. 2.5.3 National and International Integration by Major Transport Corridor

In addition, unemployment problems have emerged as a crucial issue due to the implementation of the Economic Transformation Program. Unemployment is a new phenomenon in Poland. This type of economic issue has never been dealt with by the previous regional policies.

The policy is also aware of the necessity of opening the international borders to take full advantage of the Poland's location in Europe, at a crossing point between Western Europe and the CISs as well as between the Scandinavian and Balkan countries.

2.5.3 Future Prospects

As discussed in the above, major issues of regional economies and spatial organization seem to have originated from the legacies of the old regime that the industrialization was pursued principally based on the development of large scale industries which did not have active economic transactions with the local economies. Urban development accompanied with the industrial development was concerned mainly with providing accommodation for the labor force. Under a centrally controlled economy, the decentralization policy was not successful in developing various parts of the country.

Conspicuous differences can be seen in a market economy in that:

- (1) cities have multiple economic functions of production, distribution, various services and consumption including diversified involvement of participants;
- (2) multi-directional interactions between cities are active based on individual decision making to achieve the maximum possible merits;
- (3) urban areas are renewed for the purpose of improving the efficiency of economic activities with due consideration to better living environment;
- (4) attention is given to rural development with an emphasis on local resource development through introducing new technologies;
- (5) local government has responsibilities and capacities to improve the living conditions of the local people and the local economic grounds; and
- (6) a region is more strongly connected with foreign countries in terms of economy and culture which encourages international integration

The transition of Poland from a centrally planned economy to a market economy could be attained by shifting emphasis on decentralization of the economy and encouraging private participation. Transport development should be geared to this end as a part of the overall program. Improvement required for the transport system in view of regional development will include:

- (1) Improvement of the inter-regional transport system for both passengers and cargoes to facilitate inter-regional transactions;
- (2) Improvement of urban and urban-rural public transport systems with due consideration to financial self-support as well as introduction of measures to cope with the increasing vehicular traffic in city areas;

- (3) Improvement of transport linkage between urban and inter-regional transport systems including bypasses to city centers, truck terminals and warehouses for efficient distribution, better access and egress to and from passenger terminals and so on;
- (4) Development of an international transport system to encourage economic development of the border regions; and
- (5) Review of roles and functions of national, voivodship and city governments for improving regional transport systems.

2.6 Tourism

2.6.1 Tourism Resources and Facilities

Tourism is a relatively small sector of the national economy. However, unlike other sectors, tourism can bring in foreign currencies based on Poland's physical and cultural endowments. Political and economic reforms of Eastern Europe in the late 1980s increased tourist arrivals to these countries. Poland needs further efforts to attract an increasing number of international visitors to compete with other Eastern European countries in the international tourist market.

Tourist attraction consists of coordinated development of tourism resources, transportation, accommodations, cuisine, and various tourist services. Tourism development has an extensive economic effect on other sectors of the economy. The tourism sector can play a significant role in encouraging business activities as well as earning foreign exchanges, which is particularly important in an economy which has a huge amount of accumulated debt.

Development of diversified tourist and vacation sites has contributed to encourage tourism and vacationing among Poles. Although these tourist and vacation sites have been developed primarily for Poles, some of them seem to have high potential for attracting international tourists as well if tourist support facilities and services are adequately improved.

The tourism resources of the country can be grouped into the following five categories:

- (1) Cities with historical monuments and architecture,
- (2) Places associated with the struggle for national liberation,
- (3) Baltic coastal areas,
- (4) Lake areas in the north-eastern regions including the Pomeranian and Dobrzyn-Chelmno lake areas, the Great Poland lake area, and the Masurian lake area, and
- (5) Mountain areas in the south including the Sudetes and the Carpathians.

Special attention, however, needs to be paid to environmental protection as most of the tourism resources are located in designated preservation areas (Figures 2.6.1 and 2.6.2).

