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The World Bank

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YUGOSLAVIA

INDUSTRIAL RESTRUCTURING STUDY

OVERVIEW, ISSUES AND STRATEGY FOR RESTRUCTURING

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Industry and Energy Operations Division
Country Department IV
Europe, Middle East and North Africa Regional Office

CURRENCY AND EQUIVALENTS

Currency Unit - Dinar (Din)

(Average rates)

1990	1991	1992
US$1.00	10.5	

WEIGHTS AND MEASURES

Metric System

BOAL	-	Basic Association of Organized Labor
CC	-	Convertible Currency
FTO	-	Foreign Trade Organization
FSAL	-	Financial Sector Adjustment Loan
NBY	-	National Bank of Yugoslavia
LMEs	-	Loss Making Enterprises
LPFWAR	-	Law in Providing Funds for Working Affected by Restructuring
NBPAP	-	National Banks of Autonomous Provinces
RAP	-	Republics and Provinces
SAL	-	Structural Adjustment Loan
SMA	-	Self Management Agreement
SC	-	Social Compacts
SSEs	-	Small Scale Enterprises
TFP	-	Total Factor Productivity
WO	-	Work Organization

YUGOSLAVIA - FISCAL YEAR

January 1 - December 31

YUGOSLAVIA: INDUSTRIAL RESTRUCTURING STUDY

Table of Contents

Table of Contents (Continued) Page No.

ANNEXES

This report is based on the findings of two World Bank missions that visited Yugoslavia in March/April and June, 1990. The missions were led by Mr. Yoshihiko Sumi (EM4IF) and consisted of the following staff. Messrs. Hiran Herat, Jose M. Soncini (EM4IF); Wei Ding (EM4CO); Eric Manes (EMTTF); Har Bhattacharya, N.C. Krishnamurthy, Roy Pepper, Charles Woodruff (EMTIE) and Mohan Pherwani (ASTIF). The Yugoslav counterparts were coordinated by the Federal Secretariat for Energy and Industry, particularly Messrs. Milovan Vasic and Radivoje Milojevic.

YUGOSLAVIA: INDUSTRIAL RESTRUCTURING STUDY

SUMMARY AND CONCLUSIONS

Structure and Performance of the Sector

i. For the last three decades, industry has been the leading sector of Yugoslav economy; its share of GSP has been increasing gradually even though the country was already more industrialized by the 1960s than most other middle-income developing countries. Croatia and Serbia are the republics with the largest share of industrial activity, but all republics have developed a significant and diversified industrial sector. Across the country, industry is also quite diversified, though four major subsectors, engineering, chemicals, textiles and agro-industries, account for about 60 percent of total industrial value-added.

ii. The structure of industrial enterprises. From the early 1970s until the adoption of the Enterprise Law of 1989, industrial enterprises in Yugoslavia were characterized by a high degree of decentralization whereby in a typical industrial plant, each of several vertically or horizontally integrated production units or departments was a separate, financially independent legal entity. Each unit, called a Basic Organization of Associated Labor (BOAL), was a socially-owned, self-managed organization with its own treasury and a Workers' Council as its main decision-making body. While individual large enterprises were highly fragmented internally, they often dominated their subsectors, achieving near monopoly status in their major markets. These enterprises also indirectly dominated financial markets by founding and owning both commercial banks and internal banks which took deposits from their workers. As the enterprises often owed their dominant position to politically inspired allocations of capital and credit, they were also highly susceptible to political pressure, particularly at the local level, in such areas as job creation, the funding of local expenditures for infrastructure, education and health services and financing the investments or covering the losses of other enterprises in their locale.

iii. Declining sector performance. In the past decade, serious problems have affected the industrial sector and performance deteriorated significantly. Output growth which averaged over 5.5 percent per annum between 1975 and 1983 has stagnated, falling to zero in 1987 and 1988 and turning negative in 1990 (see Figure 3, page 11). Export growth, in spite of the upsurge in exports to convertible currency markets in the mid-1980s, has recently declined because exports have been relatively unprofitable and have generally been unable to escape from the lower quality end of the market (see Figure 5, page 18). Productivity gains have been minimal or negative. Total factor productivity (TFP) growth has made a smaller contribution to output growth than has the growth of labor and capital inputs. Financial discipline has also been lacking (see Table 1.7, page 17). As a result, an increasing proportion of enterprises have run losses and have financed them through various subsidies and transfers to the point where the problem of large loss-making enterprises (LMEs) has had serious macroeconomic implications. Thus

efficiency of investment has been low and declining, and the subsectors receiving the largest allocations of investment have not contributed proportionately to output growth.

iv. During the mid 1980s. export orientation of the industry sector increased markedly and a very diversified structure of exports emerged. However, this change was not always based on a real improvement in international competitiveness, rather it was often the result of enterprises exporting, even at a loss, in order to obtain foreign exchange. In this way, exports guaranteed the supply of imported inputs, while the sale of imported goods usually generated a profit more than sufficient to offset any losses incurred on the initial export transactions.

v. The steady and prolonged decline in industrial performance resulted chiefly from the combination of a distorted relative price structure, administrative controls on the allocation of resources, and excessive and regular cross-subsidization within enterprises of loss making activities by profitable activities. Not surprisingly, with workers' self-management at the enterprise level and political and bureaucratic management at the sector level, economic objectives such as return on capital, were overridden by wage demands and political agendas. Past economic reforms beginning in 1982 had attempted to address some of these issues, but had not been successful in stabilizing the economy and inducing the desired response because the underlying structural problems were not addressed.

vi. Recent financial performance. Since 1981, the financial performance of the industrial enterprises has been deteriorating, with enterprise losses increasing from 1 percent of GSP in 1981 to 10 percent in 1989, and the industrial sector as a whole has been making net losses since 1987 (see Figure 4, page 12). In 1989, the number of loss making enterprises (LMEs) represented about 28 percent of total enterprises (see table 1.5, page 13). Around 100 capital intensive enterprises, out of a total of 7,500 enterprises account for nearly 70 percent of total enterprise losses. Financial transfers for the coverage of losses have led to high rates of inflation. Major factors contributing to recent financial losses are price controls in many basic products, increased interest costs, and low capacity utilization due to depressed domestic demand. For several reasons, including an overvalued dinar, uncompetitive product quality, and lack of export marketing capability, enterprises have not been able to replace lost domestic sales with export sales.

vii. Factor productivity. The rapid expansion of the industrial sector over the three decades prior to 1980 was dependent largely upon the growth of new investment and little concern was given to improving capital productivity. Labor productivity improved only with proportionate investment (see Table 1.7, page 17). The contribution of technical progress to growth also fell in the 1980s. A recent World Bank study (Annex 6 of this report) found that there has been a clear declining trend of TFP growth rates in most industrial subsectors. This unsatisfactory performance in production efficiency also weakened export performance and profitability. The lack of profitability of exports was offset to some degree by profits from trading in foreign exchange

and by direct fiscal export incentives. Also various types of cross-subsidies were available from domestic sales which were highly profitable due to trade barriers against imports.

Enterprise Level Issues

viii. Self-management and ownership of enterprises. The Yugoslav system of workers self-management lacks well defined property rights over capital. This has been a major cause of inefficiency in investment allocation. The business entity in Yugoslavia is endowed with capital that is owned by society at large. However, this social ownership is not vested in the government or any other legal body. Under social ownership, any residual income after deducting all non-labor costs was shared among workers. Thus, maximizing income per worker, rather than net profit of the enterprise, became the key objective of firms and the main signalling mechanism for the allocation of resources. This may be contrasted to capitalist firms where, in theory, if not always in practice, the available returns on equity capital govern which business activities expand and which contract.

ix. As indicated in para ii above, Yugoslav enterprises, because of their organizational structure, social ownership and self management, suffered from several inherent weaknesses, including: (i) weak and fragmented decision making by the managements of WOs or COs (Workers' Councils at the level of the BOALs had the power to veto decisions from above); (ii) duplication of administrative and accounting functions; and (iii) cross subsidization among BOALs and WOs. Furthermore there was little incentive for enterprises to become efficient, commercially oriented and internationally competitive and they were characterized by: (a) a lack of market orientation; (b) a lack of strategic direction, specialization or focus on core business activities; (c) surplus labor, particularly in administrative divisions; and (d) lack of financial discipline. Finally, as a result of their objective function, socially owned enterprises have a bias towards choosing capital intensive as opposed to labor intensive production systems in order to minimize the number of workers sharing residual income. The bias was reinforced as enterprises founded commercial banks from which they obtained cheap loans, often at negative real interest rates, to finance labor saving investments. Further accommodation was provided by accounting rules which permitted enterprises to greatly understate depreciation charges and hence maximize residual income.

x. Product mix and market development. While many industrial enterprises have a diversified product mix, very few of them have a good knowledge of domestic and export markets. Incentives for an active marketing effort are lacking because domestic customers are generally not very demanding and competition has frequently been avoided by product or regional segmentation among producers. Exports are not profitable and often are subsidized by high domestic prices. Also, exports are mostly concentrated in the low priced end of the market, which puts less priority on product design and quality. The ongoing import liberalization and increasing competition in domestic and export markets are expected to put pressure on product development and marketing.

xi. Technology and human resources. The level of production technology used by enterprises is varied. The coexistence of very old and modern machinery is noticeable in some enterprises, such as the engineering industry. The resulting overall manufacturing costs are not internationally competitive. While there is general concern for quality control, some enterprises appear to face quality problems traceable to their equipment. In-house capabilities for R&D exist, but efforts for product development are not satisfactory, often because of the enterprise's weak links with and knowledge of market conditions. As an integral part of operational restructuring, most enterprises need to eliminate surplus labor, whose size is estimated to be 20 to 30 percent of their total work force, particularly in administrative and non-operational areas.

xii. Environmental protection. Although there are some federal or provincial standards for pollution level of liquid effluent and aerial pollutants, no standards for levels at source exist and many plants discharge large quantities of waste water containing pollutants and toxins. During enterprise visits, such problems were observed in several enterprises in the pulp and paper industry and textile industry.

The Reform Program

xiii. Government has implemented a number of reforms to address the systemic problems associated with the social ownership and self-management of enterprises and the resulting relationship between the enterprise sector and the banking sector, as summarized in para ix. A number of legislative initiatives, including the 1989 and 1990 Enterprise Laws, the 1989 Foreign Investment Law, the 1989 Law on Circulation and Management of Social Capital and the 1990 Amendments of this law have yielded major progress towards establishing a legal framework for enterprise ownership and investment in Yugoslavia which more closely resembles the framework embodied by companies law in advanced market economies.

xiv. Enterprise and ownership reforms. The Federal Government's program for ownership transformation has been based on a number of basic principles: (a) privatization should not be done through free distribution of social capital, but through sale at market value with the objective that enterprises be taken over by owners who will manage them more efficiently; (b) one of the important objectives of privatization should be the dispersion of ownership to broad strata of the population with the aim of creating a broad coalition for a market-oriented economic development; (c) it is important to preserve the positive aspects or the gains achieved through the prior system of self-management, by increasing the motivation of employees arising form their identification with the enterprise; (d) given the dominant position of social property at present, ownership transformation will involve a long-term process which will unfold gradually; (e) nationalization may be justified in economic terms in certain activities (e.g. infrastructure), but across-the-board takeover of social capital by the State should be avoided, even on a temporary or transitional basis; and (f) the approach to privatization should

be pragmatic and should encompass all the successful methods of privatization known from other countries.

xv. The 1989 Enterprise Law provided for the abolition of BOALs as legal and financial units. As a result, many BOALs were grouped together to form enterprises and, similarly, several related production enterprises often formed a common services enterprise to provide for various functions such as general administration, planning, personnel, accounting, finance and export sales. These common services enterprises might resemble holding companies but in fact were, themselves, held by the autonomous member enterprises of the group. The Law recognized ownership rights based on contribution of capital and allowed socially-owned enterprises to transform to mixed ownership enterprises by attracting private equity capital. It facilitated entry of new enterprises and direct foreign investment in the enterprise sector. The 1990 Enterprise Law (which ammended the 1989 Law), substantially strengthened the authority of management in socially owned enterprises while making management more accountable to private investors in mixed-enterprises.

xvi. The 1989 Foreign Investment Law removed major restrictions on foreign investment in Yugoslavia and placed foreign investors substantially on equal footing with their domestic counterparts. The 1989 Law on Circulation and Management of Social Capital and the 1990 Law on Social Capital provided a mechanism for the sale of socially owned assets and for the transformation of socially owned enterprises into joint stock companies or limited liability companies which could issue internal shares (purchased at a discount by employees) or external shares to other investors. Inherent in such a transformation was the elimination of self management in favor of management based on ownership rights. The Law also allowed the sale of enterprises, in whole or in part. In cases where only internal shares were issued, a joint stock company would have a supervisory board made up of creditor banks, workers' representatives and competent persons appointed by Government. Member enterprises of a group, based on former WOs or COs, could either opt out of the group or surrender their shares to the group's common services enterprise, thereby making it a true holding company. In the event any shares in a subsidiary enterprise were sold, the law provided that the proceeds from the sale would remain with the holding company. However, the law remained ambiguous on the matter of who owned the shares in independent companies or holding companies, but it provided that if such enterprises are sold outright, then the proceeds of the sale would flow to a Development Fund to be established under the Law in each republic or autonomous province by the end of 1990. Thus, at least in the event of sale, it does appear that Government might have some ownership interest.

xvii. The Law on Social Capital also provided for the creation of Restructuring Agencies (RAs) which were to be responsible for determining that a fair value was received from the sale of any socially owned assets. The law provides that the agency must designate an authorized organization to value any enterprise which is being sold. The sale is to be conducted by public bidding, or by other methods with the consent of the agency. However, in the case of internal shares purchased by employees, the book value of the

enterprise was considered an adequate basis for pricing the internal shares transferred to workers.

xviii. Trade liberalization and competition. The Bank TFP study (Annex 5) established a negative correlation between the degree of protection from import competition and productivity gains, implying that a lack of competition may have been responsible for the poor efficiency of many industrial sectors. As an integral part of the economic reform program, the former system of quantitative import restrictions has been replaced to a large extent by a system of tariff protection, with quotas existing for a much more limited range of products. The introduction of the foreign exchange market and the convertibility of currency should also help reduce distortions in resource allocation and in the decision to import, export or produce for the domestic market. In parallel with the trade liberalization, pricing is also being liberalized, except for energy products and some metallurgical and basic chemical products.

xix. As the quota regime gradually phases out, tariffs and other duties on imports are becoming the binding determinant in the trade regime. While the level of import tariffs on specific commodities is generally low by developing country standards, total taxes on imports, including other import duties, remain significant. The Government has initiated reforms aimed at reducing these taxes and duties and reducing the number of exemptions in order to equalize protection across activities. These recent steps toward import liberalization coupled with an overvalued Dinar have caused some enterprises to begin facing real import penetration and thus increased competition.

xx. Exit mechanisms. Two important pieces of legislation enacted in 1989 have strengthened the possibilities of enforcement of greater financial discipline and enterprise restructuring. These are the Financial Operations Act which provides for automatic triggering of bankruptcy actions under specified circumstances of non-performance by enterprises, and the new Law on Compulsory Settlement, Bankruptcy and Liquidation, which significantly strengthened the rights of creditors and official agencies in seeking initiation of settlement and bankruptcy proceedings. With regard to laws on securitization and debt recovery, a system of land registration has been put in place, including registration of all dealing in land which is the basis of a system of mortgages in real estate. Foreclosure actions have been simplified and no recourse to the courts is necessary. The Federal Government plans to undertake further work to develop a workable system of mortgages and securities equivalent to those of the advanced market economies.

xxi. Taxation. The current taxation system impedes the growth potential of the industrial sector in several ways: first, an excessive number of taxes and contributions; second, excessive taxation on labor input; and third, excessive discretion for taxing authorities and thus considerable variations in the tax burden across republics and across years. A fundamental tax reform to establish a simple and transparent system to address these issues has been proposed in several Republics and should be implemented quickly on a country-wide basis.

xxii. The Federal and some Republican Governments recognize the need for tax reform in order to address the problems discussed above. The major elements of tax reform include the introduction of (i) a tax on enterprise profits replacing the current enterprise income tax levied on profits plus wages (to be introduced by January, 1991 with revenues from the tax received by the RAPs), (iii) an income tax on the gross wages of workers replacing numerous contributions to "Communities of Self Interest" (to be implemented by January, 1992 with revenues from the tax going mainly to local governments), and (iii) a levy on the gross wages of workers to fund pension, medical and unemployment insurance programs (to be implemented by January, 1992).

xxiii. Financial sector reforms. Legislation imposing major reforms on the banking system was adopted 1989 and 1990, including the 1989 Banking Law, the 1989 NBY Law, the 1990 NBY law, the 1989 Law on Rehabilitation, Bankruptcy and Liquidation of Banks which was amended in 1990 and, finally, a special law in December 1989 which established a Federal Agency for Insurance and Bank Rehabilitation. The institutional and legal reforms, which are designed to establish a commercially oriented independent banking system. The legislation clearly indicated the intent of the authorities to transform the banks into independent profit oriented institutions while removing structural impediments to competition in the banking sector. Most significantly the 1989 NBY Law gave NBY the authority to issue and revoke banking licenses. As a result, Internal banks and Associated banks were eliminated and of 150 Basic banks, Under this system only 63 commercial banks have been licenced. These Banks, most of which were formed from mergers and reorganizations of the previous Basic and Associated banks, were also required to transform themselves into joint-stock companies. In addition, the 1990 NBY Law empowered NBY to: (i) require that banks maintain adequate capital; (ii) require that banks write off uncollectible claims and provision against problem assets; and (iii) wherever required, replace bank management and remove other irregularities through the imposition of stringent holding actions upon the bank's operations.

xxiv. As part of the program for restructuring Yugoslav banks, the banks will be subject to lending guidelines which will restrict lending to problem borrowers. Banks will also have to commit to a program for strengthening of their project evaluation skills.

Current Status of the Stabilization Program and Enterprise Sector Reforms

xxv. The 1989/1990 stabilization/ economic reform program, which went far beyond earlier reform efforts, aimed to reduce inflation, liberalize prices and trade and reform ownership and governance of enterprises. The experience to date clearly shows the mutual interdependence of macroeconomic, industrial sector and financial sector reforms and how systemic problems in the financial and enterprise sectors can delay the achievement of macroeconomic goals which in turn can lead to severe distress for enterprises and banks, thus further delaying their restructuring.

xxvi. The key measures adopted to stabilize the economy included tight monetary policy with strict controls on credit, fiscal restraint, a wage freeze and free convertibility of the Dinar at a fixed rate of exchange. Though the stabilization measures were, initially, successful, they were eventually undermined by the irresistible wage claims of self-managed socially owned enterprises and the willingness of banks to finance these claims. These wage demands, the behavior of banks and the consequent failure of the stabilization program seriously compromised several crucial preconditions for restructuring the enterprise sector, including: (a) the establishment of flexible and market determined exchange rates; (b) the removal of any biases against exports; and (c) the availability of sufficient credit to provide adequate liquidity to viable enterprises.

xxvii. Major price distortions and a significant anti-export bias were inevitable because the Dinar/DM exchange rate, fixed at the outset of the program, had to be maintained much longer than planned because, given the wage demands, it was taking much longer to bring inflation under control. Similarly, credit controls deprived viable as well as loss making enterprises of the liquidity they needed to conduct business efficiently but these controls could not be relaxed since any new credit provided to the enterprise sector tended to flow directly to wage payments.

xxviii. Inflation (consumer prices) quickly dropped from a monthly rate of 60 percent for December 1989 to zero in June 1990. However, by that time, the purchasing power of a wage fixed in December 1989 had fallen by around 41 percent resulting in a contraction in both domestic demand and industrial output. The latter was accentuated by growing enterprise liquidity problems due to the stringent controls on credit. This situation proved to be unsustainable and in mid 1990 credit controls were relaxed to finance wage increases which, initially, were more than adequate to restore lost purchasing power. By October 1990, consumer prices had increased by 100 percent over the December 1989 level, but with a Dinar still fixed at 7.0 per DM and freely convertible by households, imported consumer goods became increasingly attractive, and the wage increases fueled an import boom. Meanwhile, the enterprise sector, which was facing severe competition from imports and declining profitability on exports, could no longer offset losses on exports with profits from domestic sales or from trading in foreign exchange.

xxix. Credit controls were reinstated in September 1990, followed by devaluations of the dinar in December 1990 and April 1991. However, these devaluations fell well short of compensating for the differential between Yugoslav and international rates of inflation, and thus failed to restore the international competitiveness of the enterprise sector. Finally, to protect domestic producers of consumers goods and a rapidly declining external balance, dinar convertibility by households was drastically curtailed. The immediate challenge facing industrial enterprises, banks and the stabilization program is how to resist the demand for wage increases, while assuring adequate liquidity for viable enterprises, including those that would be viable if the exchange rate was correct. For the enterprises, this is essential if they are to restructure themselves and introduce more efficient, internationally competitive operations while weathering current difficulties,

including the overvalued dinar and the ongoing recession resulting from the stabilization program.

Further Recommendations for Industrial Restructuring

xxx. Creation of an enabling environment. There is an urgent need to improve the efficiency of the Yugoslav industry and to reduce the huge losses generated by the socially-owned enterprises. Creating an enabling environment of macroeconomic stability through strict monetary policy to contain inflation should remain the Government's top priority. Banking sector reform, currently underway, and the diversification of the financial sector with the establishment of non-banking institutions and a securities market will increase the range of choices available to enterprises for meeting their specific financing needs. Ownership reform clearly represents the most essential aspect of enterprise reform to improve accountability and governance. In this regard, only privatization of large socially-owned enterprises offers immediate prospects for bringing in new financing and more dynamic management. The other essential areas of reform, linked closely to industrial restructuring, include taxation, market structure, trade, labor law, the social safety net, and SME development. The enabling environment must include a strong institutional framework for industrial restructuring.

xxxi. Enterprise and ownership reforms. The limited resources available to the RAs will severely limit the number of enterprises that can be dealt with in the near future. Also the law failed to vest with enterprises the ownership of the land that they occupied, thereby greatly compromising overall ownership rights and the ability of enterprises to offer appropriate security to lenders. Therefore, there remain a number of legislative tasks to be performed, including: (i) constitutional amendments necessary to abolish self management and require all enterprises to be transformed into joint stock companies with supervisory boards; (ii) amendments to the Law on Enterprises to define a corporate structure fully consistent with market economies; (iii) a clear definition of the ownership of the land occupied by enterprises; (iv) development of adequate institutional capacities for the agencies responsible for enterprise restructuring and privatization, including valuation of assets; and (v) development of a privatization strategy.

xxxii. Trade liberalization and competition. Price liberalization should be associated with, first, a proper legal and administrative framework of anti-trust policy, which is to be provided under the new Law on Internal Trade, second, effective mechanisms, including bankruptcy, for the exit of enterprises and third, the continued elimination of quantitative import restrictions. These measures, if administered properly, are expected to stimulate new entry, cause uncompetitive enterprises to leave the market and thereby enhance market competition. Continued price and import liberalization will foster market competition while the elimination of foreign exchange controls will lead to a more efficient allocation of resources in the enterprise sector.

xxxiii. Still, anecdotal evidence indicates that domestic prices remain above export prices, sustaining one of the primary sources of anti-export bias in the marketing decisions of domestic producers. While this reflects, to some extent, a market segregation for differentiated products as well as the continued existence of barriers to import in the form of tariffs and duties, remaining quantitative restrictions and inefficiencies in the distribution of imports, the recent inflation of domestic prices under a fixed exchange rate, also helped contribute to the price differential.

xxxiv. In addition to the factors cited above, there is evidence that the price differential between domestically sold products and exported products is further widened by the incentive firms have to export at any cost. Unlike the previous regime where exporting at any cost was necessary to obtain foreign exchange, firms now cite difficulties in receiving payment from domestic sales and as the result of cash flow difficulties are induced to export in order to meet their wage bill and other current expenses. The low export prices result from the need to offer price discounts in order to offset other non-price factors which place Yugoslav products at a disadvantage, such as inadequate marketing, poor performance in meeting delivery dates and providing after-sales service and certain quality image problems. Thus, as some degree of exporting may not be efficient or even profitable at the margin under the current conditions, there is a need to develop high-quality products, export marketing capabilities and support services for exporting activities so that Yugoslav firms can effectively compete in export markets on the basis of both price and non-price factors.

xxxv. On foreign trade policy, the accelerated removal of all quantitative restrictions on imports and a continuing review of the tariff regime will help ensure that domestic products do not remain insulated from external competition. At the same time, the introduction of appropriate incentives to promote exports, including support services and a flexible exchange rate policy, will assist Yugoslav products to compete on an equal footing with foreign products and will provide strong incentives for enterprises to initiate restructuring efforts necessary to compete in world markets.

xxxvi. Direct foreign investment. Although the new foreign investment law and the new enterprise law offer a liberalized legal framework for direct foreign investment, most foreign investors are reluctant to make a large commitment and are proceeding cautiously, in part due to the current uncertainty in the economic and political environment. While sustaining the recent positive trend in small scale investments, continued policy reforms (e.g. ownership, taxation, exchange rate policy) are needed to induce large scale foreign investment in the industry sector.

xxxvii. Exit mechanisms. The Financial Operations Act of 1989 provides specific guidelines for enterprises to declare themselves insolvent. However, since the creditors and not the Government are responsible for achieving a settlement, there is evidence that in some cases banks and creditors have converted their loans into controlling equity positions and enterprises have continued to operate without addressing the fundamental reasons for their

financial difficulties. The data on liquidations shows that the heaviest concentration of liquidations were in Serbia and the southern Republics. Also. recent liquidations covered only smaller enterprises, thus suggesting that the larger firms are able to avoid liquidation. The Federal Government needs to undertake further work in order to develop a workable system of mortagages and securities equivalent to those of advanced market economies.

xxxviii. Labor law and the social safety net. Enterprises not only have been prevented by law from discharging surplus labor, but also have often been required by law to hire additional labor on a regular basis. To facilitate reduction of surplus labor, the Labor Law should be amended so as to reduce the cost for laying-off workers; institutional arrangements and financial resources should be provided to establish a system of protection for adversely affected workers; rigidities in the labor market should be removed; and proactive measures for job creation, such as the development of small and medium enterprises, should be implemented.