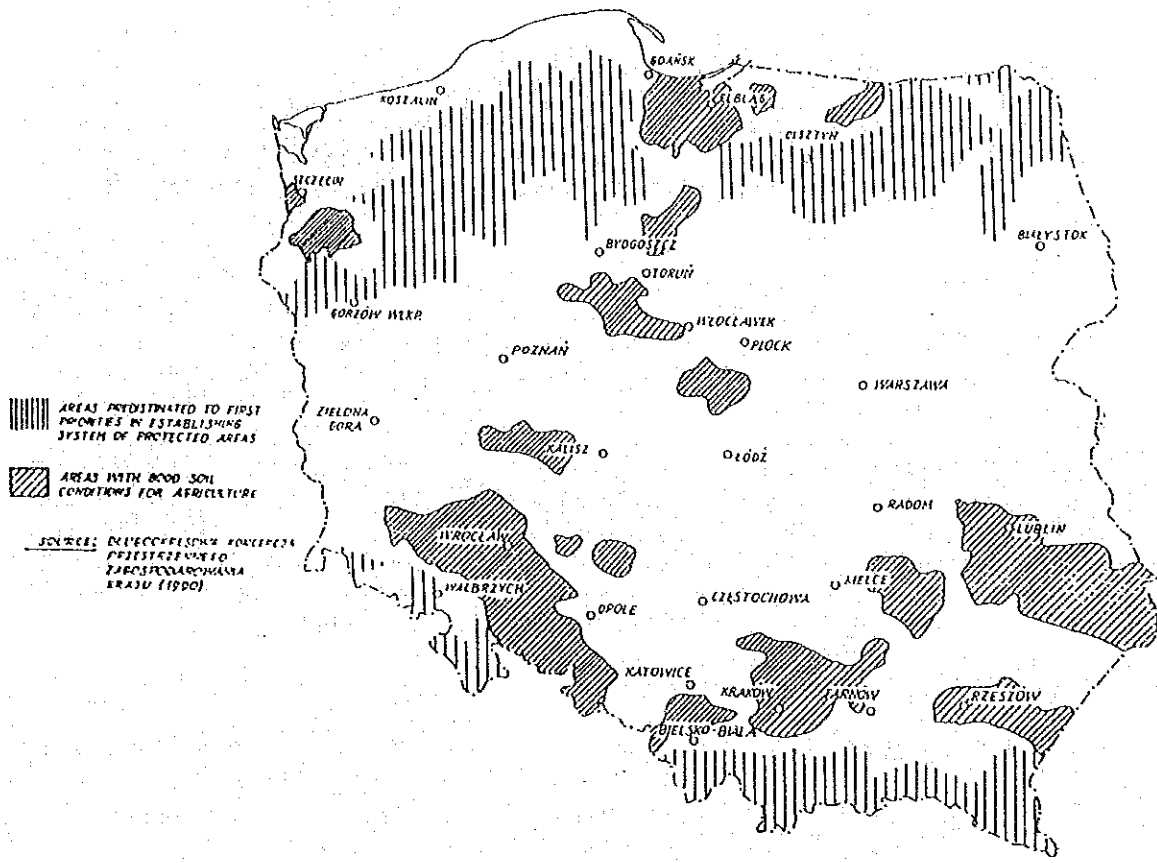


Fig. 2.6.1 Preservation Areas

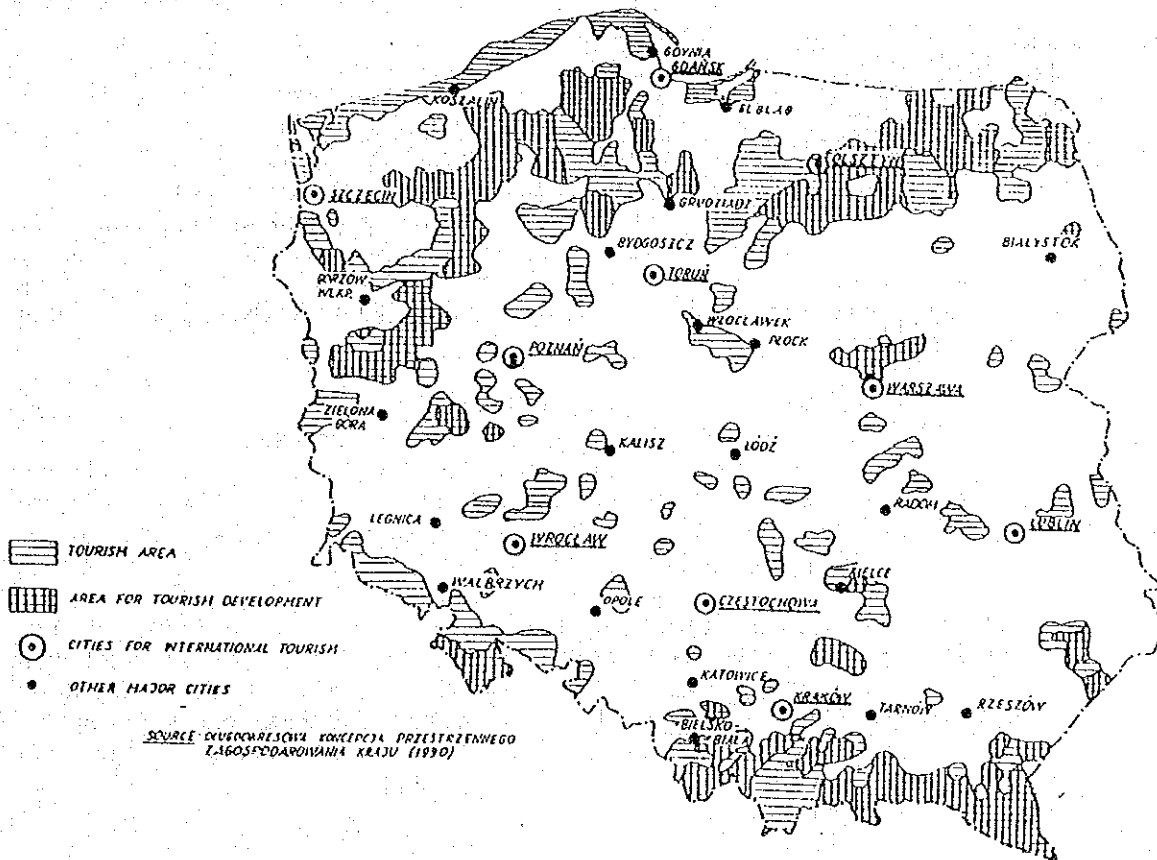


Fig. 2.6.2 Tourism Potential Areas

Most of the tourist and vacation sites have good access to major cities where many of the international visitors arrive. These cities are conveniently located in international land transport corridors served by railways and roads. Almost all the cities in Poland, however, are not served by international scheduled flights with exception of Warsaw and a few cities.

There are various types of accommodations in Poland including international as well as local hotels, hostels, bed and breakfast inns, and holiday centers. The total number of beds in 1990 amounted to 828,000 of which hotels provided only 54,000 beds. The average occupancy rates of hotels ranged between 60 and 74%, which means that most of hotel rooms are fully occupied in the high season.

In order to encourage more international visitors to Poland, international transport connections need to be improved. For instance, land transport for budget tourists from neighboring countries and air transport for group and individual tourists from the West European countries. The hotel capacity should be increased to accommodate tourists as well as international business men and women. Tourism facilities and services should also be improved to comply with international visitors' requirements.

2.6.2 International Visitors' Arrival to Poland

The number of foreign visitors to Poland has increased gradually since its sudden drop in 1981. In 1989, 8.2 million foreigners crossed Poland's national border, and in 1990 the number jumped up to 18.2 million, which was much higher than the previous peak of 10.7 million in 1978. This sudden increase was caused by the surge of visitors from Eastern Europe and the former Soviet Union (15.8 million), comprising 9.2 million from the former Soviet Union and 4.3 million from former East Germany. The number of visitors from Western countries increased as well though their number was far smaller than these two countries, amounting to 2.4 million in 1990. Poland seems to be attractive prices-wise although its facilities and services were not always satisfactory for tourists from western countries.

According to a survey conducted by the Institute of Tourism in August 1990, car transport had the highest share of 51% in visitor's arrivals, followed by air transport with 17%, railways with 15%, buses with 11% and ferries with 5%. Among the international visitors to Poland, 44% were tourists and vacationers who wanted to spend leisure time or holidays in Poland or were interested in Polish historical monuments and culture. The remaining share included business trips with 15%, and relative and friend visiting trips with 35%. As for accommodations, 33% of the visitors stayed at hotels, 33% at houses of their relatives and friends, and 22% at camp sites or private homes.