xxxix. Holding Action (Crisis management). Many potentially viable enterprises are currently in a crisis situation due to losses and illiquidity. This is due to a number of factors including: slumping domestic demand for consumer goods and particularly capital goods as a result of the stabilization program; loss of sales to collapsing CMEA markets; and losses due to price controls. Unless appropriate emergency restructuring measures are taken by the enterprises themselves, their banks (or the new Agency for Bank Rehabilitation), and the restructuring agencies many of these enterprises may be forced to close. In some cases, the only avenue to restore enterprise creditworthiness would be through capital contributions and the Government may be the only potential source of such funding. However, in order to avoid bail-outs of enterprises by banks and Government and compromise the financial sector reform as well as the stabilization program, financial assistance to these enterprises, either in the form of debt relief or Government contributions, should be given only after certain preconditions are met, including: (a) the preparation, by the enterprise, of a restructuring plan demonstrating long term viability; (b) the shedding, by the enterprise, of surplus labor; (c) ownership reform, including privatization; and (d) the implementation of relevant price reforms by Government.

xl. Defensive restructuring. The two main elements of defensive restructuring are: (a) the whole or partial closure of loss-making enterprises (LMEs) which have no visible prospect of becoming viable; and (b) the shedding of surplus labor in the remaining viable or potentially viable enterprises. It is critical for the enterprises to expedite the preparation of immediate short-term measures to reduce the losses of chronically loss-making units, including the liquidation of non-viable activities, and set the stage for medium-term restructuring. To this end, the Federal Government, assisted by foreign consultants, is preparing loss reduction programs for the largest 20 LMEs. Studies will also be launched to diagnose the cause of losses in another 40 large LMEs. As a next step Government needs to implement quickly and carefully monitor the implementation of the recommended loss reduction programs.

xli. Positive restructuring. Each socially-owned enterprise should be urged to initiate immediate actions to reduce costs, followed by a diagnosis of the entire enterprise management and operations and the development of a comprehensive restructuring program based on the diagnosis. Potentially viable enterprises need to undergo "positive restructuring", aimed at rationalizing product-mix and production facilities, improve technology, reduce operating costs, and improve product quality and overall export competitiveness. The Federal Government is preparing a demonstration project for enterprise restructuring in the industrial sector with World Bank assistance. However, for the effort to be successful substantial progress must be achieved in creating the enabling environment and the liquidity gridlock, currently affecting all enterprises, must be dealt with.

YUGOSLAVIA: INDUSTRIAL RESTRUCTURING STUDY

INTRODUCTION

Background

1. After experiencing rapid and diversified growth in the previous two decades, the performance of the industrial sector in Yugoslavia deteriorated in the 1980s. Overall growth of industrial value-added fell from 7% per annum in the 1970s to less than 3% per annum in the 1980s. Growth of exports to convertible currency markets has been unstable, with rapid growth in 1980s brought about less by increased international competitiveness than by the need to export to obtain access to scarce foreign exchange. Productivity gains have been minimal or negative: increases in capital and labor productivity are declining and the contribution of total factor productivity (TFP) growth in overall output growth is shrinking. Financial discipline has been lacking. An increasing number of enterprises has been suffering losses, which were covered by various subsidies and transfers, and the increasing size of losses and number of loss-making enterprises (LMEs) have had serious macroeconomic implications. As the decade progressed, there was increased recognition within the country of drawbacks in the system of workers' self-management of enterprises and its role, along with the policy and political environment, as a major factor contributing to the deteriorated performance.

2. Recognizing an urgent need for enterprise restructuring in the industrial sector, the Yugoslav Government has taken initiatives to introduce reform measures toward clearly defined ownership of enterprises, equal treatment of all type of economic entities, increased scope for private sector development and facilitation of enterprise restructuring efforts through Restructuring Agencies and Development Funds. The Government is also preparing a quick action program to reduce drastically financial losses of large LMEs. In response to this new political direction, which is being underpinned by economic policies that open the economy to greater competition, management of many enterprises have also initiated their own restructuring efforts designed to ensure survival and adjustment to the new economic environment.

3. Export development, rehabilitation of enterprises and promotion of small scale industries have been the principal objectives of the Government strategy for the industrial sector in the past. Seven Bank lines of credit were extended in support of industrial development through 1983, and they have helped finance small and medium scale manufacturing projects in less-developed regions of the country. In addition, a line of credit in support of energy conservation in industrial enterprises was approved in 1987.

4. A possible Bank assistance program for the Yugoslav industrial sector would cover two aspects of industrial restructuring: elimination of economically non-viable operations (defensive restructuring) and development of potentially viable operations (positive restructuring). Proposed Bank operations in the industrial sector in the next few years include: an Industrial Restructuring Project, which would focus on comprehensive restructuring of selected enterprises; a small and medium enterprise development project; and a technology development project.

5. Various tasks have already been carried out to address the critical issues of the industrial sector in Yugoslavia. The issue of enterprise losses has been discussed from the macroeconomic viewpoint, i.e. the linkage with the losses of the financial sector and the country as a whole, under the Financial Sector Review and the Bank dialogue with the Yugoslav counterparts in the context of SAL II and FSAL. In the context of defensive restructuring of loss-making enterprises, a study of the steel industry is currently being undertaken by the Federation of Steel Producing Industries. A Bank study completed recently attempted to assess the performance and efficiency of the industrial sector by estimating long-term trends in TFP of subsectors and regions[1/]. The study also analyzed institutional factors, focusing on the enterprise management system, contributing to the poor performance of the sector.

6. One result of discussions carried out in October 1989 between the World Bank and the Yugoslav Government was an acknowledgement that the policy dialogue in the context of adjustment loans should be complemented by a study of the performance of selected industrial enterprises and the constraints on their efficiency and competitiveness, with the aim of developing an appropriate framework for restructuring individual enterprises and examining the adequacy of the policy and institutional environment from the viewpoint of industrial enterprises. It was therefore agreed that the Bank should carry out an Industrial Restructuring Study to achieve this objective as the analytical basis for future Bank operations in industrial restructuring.

Objectives

7. The main objective of the Industrial Enterprise Restructuring Study is to address how Yugoslav industrial enterprises can enhance their competitiveness and efficiency in response to a changing business environment. This was accomplished primarily through focused reviews of selected enterprise cases (a bottom-up approach). In particular, the Study: (i) assesses the performance and structure of the industrial sector; (ii) discusses the key policy and institutional level issues affecting the performance of industrial enterprises; (iii) provides an overview of enterprise level issues; and (iii) recommends actions to the Government (federal and republic levels), the Chamber of Economy as well as the enterprises for establishing a framework and strategy for successful enterprise restructuring. The Study also identifies major policy actions to be achieved in the context of Bank adjustment lending and presents an analytical basis for future Bank operations in the industrial sector.

1/ V. Konovalov, Yugoslav Industry: Structure, Performance and Conduct, mimeo, Nov. 1989. (Annex 6 of this Report)

Methodology

8. The Study started from an overview of the sectoral structure and performance by using statistical data. This work also drew on the studies in which the Bank has been involved, e.g., the Konovalov's report (Annex 6), a textile industry study. A Bank mission visited Yugoslavia from March 19 to April 6, 1990 to discuss the factors affecting the performance of industrial enterprises at the enterprise level and the policy and institutional level. The Yugoslav counterparts were coordinated by the Federal Secretariat for Energy and Industry. The mission met a team of experts of federal and republic agencies, representatives of the Yugoslav Chamber of Economy and researchers of the Economic Institutes of Belgrade and Zagreb. The mission also visited 31 industrial firms carrying out a one to three day review per firm.

9. The enterprise sample included fourteen engineering industry firms, six chemical industry firms, four wood-based industry firms, six light industry firms and textiles and one agro-industry firm (See Annex 4 for the list of sample enterprises). In terms of type of ownership, these sample firms included seventeen socially-owned enterprises (former Work Organizations), eleven socially-owned enterprise systems (former Composite Organizations) and two mixed enterprises which are owned partially by private persons. Prior to the visits, a questionnaire was distributed to 48 enterprises within the five subsectors, including most of the visited enterprises. Responses to the questionnaire formed the basis of reviews of sample enterprises and analysis of the constraints on the improved performance of industrial enterprises. Financial data of the sample enterprises were prepared primarily by SDK, the Social Accounting Service of Yugoslavia and supplemented by the enterprises themselves during the mission's visit.

Structure of the Report

10. Chapter I begins with an overview of the structure and performance of the industrial sector. Special attention is given to recent changes, aggravated financial performance and factors contributing to the low or negative profitability of industrial enterprises. Sector-wide issues which need to be addressed at the policy and institutional level are discussed in Chapter II. Chapter III aims to identify the constraints at the individual enterprise level on the improved performance. Finally, a desired framework of enterprise restructuring is presented in Chapter IV with a set of recommendations to the Government, Chambers of Economy and individual enterprises. A complete set of technical notes on enterprises visited by the Bank missions are in the Study file. Four samples in condensed form are attached in Annex 5. Sample terms of reference for a comprehensive restructuring study of an industrial enterprise are in Annex 3.

CHAPTER I INDUSTRIAL STRUCTURE AND PERFORMANCE

A. Overview of the Industrial Sector

1.01 For the last 30 years, industry has been the leading sector of Yugoslavia's economy. Compared to other middle income countries, Yugoslavia was relatively well industrialized by the 1960s; however, industry's share in GSP has continued to increase over the past three decades. Today, its share amounts to approximately 43% of Gross Social Product (GSP), 44% of total employment, 50% of overall investment and 93% of total exports.

(i) Distribution of Industry

1.02 Industrialization has proceeded unevenly in Yugoslavia, although the government has made efforts to stimulate industrial development throughout the country. Tables 1.1 and 1.2 summarize the distribution of industry by republic in 1988, the latest year for which figures are available; since then there can have been only minor changes in the values. Croatia and Serbia each account for about one-quarter of overall industrial social product; if the shares for Kosovo and Vojvodina are added to that of Serbia to form what this report refers to as "Greater Serbia", the latter accounts for approximately 36% of industrial production. Slovenia accounts for almost 20% and Bosnia-Hercegovina for a further 14%, while Macedonia and Monte Negro together account for less than 8%. However, as Table 1.2 shows, in all republics industry accounts for a substantial and remarkably similar proportion of overall social product. The wide range of shares for each republic in overall industry reflects largely the wide range in the size of GSP in the republics.

1.03 Individual sub-sector shares vary widely, as might be expected, for location-specific activities; thus, almost all iron ore production is found in Bosnia-Hercegovina, shipbuilding is concentrated in Croatia, and Croatia and Vojvodina account for all crude oil and gas production. However, for non-location-specific activities, typical of manufacturing, virtually all branches are represented in each republic and each republic has a fairly similar structure of production, when measured at the level of disaggregation available. As Table 1.1 shows, Croatia has 23% of manufacturing production on average and somewhat similar shares in each branch. The situation is essentially similar in the other republics. To some degree, this reflects the tendency towards republican-level autarchy and a considerable degree of success for government's attempts to create industrial activities in all branches in each republic. Interviews with enterprises have shown that this tendency towards autarchy has been offset, to some extent, by specialization of production and segmentation of markets.

Table 1.1

Republican Shares of Gross Social Product
By Sectors and Branches
1988
(as a percentage of SFRJ = 100)

	Bosnia-Herz.	Monte-negro	Croatia	Mace-donia	Slo-venia	Greater Serbia	Serbia	Kosovo	Vojvodina
TOTAL GSP	12.2	1.9	25.6	5.4	19.5	35.4	22.5	2.1	10.8
Social Sector	12.0	1.9	25.9	5.5	20.4	34.2	22.2	1.9	10.2
Private Sector	13.4	1.4	23.0	4.7	11.4	46.3	25.7	4.8	15.7
MANUFACTURING AND MINING	13.3	1.8	21.9	6.1	21.9	34.9	22.6	2.2	10.2
Mining	20.8	5.3	17.7	7.9	14.2	33.9	23.6	5.1	5.2
Electricity	19.5	3.9	18.2	6.2	13.8	38.5	30.7	3.7	4.1
Coal mining	30.3	3.3	1.6	2.6	18.9	43.2	35.1	8.1	0.0
Coal processing	65.3	0.0	32.7	0.0	0.0	2.0	0.0	2.0	0.0
Crude petroleum & gas	0.0	0.0	47.0	0.0	0.0	53.0	0.0	0.0	53.0
Crude petroleum refineries	0.6	0.0	46.9	13.4	10.6	28.4	7.5	0.0	20.8
Iron ore mining	88.2	0.0	0.0	11.8	0.0	0.0	0.0	0.0	0.0
Iron & steel	20.1	5.4	18.6	13.4	18.6	24.0	14.6	8.2	1.2
Non-ferrous ore	17.2	8.8	3.6	13.8	4.4	52.0	42.6	9.4	0.0
Non-ferrous metal	34.0	15.4	11.1	8.2	14.1	17.3	11.4	5.9	0.0
Refining of non-metals	3.7	4.8	21.7	4.7	20.9	44.1	40.0	2.3	1.3
Extraction of non-metals	32.7	4.5	11.9	13.0	13.0	25.3	19.3	3.3	3.0
Manufacturing	11.6	0.9	22.9	5.7	23.7	35.2	22.3	1.5	11.4
Manufact. of non-metals	5.1	3.6	21.2	7.6	26.9	35.5	25.1	1.1	9.4
Manufact. of metal products	16.5	0.6	19.8	3.2	21.7	38.2	27.6	1.0	9.5
Manufact. of Machinery	10.2	1.7	25.6	2.5	24.2	35.8	27.8	0.2	7.8
Transport Equipment	15.5	0.1	10.0	5.2	23.3	46.0	37.8	1.7	6.4
Shipbuilding	0.0	2.6	73.2	0.0	0.9	23.3	13.2	0.0	10.1
Electrical machinery	9.3	0.4	19.3	3.8	36.7	30.5	24.5	2.1	3.9
Manufact. of Chemicals	10.2	0.3	29.1	6.7	16.7	37.1	16.4	1.3	19.4
Processing of Chemicals	8.7	0.4	26.0	3.7	32.7	28.4	19.4	0.7	8.2
Stone quarrying & sand	22.2	1.9	33.4	11.3	7.7	23.5	20.9	1.0	1.9
Building materials	10.0	0.6	26.9	9.0	18.1	35.5	17.2	3.2	15.1
Sawmills & wood boards	33.4	4.6	24.2	1.2	23.5	13.0	9.7	0.4	2.9
Furniture & Fixtures	20.5	1.2	24.4	3.3	31.3	19.2	12.1	1.2	6.0
Paper & paper products	19.2	0.5	20.8	2.1	32.3	25.1	15.2	0.6	9.2
Textile yarns & fabrics	9.1	1.3	22.0	15.1	23.7	29.0	19.8	2.9	6.3
Finished textile products	13.1	0.5	21.0	9.7	20.8	34.9	21.9	1.4	11.6
Leather & fur	7.8	1.6	14.0	13.1	40.8	22.8	12.4	1.1	9.3
Leather footwear & goods	15.1	1.8	26.4	6.7	17.1	31.9	18.6	1.9	11.5
Manufact. of rubber	2.7	0.7	11.9	0.9	27.9	55.8	42.0	2.8	11.0
Manufact. of food products	6.8	0.8	24.8	4.2	14.1	49.3	18.4	1.4	29.5
Manufact. of beverages	6.9	2.0	24.7	7.0	18.9	40.6	22.6	4.1	13.8
Manufact. of animal feed	13.1	0.0	28.8	1.8	23.7	58.8	25.9	1.1	31.4
Tobacco	13.0	0.6	24.1	40.0	5.7	16.5	13.0	1.4	2.1
Printing	8.1	1.1	24.8	4.0	24.1	38.2	25.2	2.3	10.8
Recycling	11.1	0.5	20.7	5.9	17.6	43.8	32.0	1.9	10.1
Miscellaneous products	5.3	0.0	10.5	1.7	61.2	21.3	9.7	1.1	10.5

Source: Statistical Yearbook of Yugoslavia, 1990

Table 1.2

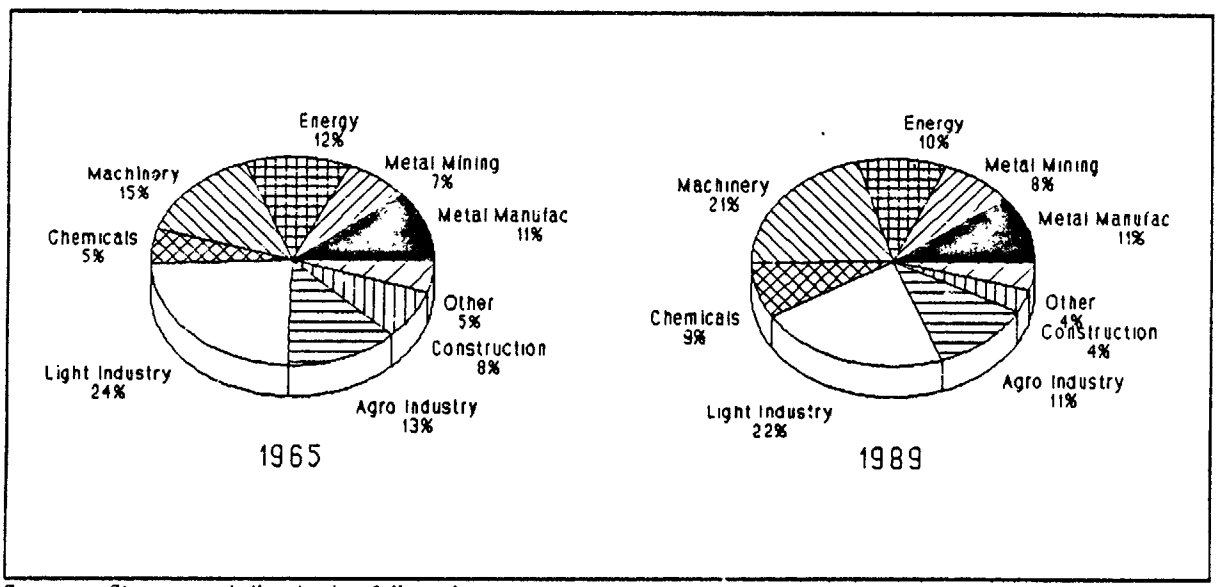
Industrial Structure of Individual Republics
By Sectors and Branches
1988
(in %)

	TOTAL SFRJ	Bosnia-Herce.	Monte-Negro	Croatia	Mace-donia	Slo-venia	Greater Serbia	Serbia	Kosovo	Vojvodina
TOTAL GSP	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Social Sector (as % of total)	90.3	89.4	93.0	91.3	91.6	94.4	87.3	88.9	78.2	85.9
Private Sector (")	9.7	10.6	7.0	8.7	8.4	5.6	12.7	11.1	21.9	14.1
MANUFACTURING AND MINING (as % of total GSP)	49.2	53.9	46.4	42.1	55.9	55.2	48.5	49.4	49.5	46.5
		(as	percent	of	industrial			GSP)		
Mining	19.0	29.7	57.3	15.3	24.7	12.4	18.4	19.9	45.1	9.7
Electricity	5.9	8.7	12.9	4.9	6.0	3.7	6.5	8.1	10.2	2.4
Coal mining	2.3	5.3	4.4	0.2	1.0	2.0	2.9	3.6	8.8	0.0
Coal processing	0.2	1.0	0.0	0.3	0.0	0.0	0.0	0.0	0.2	0.0
Crude petroleum & gas	0.8	0.0	0.0	1.7	0.0	0.0	1.2	0.0	0.0	4.1
Crude petroleum refineries	1.2	0.1	0.0	2.6	2.6	0.6	1.0	0.4	0.0	2.5
Iron ore mining	0.1	0.9	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
Iron & steel	3.5	5.3	10.6	3.0	7.7	3.0	2.4	2.3	13.3	0.4
Non-ferrous ore	1.0	1.3	5.1	0.2	2.3	0.2	1.5	1.9	4.4	0.0
Non-ferrous metal	2.3	5.9	20.1	1.2	3.1	1.5	1.1	1.2	6.3	0.0
Refining of non-metals	1.2	0.3	3.2	1.2	0.9	1.1	1.5	2.1	1.3	0.2
Extraction of non-metals	0.4	0.9	0.9	0.2	0.8	0.2	0.3	0.3	0.6	0.1
Manufacturing	81.0	70.3	42.7	84.7	75.3	87.6	81.6	80.1	54.9	90.3
Manufact. of non-metals	1.8	0.7	3.6	1.7	2.2	2.2	1.8	2.0	0.9	1.6
Manufact. of metal products	7.9	9.8	2.5	7.2	4.2	7.9	8.7	9.7	3.8	7.4
Manufact. of Machinery	6.5	5.0	6.0	7.6	2.6	7.1	6.6	8.0	0.7	4.9
Transport Equipment	5.5	6.4	0.2	2.5	4.7	5.8	7.2	9.2	4.4	3.4
Shipbuilding	1.3	0.0	1.9	4.5	0.0	0.1	0.9	0.8	0.0	1.3
Electrical machinery	8.2	5.7	2.0	7.2	5.0	13.7	7.1	8.9	8.1	3.1
Manufact. of Chemicals	4.1	3.1	0.7	5.5	4.5	3.1	4.4	3.0	2.5	7.3
Processing of Chemicals	5.0	3.2	1.2	5.9	3.0	7.4	4.0	4.3	1.7	4.0
Stone quarrying & sand pits	0.4	0.7	0.5	0.6	0.8	0.1	0.3	0.4	0.2	0.1
Building materials	1.7	1.3	0.5	2.1	2.6	1.4	1.8	1.3	2.6	2.6
Sawmills & wood boards	1.4	3.6	3.7	1.6	0.3	1.5	0.5	0.6	0.3	0.4
Furniture & Fixtures	4.0	6.1	2.7	4.4	2.1	5.7	2.2	2.1	2.2	2.3
Paper & paper products	2.5	3.6	0.7	2.4	0.9	3.7	1.3	1.7	0.7	2.3
Textile yarns & fabrics	4.2	2.8	3.1	4.2	10.3	4.5	3.5	3.7	5.6	2.5
Finished textile products	6.9	6.8	2.0	6.6	10.9	6.5	6.9	6.7	4.4	7.3
Leather & fur	0.9	0.5	0.8	0.5	1.8	1.6	0.6	0.5	0.4	0.8
Leather footwear & goods	2.5	3.0	2.5	3.0	2.3	1.9	2.3	2.1	2.2	2.3
Manufact. of rubber	1.3	0.3	0.5	0.7	0.2	1.7	2.1	2.5	1.8	1.4
Manufact. of food products	9.5	4.8	4.2	10.7	6.5	6.1	13.3	7.7	6.0	27.3
Manufact. of beverages	1.8	0.9	2.0	2.0	2.0	1.5	2.1	1.8	3.4	2.4
Manufact. of animal feed	0.4	-0.4	0.0	0.5	0.1	0.4	0.6	0.4	0.2	1.2
Tobacco	1.0	0.9	0.3	1.1	6.3	0.2	0.5	0.6	0.6	0.2
Printing	1.3	0.8	0.8	1.4	0.8	1.4	1.4	1.4	1.3	1.3
Recycling	0.6	0.5	0.2	0.5	0.6	0.5	0.7	0.8	0.5	0.6
Miscellaneous products	0.5	0.2	0.0	0.2	0.1	1.4	0.3	0.2	0.3	0.5

Source: Statistical Yearbook of Yugoslavia, 1990

1.04 Approximately 80% of industrial value added originates from processing industries, and the remainder derives from energy and metallic and mineral raw materials 2/. Although quite diversified, industry is dominated by a few large sub-sectors: the largest four sub-sectors, engineering (including machinery, shipbuilding and metal products), chemicals, textiles and agro-industry account for about 60% of total industry (Table 1.3). Although a slight tendency over time towards sub-sectoral specialization can be detected, the distribution of value-added remains strikingly similar to that of 20 years ago (Figure 1). There have been slight changes in industrial structure, most clearly increased shares in electronics and chemicals at the expense of slightly decreased shares in light industry, agro-industry and building materials. It should be noted, however, that most of the shift took place in the 1970s.

Figure 1
Distribution of GSP by Industrial Sub-Sector



Source: Statistical Yearbook of Yugoslavia, various issues.

2/ The Yugoslav definition of industry has 32 sub-sectors which are categorized into two groups, i.e. mining and manufacturing. The mining category includes oil refining, manufacturing of iron and steel as well as power and mining of natural resources.

Table 1.3

Shares of GSP, by Industrial Sector, 1965-89
(% of total industry)

	1965	1975	1980	1985	1987	1989
(Industry's Share of GSP)	34.2	37.0	39.1	43.1	44.1	43.1
MINING	21.1	20.0	19.1	19.9	19.7	18.9
Energy	12.1	11.6	11.9	12.3	12.6	10.2
Metals	7.4	7.1	6.0	6.4	6.0	8.3
Non-Metals	1.6	1.3	1.1	1.2	1.1	0.4
MANUFACTURING	78.9	80.0	80.9	80.1	80.3	81.1
Metal and Non-Metallic Minerals	11.0	10.9	11.2	10.8	10.4	10.6
Non-metallic Minerals	1.8	2.0	1.9	2.5	2.4	2.0
Metallic Products (MM)	9.2	8.9	9.2	8.3	7.9	8.6
Shipbuilding	1.2	1.7	1.0	1.3	1.4	1.0
Machinery and Equipment	14.7	16.5	17.9	18.6	18.7	21.0
Manuf. of Machinery (MB)	5.3	5.6	6.4	6.7	6.5	7.1
Transport equipment (TE)	4.9	5.3	5.7	5.4	5.7	5.3
Electrical machinery (EM)	4.5	5.5	5.9	6.4	6.5	8.6
Chemicals	5.3	8.0	9.3	10.0	10.3	8.7
Basic chemicals (CM)	3.1	3.4	3.8	4.5	4.7	3.9
Processing of chemicals (CP)	2.2	4.6	5.6	5.6	5.6	4.8
Light Industries	24.0	22.7	21.5	21.2	21.4	21.9
Furniture & fixtures (FUR)	4.7	4.5	4.4	3.8	3.7	3.6
Paper & paper products	1.6	1.8	1.8	1.8	1.8	2.4
Textile yarns & fabrics (TEX)	7.2	5.0	4.5	4.3	4.3	3.8
Finished textile products (GAR)	5.9	7.2	6.7	6.9	7.5	7.0
Leather & fur	1.0	0.8	0.7	0.7	0.6	0.9
Leather footwear & goods	2.4	2.2	1.9	2.2	2.2	2.7
Manuf. of rubber goods	1.1	1.3	1.5	1.4	1.3	1.5
Agro-industry	12.9	11.3	11.2	10.6	10.6	11.3
Food Products (FP)						
Building Materials	7.6	7.2	7.0	6.0	5.8	3.7
Stone quarrying & sand pits	1.0	1.1	1.2	1.0	1.0	0.5
Manuf. of building materials	3.5	3.8	3.7	3.0	3.0	1.6
Sawmills and wood boards	3.2	2.3	2.1	1.9	1.8	1.6
Other	2.1	2.1	2.0	1.9	2.0	2.6
Printing	1.7	1.5	1.5	1.4	1.4	1.5
Miscellaneous products	0.4	0.6	0.6	0.6	0.6	1.1