Many visitors from former East Germany to Poland are attracted for historical reasons in addition to geographical proximity. More than 10 million German and Austrian people visited Poland in 1990. German-speaking tourists are attracted by the German historical heritage left in the Polish territory, especially in the north-central, western, and south-western regions. The attractions include churches, palaces, manor houses, museums, castles, and memorial battlefields.

Another characteristics of Poland's international tourism is that over 20,000 Jews visited Poland in 1989. Most of them visited the Jewish historical sites which were important in Jewish communities before World War II. The Jewish historical and cultural attractions are spread over the eastern, central, southern, and south-eastern regions. These attractions, however, have neither been fully appreciated nor well preserved with the exception of a few concentration camps.

Future International Tourist Arrivals to Poland were estimated by "A Baseline Study of the Polish Tourism Industry" prepared by the Government of Ireland in consultation with the European Commission in April 1991. According to the study, some 15% annual increase from the West is likely to be sustainable until the year 2000, increasing the western tourist arrivals from 2.4 million in 1990 to 10.9 million in 2000.

2.6.3 Tourism Promotion

In the face of the future leap of international visitors to Poland, tourism resources, facilities and services need to be improved to comply with the higher standard of requirements:

- (1) Tourism resources need to be developed by taking account of the tourist characteristics of the prospective market countries and segments so as to increase the immediate foreign exchange earnings;
- (2) Tourism facilities including accommodations, restaurants and telecommunications, need to be improved and diversified to satisfy the divergent visitors' requirements; and
- (3) Tourism services including information service, interpretation and guiding services, and general hospitality need to be improved to induce tourists to be repeaters as well as to extend their word of mouth communication.

Concurrently with the above, promotional activities need to be strengthened in the target countries to provoke more people to come to Poland in close cooperation with the tourist agencies and/or airline companies there. Careful attention needs to be paid, however, to conserve the natural as well as the social environment to the maximum possible extent on one hand, and to encourage local economic linkage with the tourism development, particularly creation of job opportunities on the other.

To facilitate visitors' movement, it is necessary to solve the existing transportation bottle-necks including border crossings, transport network and services. Attention needs to be placed on improving the transport information system, seat reservation system, reliable scheduling of services and convenient connections between different modes of transport especially for those who carry baggages. Rest houses, restaurants, gas stations and public telephones need to be arranged at an appropriate distance along the major international corridors.