Source: Federal Bureau of Statistics

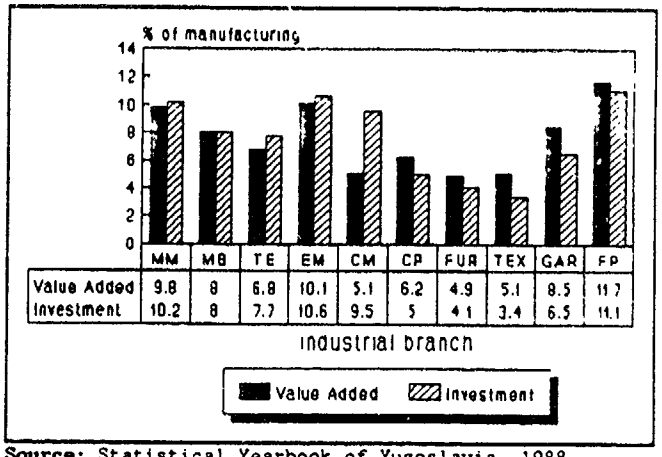
(ii) Industrial Investment

1.05 A large part of industrial investment has been absorbed by a few large industries, including the leading sub-sectors (Figure 2). In addition to the power sub-sector, which has absorbed about 20% of the total, three sub-sectors, metal products, chemicals and machinery, have accounted for at least 10% each. Light industry and agro-industry have also accounted for significant shares of investment. In general, investment allocations were slow in responding to changes in output of each sub-sector. While some incremental investment flowed to growing industries, such as electrical machinery (including electronics) and garment sub-sectors, shares have remained relatively constant. The sub-sectors receiving large allocations of investment did not contribute proportionately to growth of GDP (Figure 2).

(iii) Export Orientation

Figure 2

Value Added and Investment Shares: Principal Manufacturing Sub-sectors 1988



Source: Statistical Yearbook of Yugoslavia, 1988
Note: Acronyms for branches are shown in Table 3.

1.06 The Yugoslav industrial sector had a strong domestic market orientation in the 1970s, but became more export-oriented during the 1980s, partly due to the Government's export promotion policy and partly due to the foreign exchange allocation system introduced in the 1983 stabilization program, which provided a strong incentive for firms to export in order to secure foreign exchange for imports. In 1987, export sales were about 16% of total manufacturing production, and most branches of the engineering, chemical sub-sectors and wood-processing and footwear industries reflect a higher-than-average export orientation. The commodity structure of Yugoslavia's manufactured exports has been one of the most diversified in the world -- both in terms of number of products exported as well as through inter-country comparison of statistical indicators of concentration and specialization.3/ Enterprises' exporting behavior and the diversified nature of the Yugoslavia export structure are, in fact, the natural result of the diversified structure of production and the nature of the typical industrial sector enterprise in Yugoslavia - a large, multi-product conglomerate which has found advantages in combining export and import activities. The export-oriented policy framework of the 1980s and the foreign exchange allocation system, which forced enterprises to export in order to earn the right to import intermediates and raw materials, also contributed to this behavior.

1.07 Most of Yugoslav industry has depended heavily on convertible currency (CC) markets, particularly Western Europe; in 1989, about 78% of total industrial exports were directed to CC markets. However, several branches of the engineering subsector, particularly general machinery and shipbuilding branches, are dependent to a substantial degree on clearing trade (CT) markets, as are basic chemicals, garments and footwear. While CC exports are quite diversified across a wide range of sub-sectors, the engineering subsector supplies about a half of all CT exports. Although Yugoslavia's dependence on CMEA markets has been less than that of the CMEA countries and the country has not faced the problems deriving from use of the transferable

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3/ See Annex Table x.x, taken from a study on export diversification in the Occasional Studies Volume of the 1989 World Economic Outlook, published by the International Monetary Fund.

ruble, the use of clearing dollars still presents challenging problems regarding the management of a non-convertible trade balance and distorted industrial incentives which accompany the dual system of external trade. Interviews with a number of engineering enterprises revealed that they had faced similar problems in their trading links with several developing countries which also had clearing accounts with Yugoslavia and trading arrangements which were managed to some degree through government-to-government channels.

B. Recent Developments in Industry

1.08 During the last three decades the Yugoslav industry has experienced a steady decline in growth of output and productivity. Although in part a natural outcome of increasing industrial maturity, the decline resulted in large part from the combination of distorted relative prices, controlled resources, excessive subsidization and the possibility of perverse enterprise objectives resulting from workers' self-management in the 1970s. This was accompanied by inefficient and misplaced investments, low labor productivity, surplus labor, and poor quality of production which had a significant degree of import dependency. The partial reforms introduced in 1982 did little to slow down this decline.

Table 1.4
Period Growth Rates for GSP and Industry
(average annual real growth)

	1975-83	1984-86	1987-88	1989*	1990*
GSP	3.5	2.0	-1.4	0.8	-7.5
Industry					
Value Added	4.9	3.9	0.1	-0.7	n.a.
Production	5.5	4.0	0.0	0.9	-10.6

* preliminary estimates

Source: Federal Bureau of Statistics

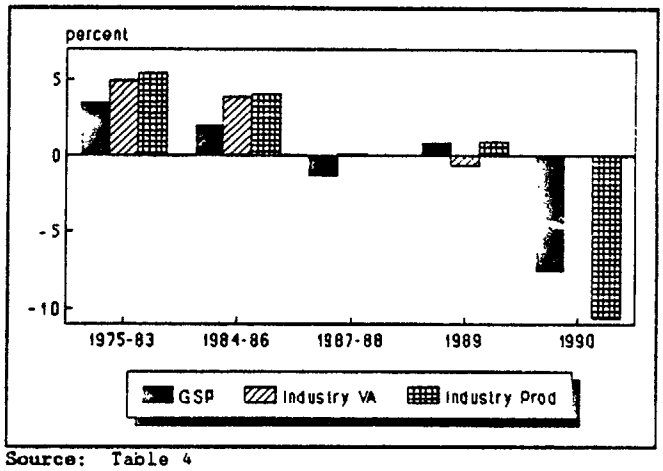
1.09 Stagnation in industry became particularly acute in the early 1980s at the time of the balance of payments crises. Table 1.4 above indicates a slowdown in growth of overall GDP, industrial value added and gross production after 1975. The period growth rates indicate that, following the introduction of the 1983 stabilization program, growth did resume, albeit at a lower rate than achieved during the 1970s (Figure 3). The slight rebound in output growth was short lived, however, as the economy took another downturn in 1987-88, when GSP contracted by 1.4%, as growth in industrial value added and production, which had led GSP growth in the boom years, fell to zero. Industrial gross production expanded by only 0.9% in 1989 and declined precipitously by almost 11% in 1990, and industrial value added fared even less well reflecting increasing costs and falling profits.

1.10 For four years after the 1983 stabilization program, export growth was strong in real terms, surpassing the general sluggish output performance of the industrial sector and thereby resulting in an increase in the share of

production exported. In volume terms, total exports to convertible currency areas grew by 8.3% in 1984, 7.4% in 1985, 6.3% in 1986 and 6.8% in 1987. In 1988, however, export growth was negative and a recovery in 1989 was not very strong. Export growth in 1990 slowed substantially due to continuing appreciation of the dinar in real terms and the scarcity and cost of working capital.

1.11 The increasing difficulties experienced in the 1980s by social sector enterprises, which generated financial losses, were accommodated by the subsidization from the budget and the banks, which sustained excessive aggregate demand throughout the 1980s. The liquidity crisis of the 1982-83, which threw the country into a deep recession, and the liberalization efforts which followed did not succeed in inducing a supply response to cope with the excess demand, but merely transformed the current account deficit into accelerating inflation once the recession eased. In turn, macroeconomic instability and the effect of import restrictions caused large increases in manufacturing costs. The supply shock felt by enterprises in terms of increased costs of money, intermediates and imports was met by increased subsidization in order to prevent widespread bankruptcies. The result was hyper-inflation and the need for a strong demand-oriented stabilization program.

Figure 3
Real Growth of GSP and Industry



Source: Table 4

1.12 The most recent reforms introduced in 1989 address the weaknesses in the Yugoslav economic system on three fronts: reduction of inflation, liberalization of prices and trade, and reform of ownership. The wide ranging reform program includes tight credit policy, further liberalization of trade and price systems, assurance of equal status for enterprises under private or mixed ownership, and privatization of socially owned enterprises. The immediate challenge facing most industrial enterprises, particularly during the current recession, is restructuring of their operations and management and the creation of internal organizations and strategies for accommodating to the new macroeconomic and market situation.

C. Financial Performance

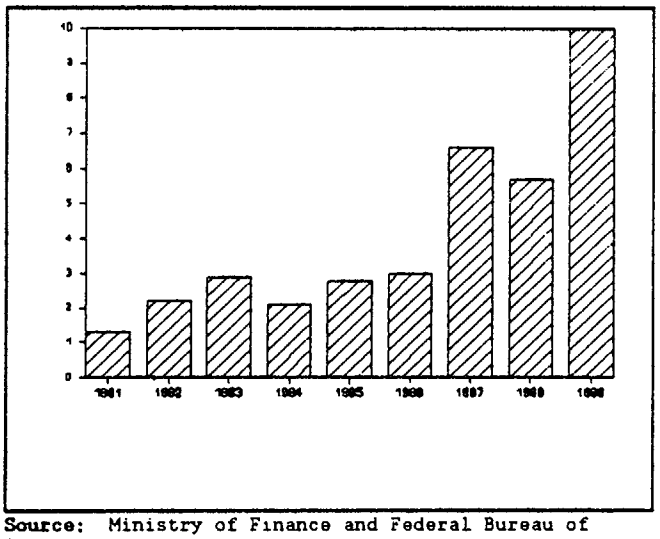
(i) Trends in Financial Performance

1.13 Until 1986, the industrial sector as a whole had been able to turn out some profit, although net profitability of the sector had been declining

since 1983. Since 1987, the whole industrial sector has been making net annual losses. By 1989 the number of loss-making enterprises had grown to approximately 4500, about 15% of total enterprises, and they employed 1.2 million workers, about 20% of the total work force.

1.14 Figure 4 shows the losses for the whole enterprise sector as a share of GSP since 1980; the figure therefore covers more than just the industrial enterprises. In fact, industrial enterprise losses were probably 50% more than the figures given in the figure, because during the 1986-1989 period, the share of losses of industrial enterprises in total enterprise losses is estimated to have remained at about 75% and industry accounts for less than 50% of GSP. Therefore, industrial losses as a share of industrial GSP probably amounted to more than 15% in 1990.

Figure 4
Enterprise Losses as Percent of GSP



Source: Ministry of Finance and Federal Bureau of Statistics

1.15 Because of changes in the accounting system introduced in recent years, statistics on financial performance are not strictly comparable from year to year for the enterprise sector as a whole and for individual enterprises. Therefore, the trend in financial losses has to be interpreted with caution. Furthermore, financial losses, although implying serious consequences, cannot be viewed simply as economic losses or a definitive indication of inefficiency, as many distortionary factors external to enterprises may have contributed to this financial outcome. Nevertheless, two facts remain valid for the industrial sector: first, the financial outcome has not been satisfactory; and second, the situation has been deteriorating.

1.16 The tables in Annex I provide a breakdown, for each of 9 industry sub-sectors, of enterprise profits, losses and employment for 1989 and for Jan-Sept 1990. The overall results are summarized in Table 1.5 on the next page.

Table 1.5

Enterprise Profits and Losses
1989 and Jan. to Sept. 1990

	1989	Jan. to Sept. 1990
Profitable Enterprises		
No. of enterprises	5,543	5,096
No. of employees	1,632,078	1,363,646
Profit (m. dinars)	31,084 1/	5,990
Loss Making Enterprises		
No. of enterprises	2,170	2,435
No. of employees	1,098,265	1,345,290
Loss	117,510 1/	38,011
Total For All Enterprises		
No. of enterprises	7,713	7,531
No. of employees	2,730,343	2,708,936
Loss	86,427 1/	32,021

Source: SDK
1/ converted to May 15, 1990 new Dinars

1.17 For 1989, 5,543 enterprises from a total of 7,713 were profitable, earning a total profit of 31.1 billion dinars. However, the 2,170 loss-making enterprises reported total losses of 117.5 billion dinars. It is notable, and maybe significant, that profitable enterprises had an average workforce of 294 employees, while the loss-making enterprises employed an average of 506 employees. Within profitable enterprises, chemical and paper industries showed the highest profits per worker; within loss-making enterprises, the energy sector showed the largest losses per worker.

1.18 For the period Jan-Sept 1990, the number of profitable firms declined to 5,096, and their total profits fell to only 6 billion dinars. However, a decrease in total losses of loss-making enterprises was also reported, largely because of the decrease of 119 billion dinars in their net financial costs. Nonetheless, in terms of direct operating losses, it can be seen in Table 1.6 below that the actual performance of the loss-making enterprises worsened considerably in the first nine months of 1990 as compared to 1989.

Table 1.6

Financial Performance of the Loss Making Enterprises
1989 and Jan. to Sept. 1990
(million dinars)

	1989 1/	Jan. to Sept. 1990
Sales Revenues		
Domestic sales	280,635	185,123
Export sales	91,258	59,559
Total	371,893	244,682
Direct Operating Costs		
Material/energy/spare parts/small tools	182,170	151,036
Wages and salaries	88,550	69,871
Other	72,902	67,948
Total Direct	343,621	288,855
Contribution Margin	28,272	(44,173)
Depreciation	35,515	30,992
Net Financial Costs	130,273	11,727
Operating Income	(137,516)	(86,892)
Other Income	33,703	54,847
Income Before Taxes and Appropriations	(103,814)	(32,045)
Taxes and Obligatory Contributions Appropriations	2,145	240
Loss for Current Year	(117,510)	(38,011)

Source: SDK
1/ 1989 results expressed in May 15, 1990 new Dinars

1.19 In 1989, with the exception of the metallurgy sub-sector, loss-making enterprises were able to cover direct costs of labor, materials and energy from sales revenues. In 1990, however, the loss-making enterprises in all sub-sectors failed to cover direct costs from sales revenue; in fact, in the energy and metallurgy sub-sectors, the loss-making enterprises were unable even to cover costs of materials and energy and thus had negative value added.

(ii) Distribution of Industrial Enterprise Losses

1.20 Enterprise losses are concentrated mainly in a few capital intensive industries. In 1989, about 50% of enterprise losses were concentrated in four major sub-sectors: electricity, petroleum refinery, electrical machinery and chemicals. Furthermore, losses are concentrated in a limited number of large enterprises, reflecting the dominance of large enterprises in industry. Data for 1989 show that the 100 largest industrial loss-makers accounted for nearly 70% of total industrial losses. The size of enterprise losses in each Republic was more or less proportional to the size of each republican economy, but an inverse relationship existed between the level of economic development and losses as a proportion of national income.

In 1988, losses as a percentage of GSP were the highest (about 9%) in Kosovo followed by Bosnia and Hercegovina, Serbia, Monte Negro and Macedonia (about 7% each). The figures for Croatia and Slovenia were much lower (4.5% and 2.5%, respectively).

1.21 There has been some variation in the performance of different sub-sectors and enterprises, indicative of individual enterprises' ability to attract scarce resources. Enterprises and sub-sectors which have enjoyed some expansion recently may have been better able to cushion the effect of the current crisis. However, there exists the risk that enterprises which were potentially viable but have been discriminated in resource allocation under the old policy regime may fail to survive the adjustment period and go bankrupt because of the ongoing tight monetary policy.

(iii) Financing of Losses

1.22 At the macroeconomic level, financial losses have to be financed from sources other than the loss-making enterprises themselves. The process of resource transfer for the coverage of losses often introduces distortionary incentives, since it is carried out either by taxation or by direct transfers between enterprises; both are essentially compulsory mechanisms that distort the relative price structure and operating outcomes. When financial losses reach exorbitant levels, direct means of resource mobilization may prove to be insufficient for meeting requirements, and credit expansion and recourse to the inflation tax become necessary.4/ To the extent that financial losses reflect economic inefficiency, which is likely to be the case for a large number of enterprises in Yugoslavia, financial losses imply all the negative consequences stemming from economic inefficiency. In particular, persistent financial losses have meant a shift of resources from efficient users to inefficient users, and impose limits on the growth potential of sectors with high productivity.

(iv) Factors contributing to losses

1.23 The phenomenon of large financial losses in the enterprise sector became a major cause of concern to government only after 1986, when financial losses surpassed 3% of GSP. Since then, as indicated in paras 1.16 and 1.17, financial losses and the number of enterprises and workers involved in loss-making activities have continued to increase. Accompanying this is the development of macroeconomic instability and hyperinflation. This implies that, in addition to the fundamental causes which have been embedded in the system for a long period, some specific factors have been contributing to the rapidly increasing financial losses in the late 1980s. Based on information obtained during the Bank mission, some of these factors are:

4/ To understand the mechanism of inflation tax and its role in channelling resources to the enterprise sector, see the World Bank report No. YU-7869 "Yugoslavia--Financial Sector Restructuring: Policies and Priorities".

(a) price control: Price control may have been the major cause of financial losses in sectors such as electricity and petroleum refining. Although Yugoslavia has made great progress in liberalizing its price regime, and has expressed its commitment to adopt economically justifiable pricing policies for infrastructure and utilities, prices in a number of basic sectors have remained subject to government control and have often not been adjusted frequently enough to compensate for inflation. It has been argued that, even if prices for these goods are made "right", total financial losses in the economy would not be reduced, since the "correction" would only shift losses from infrastructure to other sectors. However, economic prices would result in reduced or more efficient use, and thereby in lower aggregate losses.

(b) high interest costs: Financial outcomes in the industrial sector have also been affected by modifications in how financial liabilities of industrial enterprises are charged. Until 1988, interest rates on credits to the enterprise sector were mostly negative in real terms, which diminished the amount of book losses of enterprises. This practice was changed in May 1988, when indexing schemes were introduced for most financial assets, thereby making real interest rates positive. However, commercial banks faced with weak portfolios have tried to recoup their losses by charging high interest rates for good performers, thereby raising financial costs for those enterprises able to pay. This results in a situation where the most profitable, and therefore probably the most viable, enterprises incur a disproportionate financial cost. Since the banks have not necessarily reduced their lending to poor performers, the high financial costs for good performers are not necessarily a temporary phenomenon.

(c) excess capacity: Pressure to invest, driven partly by systemic factors and realized through borrowed money, resulted in considerable over-investment in the past. This inherent tendency to excess capacity has been made more serious by the depressed domestic market, associated with repeated stop-and-go stabilization measures since 1983. These past stabilization efforts, although occasionally successful in temporarily containing expenditures, generally did not succeed in eliciting adjustment of real variables in the industrial sector, such as cutting the labor force, restructuring assets and changing production lines, and often showed their impact only through increased financial losses.

(d) decreased demand : Practically all enterprises have experienced a general slow-down in domestic markets in 1989 and 1990 due to hyper-inflation and changes in macroeconomic policy. The slow-down, and in some cases shrinkage, is noticeable in consumer durables, textiles and footwear, and less so in pharmaceuticals and petroleum products where prices are subject to controls which

keep them below import parity price levels. The slow-down in the production of commercial vehicles was due to reduced government procurement and increased imports of low priced vehicles from other CMEA countries. In 1990, the continuing slowdown in domestic production of consumer goods was attributable, in the first half of the year, to the declining purchasing power of the household sector, and, in the second half of the year, to competition from imported goods, which were readily accessible due to trade liberalization and increasingly attractive due to an overvalued Dinar.

D. Productivity and Competitiveness

1.24 Expansion of the industrial sector over the past few decades has been largely dependent on growth in new investment. The slowdown in growth over the same period has been accompanied by declining capital productivity, and labor productivity expanded only with investment. These relationships between productivity, factor substitution and output growth illustrate and help explain the slowdown in growth between the 1970s and 1980s (Table 1.7). The contribution of technical progress to industrial growth fell dramatically in the 1980s. As Table 1.7 shows, technical progress has not provided a very large share of overall industrial production growth at any stage, but the high growth rates of capital and labor inputs had concealed the fact in earlier times. With the reduction in the growth of investment in the last decade, the growth of output became clearly a function of labor input, and the poor performance of technical progress became clear. A World Bank report which undertook estimations of total factor productivity (TFP) of the major industrial sub-sectors in Yugoslavia indicated that there is a clear declining trend of TFP growth rates in most sub-sectors. 5/

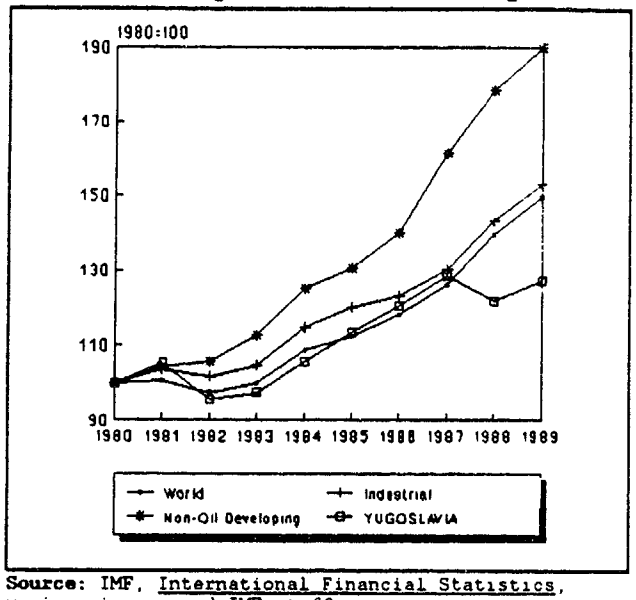
Table 1.7
Factor Contribution to Output Growth

	OUTPUT GROWTH		LABOR GROWTH		CAPITAL GROWTH		TECHNICAL PROGRESS	
	growth rate	share of outpt grth	growth rate	share of outpt grth	growth rate	share of outpt grth	growth rate	share of outpt grth
1955-65	12.04	100.0	0.32	2.7	9.45	78.5	2.27	18.9
1966-79	7.18	100.0	1.36	18.9	4.23	58.9	1.60	22.3
1980-87	2.80	100.0	2.13	76.1	0.53	18.9	0.14	5.0

Source: Table 9 in Konovalov's report. See footnote 1 of p.2

5/ See footnote 1 of p.2.

Figure 5
Real Export Growth
World, Developing Countries and Yugoslavia

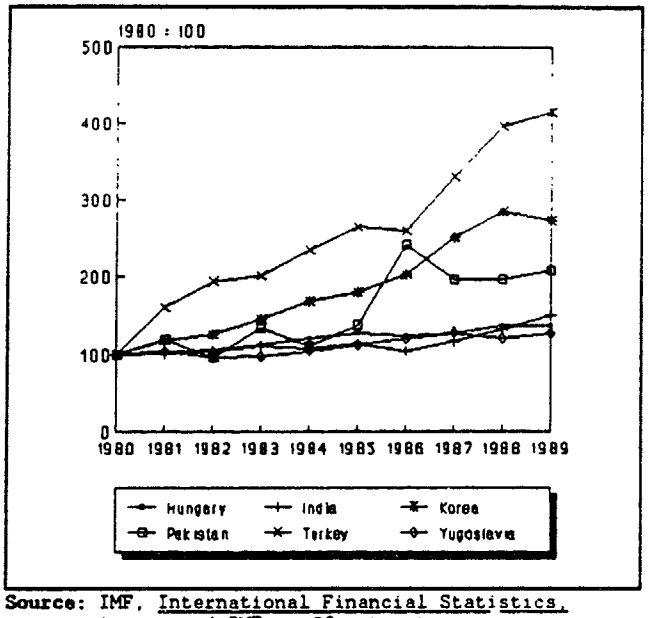


Source: IMF, International Financial Statistics, various issues and IMF staff estimates.

1.25 Trends in export growth have changed considerably in the 1980s. Compared to the 1973-80 period, when exports are estimated to have grown in real terms by 3.1% annually, the annual growth rate averaged only 1.3% in the period 1980-84. Between 1984 and 1987, growth of exports increased to an annual average of 6.5%, in response to the foreign exchange allocation policies adopted by government. Export growth was, however, negative in 1988 and did not recover very strongly in 1989.

1.26 These figures conceal to a considerable degree Yugoslavia's deteriorating international competitiveness. Examination of export markets indicates that Yugoslavia's share of manufactured exports to the world decreased consistently during the 1980s, while the share has been relatively constant in other developing countries. (Figures 5 and 6). In essence, although Yugoslavia's export growth accelerated in the 1980s, growth rates in competing countries increased faster. A major factor behind Yugoslavia's difficulties in increasing market penetration and preserving its market shares has been the strengthening market position of developed countries, Asian NICs and other middle-income developing countries. As discussed in Chapter II in detail, Yugoslav industry is not, by and large, competitive vis-a-vis these competing countries in terms of non-price factors such as product design and quality, delivery schedules and customer support. Many countries competing with Yugoslavia have recognized that improved performance in these areas is vital for moving into higher value added products and establishing a

Figure 6
Real Export Growth of Selected Countries



Source: IMF, International Financial Statistics, various issues and IMF staff estimates.

reputation for superior products. Yugoslav industrial enterprises lack advanced skills in marketing and product development partly due to systemic drawbacks of self-managed enterprises in the non-competitive domestic market. Price competitiveness has also become unsatisfactory for many product categories because of poor productivity, and successful exporting competitors have shown an ability to reduce their costs as well as improving non-price competitiveness.

1.27 Another major reason for relatively poor export market penetration is that individual enterprises have been under extreme pressure to export in order to survive in the short term, and such a situation has forced them to compete through lower prices. Interviews with enterprise managers conducted by the Bank mission indicated that many enterprises had to lower export prices below those of competitors to export, thereby accepting that export under those circumstances is not very profitable. These unprofitable exports tend to be directed to markets that accept lower quality; as a result, Yugoslav products have in general earned and maintained a reputation for being inferior. Under the former trade and payment regime, the pressure to export came from the firms' requirements to record export growth in order to receive an allocation of foreign exchange required for imports. The lack of profitability of exports was offset, to some degree, by direct fiscal export incentives of various types, and through cross-subsidy from profitable domestic sales which enjoyed import protection. This situation exacerbated the multi-product nature of individual firms and contributed to the inefficiency of exporting industries and the entire economy.

CHAPTER II POLICY AND INSTITUTIONAL ISSUES

A. Ownership Reform

(i) Enterprise Organization before the 1989 Reform

2.01 From the early 1970s until the adoption of the Enterprise Law of 1989, industrial enterprises in Yugoslavia were characterized by a high degree of decentralization whereby in a typical industrial plant, each of several vertically or horizontally integrated production units or departments was a separate, financially independent legal entity. Each unit, called a Basic Organization of Associated Labor (BOAL), was a socially-owned, self-managed organization with its own treasury and a Workers' Council as its main decision-making body. At the level of the entire plant, all BOALs were combined into a Work Organization (WO). Finally, several WOs might be grouped together to form a multi-plant, multi-location enterprise called a Composite Organization (CO). This structure had several inherent weaknesses, including: (i) weak and fragmented decision-making by the managements of WOs or COs (Workers' Councils at the level of the BOALs had the power to veto decisions from above); (ii) duplication of administrative and accounting functions; and (iii) cross-subsidization among BOALs and WOs.

2.02 While individual large enterprises were highly fragmented internally, they often dominated their subsectors, achieving near monopoly status in their major markets. These enterprises also indirectly dominated financial markets by founding and owning both commercial banks and internal banks which took deposits from their workers. As the enterprises often owed their dominant position to politically inspired allocations of capital and credit, they were also highly susceptible to political pressure, particularly at the local level, in such areas as job creation, the funding of local expenditures for infrastructure, education and health services and financing the investments or covering the losses of other enterprises in their locale. In such an environment there was little incentive for enterprises to become efficient, commercially oriented and internationally competitive. They were characterized by: (a) a lack of market orientation; (b) a lack of strategic direction, specialization or focus on core business activities; (c) surplus labor, particularly in administrative divisions; and (d) lack of financial discipline.

2.03 The essential characteristics of self-management firms were that workers were ultimately responsible for decision making and any residual income after deducting all non-labor costs was shared among workers. Thus, maximizing income per worker, rather net profit of the enterprise, became the key objective of firms and the main signalling mechanism for the allocation of resources. This may be contrasted to capitalist firms where, in theory, if not always in practice, the potential returns on equity capital govern which business activities expand and which contract. As a result, in self-managed firms there was a bias towards choosing capital intensive as opposed to labor intensive production systems in order to minimize the number of workers sharing residual income. The bias was reinforced as enterprises founded

commercial banks from which they could obtain loans at low and often negative real rates of interest, to finance labor saving investments. Further accommodation was provided by accounting rules which permitted enterprises to understate depreciation charges and hence maximize residual income.

2.04 Precisely what powers were delegated to higher levels of authority was dependent upon a formidable process of bargaining and self-management agreements (SMAs). Complementing the increased fragmentation of firms was the introduction of social compacts (SCs) between enterprises and governments which served as a vehicle for coordination of policy in the areas of planning, prices, income distribution, trade and employment. While not legally binding, these compacts and agreements sought to counteract some of the inherent biases of the self management system while reinforcing the role of political interests in determining enterprise behavior.

2.05 Given the shortcomings of self management, as practiced in Yugoslavia, ownership reform is considered by the federal and republican governments to be a necessary precondition for restoring financial discipline and achieving efficiency in the enterprise sector. In socially-owned enterprises, there is no mechanism for exercising of the owner's interest. Normally this interest governs the behavior of the management group which is given a mandate and is accountable for maximizing the return on capital. Instead, the management of socially owned enterprises pursues a set of goals set by various groups including: the workers, as represented by the Workers' Council, local agencies, communal and political, and management itself. None of these groups are necessarily concerned with the return on capital employed by the enterprise but, rather, are mainly interested in maximizing their own current share of the revenues generated by the enterprise. Until recently, there was no way to sell socially owned assets thus eliminating.the possibility for enterprises to restructure themselves by selling off unprofitable or non-strategic business units. Similarly, there was no way of selling shares as a means of raising funds for financial restructuring or new investment.

2.06 Because in Yugoslavia, workers self-management has existed within a system which lacks well defined property rights over capital, it has been a major cause of inefficiency in investment allocation. The business entity in Yugoslavia is endowed with capital that is owned by society at large. These socially-owned enterprises are entitled to use this capital and supposed to maintain its value. However, actual ownership is not vested in the government or any other legal body, this arrangement provided the rationale for all manner of outside interventions in the operation of firms. As discussed in Chapter IV, though this problem of property rights has not been directly addressed in the recent constitutional amendments, the Law on Social Capital marks an important first step in this direction (para 2.08).

(ii) Recent Enterprise and Ownership Reforms

2.07 The Legal Framework for Ownership Reform It is now widely recognized in Yugoslavia that the lack of definition of the owner of socially-owned enterprises has been the main constraint to improvement of efficiency of the enterprise sector. The clear specification of property rights and active exercise of the ownership interest has become, therefore, the most critical objective of the effort to spur improved efficiency and financial discipline in the operation of enterprises and to encourage private and foreign investment.

2.08 The first critical step in this effort was taken with the adoption of the 1989 Law on Enterprises which significantly expanded possible enterprise ownership patterns and forms of association. The law recognized ownership rights based on capital investment and allowed socially-owned enterprises to transform to mixed-ownership enterprises by attracting private equity capital. It facilitated entry of new enterprises, and direct foreign investment in the enterprise sector. Amendments to this Law were adopted in 1990 and removed the possibility of establishing new socially-owned enterprises. The 1990 Enterprise Law also substantially strengthens the authority of management in socially-owned enterprises and of owners of mixed-ownership enterprises. As of the adoption of the Law, mixed-ownership enterprises are to be governed by owners of the capital invested or their representatives. Representatives of the Social capital may either be workers or external experts appointed by management. A worker's council may or may not be formed to champion worker's rights. With a view to fostering equal business opportunities for all enterprises, the 1990 Enterprise Law also opens business activities thus far reserved for public enterprises to all enterprises. It has been the Government's intention to transform this Enterprise Law, once critical constitutional amendments are adopted, into a companies law equivalent to similar laws in advanced market economies. The Foreign Investment Law, adopted in 1989 has removed major prior restrictions on foreign investment in Yugoslavia and places foreign investors substantially at par with domestic counterparts.

2.09 The next important step was the adoption of the Law on Circulation and Management of Social Capital in December 1989, which provided a mechanism for sale and privatization of socially-owned assets. In July 1990, the Social Capital Law was enacted to amend the 1989 Law. This law provides a framework for the issue and sale of internal or external shares, or the sale of enterprises - in whole or in part - thereby transforming enterprises to joint-stock companies or limited liability companies and substituting self-management. The law allows all enterprises to offer a portion of the social capital (up to six times annual net personal earnings of an enterprise) for sale, on the basis of internal shares, to present and former workers of the enterprise, other domestic persons and the Pension Funds. Present workers are able to purchase internal shares in the enterprise up to three times their net personal earnings. Share prices can be discounted by 30% plus 1% for each year of service for present and former workers, and by 30% for all other purchasers of shares. These internal shares are to be valued on the basis of the book value of social capital of an enterprise, and following the issue of

these shares, the value of the remaining social capital would be decreased by the value of the discounts granted. With the sale of internal shares, the enterprises would be transformed from socially-owned to a mixed ownership enterprises. The internal shares can be bought by installment over a period of at most ten years. Holders of internal shares have voting rights in proportion to the nominal value of the shares, but rights to dividends only in proportion to the paid-in portion of their obligations. The internal shares can be sold on the market only if fully paid for and if their sale is in line with the requirements of the Securities Law (which requires a separate valuation of the enterprise). A period of only one year from the date of adoption of the Law is allowed (i.e. up to July 1991) for enterprises to transform themselves if they so decide through this internal process.

2.10 The Social Capital Law also provides for the alternative of a partial or total sale of an enterprise, with the involvement of a RAP Restructuring and Recapitalization Agency (Agency) and a RAP Development Fund (the Fund). The Law provides that the Agency must designate an authorized organization to value the enterprise. The sale is to be conducted by public bidding, or by other methods with the consent of the Agency. The sale contract is entered into by the Fund, also with the consent of the Agency. The Fund reserves the proceeds from the sale and the social capital remaining after a partial sale, and based on the recommendation of the Agency, it may provide incentives to promote such sales. In particular, it can provide shares in the enterprise or in the Fund to workers who have not benefited from the right of discounts on internal shares. Each RAP can establish, either on its own or in joint-venture with domestic or foreign parties several Agencies and Funds. These organizations would operate as public enterprises. The Law provides that the Agencies must be established within 3 months, and the Funds within six months of the passage of the Law.

2.11 The Federal Government intended that the Enterprise Law and the Social Capital Law provide the strategic and legislative umbrella within which the Republics would develop their own implementing legislation for enterprise restructuring and privatization. It also intended to revise the legislation based on the response from the enterprises and the Republics and a more fully developed privatization strategy. Two Republics (Slovenia and Croatia) have developed draft privatization laws of their own. These draft laws maintain some of the basic tenets of the Social Capital Law, but also propose significant modifications of its provisions. The draft Croatian Privatization Law maintains, for example, the two principal avenues for ownership reform: a predominantly enterprise managed transformation, and external sale of the enterprise or part of the enterprise. The transformation option differs from that set-out by the Social Capital Law with respect to the discounts offered and the possible purchasers of shares (it appears to exclude for example domestic investors with no previous connection to the enterprise), and perhaps more significantly with respect to the nature of stocks or shares issued in such a transformation (ordinary stocks and shares) and with respect to the manner of evaluation of the enterprises (who are to submit to the Agency a valuation of the enterprise based on economic principles carried out either by themselves or by authorized valuation experts). The sale option, like that provided for by the Social Capital Law, provides for the management of the

process by the Agency and the Development Fund of the Republic of Croatia. The Law provides a time limit (up to June 30, 1992) after which the authority to decide on transformation shifts from the enterprises to the Agency. It is also noteworthy in providing that the Agency can take over the management of a socially-owned enterprise, if the economic interests of the Republic of Croatia have been violated (as when the enterprise incurs net annual losses or is insolvent, or when the Republic Government so decides). In its general outlines that draft Privatization Law of Slovenia is similar to the Croatian Law and was prepared earlier (in October 1990). This Law has not yet been approved by the Republican Assembly in part because of issues related to compensation of original owners.

2.12 Further progress on the legal framework for privatization will depend on the adoption of proposed amendments to the Constitution, which are now under consideration by the Federal Assembly. The proposed amendments include a provision which will be a crucial development in the laws relating to property rights; namely, the total elimination of differences among the various forms of ownership rights to property. The amendments are expected to be adopted during 1991.

(iii) Outstanding Issues

2.13 Although recent legislation represents a major step towards ownership reform and opens the way to privatization of socially-owned enterprises, the existing legal and institutional framework still has several serious weaknesses. Specific recommendations to deal with these outstanding issues are discussed in Chapter IV.

B. Liberalization and Competition

(i) Foreign Exchange Allocation

2.14 In the past, allocations of foreign exchange, based on import content and export performance, led to inefficient exports, excessive imports, distorted industrial organizations, and various forms of rent seeking behavior on the part of enterprises. The start up of new businesses was impeded by lack of access to foreign exchange while large inefficient enterprises profited from preferred access to foreign exchange. Further, as regional banks were responsible for the allocation of foreign exchange, foreign exchange circulation became increasingly concentrated in local areas. Potentially efficient enterprises had difficulties in importing some intermediates and many capital goods and were forced to purchase (or, in some cases, barter on the clearing market) low quality, higher priced domestic inputs.

2.15 The introduction of the foreign exchange market and the convertibility of the Dinar in December 1989 eliminated one of the major constraints to the efficient allocation of resources in the enterprise sector. Under the new system, which functioned until the end of 1990, foreign exchange was freely available and unrestricted, thus allowing producers more freedom of

choice between domestic and imported inputs. At the same time, lack of foreign exchange, in itself, no longer impeded the creation of new businesses in the service sectors as well as the goods sector. In addition to this added flexibility in resource allocation, the convertible Dinar complemented the elimination of protective quotas thus increasing import competition and allowing more sophisticated trading activities. The convertibility of the Dinar must be restored if Yugoslavia is to attract direct foreign investment. However, due to recent wage inflation, the sustainability of the foreign exchange market and the liberalized trade regime are now threatened by an overvalued Dinar which has led to a boom in the import of consumer goods, financial distress on the part of local producers of such goods and loss of competitiveness by exporters.

2.16 The former system of import restrictions was designed, in theory, to permit foreign exchange allocations to be manipulated in such a way as to ensure balance of payments stability. Explicit quantitative restrictions were imposed to certain products under so-called category K (imported items that can potentially compete against local production) in order to protect domestic producers. In practice, the regime never really operated as planned and only served to exacerbate production distortions and sustain a monopolistic or oligopolistic market structure. The Konovalov study [6/] indicated that the subsectors with the highest degree of quota protection have suffered declining total factor productivity (TFP) and the enterprises in these subsectors are often loss makers. One exception is the garment industry; although in 1988 87% of its output was protected by quotas, its TFP has not declined largely because of its increasing reliance on commission exports.

(ii) Import Liberalization

2.17 Since 1987 the government has gradually opened up the trade regime in order to improve the efficiency and structure of domestic production and reduce inflationary pressures. As an integral part of the 1989 economic reform, the Government started the implementation of a major import liberalization program in January, 1990 aimed at promoting quickly market competition. Prior to liberalization, around 50% of all imports were covered by quotas. By February 1990, less than 12% of all imports from non-CMEA (or convertible currency) markets were covered by the quotas. Production coverage by K category which at the end of 1988 was 36% will decline to 18% by July, 1991. While the impact of import liberalization may not yet be apparent, given that many basic reforms are still at various stages of discussion, the elimination of quotas will complement the larger package of enterprise reforms while helping to enforce fiscal discipline. This should lead to greater efficiency as enterprises respond to world price signals and promote competition in the domestic market. Although the competitive pressure of import liberalization on enterprise operations is still marginal, the Bank mission observed that some of the enterprises, particularly one computer manufacturer, felt threatened by recent import liberalization and consequent active competition.

6/ See footnote 1 of Introduction of this report.

2.18 Even though overall quota coverage is greatly reduced, it remains high for certain subsectors. For example, in February, 1990, 40% of the value of all iron and steel imports from non CMEA sources were covered by quotas. In the petroleum refinery sector, 33% of imports were covered by quotas. For the engineering industries subsector, 30% of the value of non-CMEA imports for transport equipment are covered by quotas as are 11% of electrical machinery, 9 percent of machine manufacturing and metal products. For the textile subsector quota protection covers 17% of non-CMEA imports of yarns and fabrics and 7% of finished textiles. Finally, in food processing, quota coverage applies to 38% of food product imports and 56% of beverage imports (though the convertible imports of beverages is very small)[7/].

(iii) Price Liberalization

2.19 A critical complement to import liberalization in promoting market competition was the price liberalization program which the Government started in 1988. Following the lifting of the price freeze in July, 1990, some 83 percent of industrial producer prices were freely formed. Natural monopolies such as electricity, railways, telecommunication, etc. are still subject to some form of control. More significantly, however, is the fact that some form of control affects the setting of prices for such items as crude oil and refined products, some ferrous and nonferrous metallurgy products, and some basic chemicals. Also worrisome is the fact that the law, which liberalized a substantial part of the domestic price regime, is vague and seems to provide for a return of controls as deemed necessary by the Government. Naturally, a return to a greater degree of price controls could lead to a more restrictive import regime and could, thus, remove desperately needed competitive forces from the domestic market.

2.20 Price liberalization has to be complemented by a legal and administrative framework preventing and removing monopolistic and competition-restrictive market behavior. This is important also from the viewpoint of fostering small businesses and medium sized firms which can compete with existing large scale enterprises. It has been noted that firms which employ between 16 and 60 workers (in many economies the most common size of enterprise) represent only about 2% of all enterprises and 4% of total employment. A Law on Trade (internal trade) was enacted in September, 1990 with some provisions for an anti-monopoly policy and its administration. A Fair Trade Commission, established under the Federal Secretariat for Trade, has responsibility a monitoring the market behavior of suppliers which have more than a 5 percent market share and can recommend necessary actions to remove unlawful collusion to restrain competition. However, the institutional

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7/ Using imports weights leads to significant problems of interpretation. The most restrictive quotas will allow few imports in and therefore will carry a small weight in the analysis. These indicators are therefore deficient relative to production coverage indices and should be interpreted as indicative as to the current subsectoral coverage of the quota regime.

capacity to administer the new law has not been adequately developed and the Trade Secretariat indicated that some technical assistance is needed in this area.

C. Foreign Trade Policy

(i) Tariffs

2.21 Revenues from tariffs and import duties represent a significant part of the Federal Government's income and have always been viewed as an important fiscal resource. However, liberalization of the trade regime through the reduction of quotas means that the tariff regime could become the principal instrument for protection and import restrictions. While tariffs are relatively low and not widely dispersed, averaging about 11 percent of total import value on un-weighted average, other types of import duties amount to 16% of total import value, thus raising average total import duties and taxes to around 27%. As total import taxes can reach as high as 50-60% for some products, competing imports become prohibitively expensive and domestic producers of these products remain insulated from external competition. In addition, some producers complain (e.g. in the textile sector) about the effect of the tariff and tax regime on their cost of intermediate goods and raw materials.

2.22 Over the past couple of years, there have been significant changes in the tariff regime, particularly in terms of changes in the levels of "other duties" than tariffs. In 1989 the average rate of other duties was 21% versus 8% in 1988. The Government noted that further reforms to the tariff regime are being considered and these reforms should lower the average tariff rate (excluding other duties) to an un-weighted average of 8%, effective by the end of 1990.

2.23 One development which facilitated the adoption of lower duty rates in 1990 was the reduction in the number of duty exemptions. While this is a positive step leading to a more unbiased trade regime,[8/] there still exist numerous exemptions, under rules which seem to be quite complicated. It is unclear, however, whether producers are aware of their eligibility for such exemptions and the procedures to be followed in order obtain them. For example, some textile producers visited by the Bank mission were unaware of exemptions applying to the import of inputs for goods produced for export and reported that tariffs and taxes amounted to 45% of their imported input value, completely eliminating their ability to compete in export markets.

2.24 Even though import tariffs on inputs are generally low, they can, as in the case of the computer manufacturer, result in negative effective protection. The impact of tariffs, in terms of their level and dispersion, on

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8/ Naturally, there is a strong argument in favor of exemptions for export production as export competitiveness requires the access to intermediates and raw materials at world prices.

export competitiveness (without internal cross subsidies at enterprise levels) needs to be systematically evaluated. In particular, the impact of tariff and non-tariff barriers relating to crude oil imports on the competitiveness of exports of refined products deserves study.

2 25 As was the case with the tariff regime, one of the biggest sources of bias against exporting is that the domestic market remains more profitable than the export market in terms of comparative prices received by producers. While the high prices on the domestic market may be temporary, it is clear that export prices are much lower than domestic prices (in some cases by 40 to 60%). This difference in prices is due not only to the overvalued Dinar and lack of competition in domestic markets but also seems that exporters must lower their prices below those of their foreign competitors as a result of Yugoslavia's image problems with respect to quality, delivery performance and after-sales servicing ability (para 3.18).

(ii) Incentives for Export

2.26 A major factor contributing to the price differential between domestic and export markets is the overvalued exchange rate. Since January, 1990, the Dinar has been pegged to German mark at 7 Dinars/ DM despite the continuing domestic inflation which amounted to more than 70% by the end of 1990. In January 1991, the Dinar was devalued by about 30%, but in order to avoid a sharp increase in domestic prices, the devaluation was far less than what would have been necessary in order to restore purchasing power parity. Domestic production for local and export markets is not expected to rebound, on a sustainable basis, until the exchange rate is adjusted to a more realistic level.

2.27 Importantly, there have also been reforms in the system of incentives for exporters and joint ventures. Specific exemptions are available to exporters which export US$150 for each US$100 they import. Joint Ventures are also no longer subject to quotas on their imports and those that are export oriented are entitled to import duty-free. Most of the enterprises expressed satisfaction with the duty drawback system in terms of duty free entitlements and related administrative procedures, although some of them think that there is room for improvement. To assist exporters and counteract the effects of the overvalued Dinar, the Government introduced in April, 1990 an export subsidy which amounts to 7% of the difference between an enterprise's foreign exchange receipts and its foreign exchange purchases for the year. While this will help boost the profitability of production for exports and could be an important incentive to export, it is reminiscent of the previous foreign exchange allocation system which generously favored "net exporters"[9/]. Basing the incentive on enterprises' net foreign exchange balance can lead to biases in the choice between imported and domestic inputs, and may lead to exports based solely on the possibility of obtaining a subsidy.

9/ Enterprises which over one year period earn more foreign exchange than they use.

2.28 The most important needs of exporters appear to be assistance in export marketing and the provision of support services. In the past, enterprises concentrated on production rather than on marketing and thus seldom sought information on external conditions. As production incentives are adjusted toward neutrality, enterprises with export potential will need to compete not only in terms of price but also in terms of quality, design, specification and product support.

(iii) Institutional Reform

2.29 In the past, enterprises had been required by law to conduct their foreign trade activities through foreign trade organizations (FTOs). Since there is little evidence that the FTOs competed with each other for export business on the basis of the quality or cost of services provided, this delegation of foreign trade responsibilities to the FTOs probably led to monopolization of trade management. Now that foreign trade is open to all enterprises, it is expected that FTOs can evolve into true import-export houses and compete with each other and with customers on the basis of services provided. On the other hand, except for the largest producers which had set up their own FTOs to bypass the old system, those which have traditionally used FTOs have been completely insulated from the world market and know too little about external markets to trade directly. Thus it will take some time before enterprises are able to develop new trade channels.

D. Direct Foreign Investment

(i) Legislation

2.30 One of the most important changes in the legal framework for enterprise restructuring was the introduction of the Law on Enterprises (1989) and the Law on Foreign Investment (1988). In the past, the only possibility for foreign investment was in the form of joint ventures with socially owned enterprises where foreign investments were basically loans guaranteed by the Government. On the one hand, the foreign partner had no risk of losing his investment but, on the other hand, he had limited ability to become involved in the management of the company. Now, in addition to the traditional form of joint venture with socially owned companies, wholly foreign owned firms can be established in Yugoslavia or so called mixed companies can be created when private investors, foreign and Yugoslav, buy shares in enterprises [10]. A foreign investor may invest in most types of enterprises, including cooperatives, banks, insurance companies, and other financial institutions. The possibility for foreign investment in the service sector represents an important potential boost to an area of the economy which has been neglected for many years.

10/ In legal terms the possibility of joint companies come in the form of joint-stock company, limited liability company, limited partnership and unlimited joint liability company.

2.31 The Law on Foreign Investment now empowers foreign investors to exercise management rights if they hold a majority of the shares in joint stock companies. However, in the case of foreign investments in socially owned enterprises, the effective management rights of the foreign investor are still unclear, particularly in the case of enterprises under mixed ownership [11]. To promote foreign investment it is necessary to revise the current law in order to ensure that foreign investors can freely exercise management rights in all cases, including that of mixed ownership.

(ii) Developments in Foreign Investment

2.32 The new legal framework covering foreign investment has generated considerable interest in investment opportunities in Yugoslavia. Evidence of the foreign investors' interest is apparent, but the size of investments to which they are willing to commit, at this point, is relatively small. The number of investment agreements signed between foreigners and Yugoslav counterparts has increased tremendously since the introduction of the new Foreign Investment Law. In 1989 alone, 555 agreements were signed as compared with 371 for the previous two decades. During the first few months of 1990, about 500 additional contracts were signed.

2.33 It is difficult to assess the distribution of investments among business activities, due to the fact that investors are registering for a number a different activities in advance of knowing exactly in which ones they will be engaged. However, one emerging trend is a very strong interest in the service sector; in some cases independent service oriented firms, but mostly services tied to a existing industries. If the interest in the service sector continues, foreign investment could help spur the development of a sector which has not existed before. An emerging service sector would also provide a boost to industrial companies who could spin-off service operations such as trucking and retailing and concentrate on their core manufacturing business.

2.34 In terms of country of origin, as expected, most foreign investments originate from Yugoslavia's traditional trading partners, Germany (22% of agreements signed), Italy (21%), Austria (19%) and the U.S.(5%). In terms of the geographic distribution of the investments, Slovenia accounted for 30% of the agreements, Croatia, 25%, and Serbia and the other republics, 26%. However, the distribution of investments in terms of their value seems to favor Serbia due to the large number of the earlier traditional joint ventures located in that Republic. In terms of the value of investments, Serbia accounts for 34% as compared to 28% for Slovenia and 14% for Croatia.

11/ The current Law of Foreign Investment contains two provisions which might severely constrain the management rights of foreign investors. One is the provision that states that an investment contract "may foresee the setting up of a joint management body and this body may be the workers' council of the enterprise." The other is the one that states that this joint management body runs the business and that the joint venture contract determines the composition, mode of election as well as the modalities of operations of the joint management body.

2.35 Despite the increased number of foreign investments, the average unit value is relatively small. It is possible that much of the foreign investment in mixed companies and wholly foreign owned companies is being made by Yugoslav citizens residing abroad who are generally interested in small scale enterprises. According the Center for International Development and Cooperation in Ljubljana, the 555 agreements which were signed during the period from January 1, 1989 to January 15, 1990 amounted to 567 million DM ($340 million) which averages just over $600,000 per agreement. Furthermore, when examining a breakdown of the types of agreements which were signed during 1989, the vast majority of them were in the form of mixed companies [12] but the largest amount of investment came in the form of the traditional joint venture [13] the average foreign investment in the mixed companies was under $600,000 while the average investment in joint ventures was $1.9 million [14]. The average investment in wholly foreign owned companies was even smaller at $214,000. More striking perhaps is that overall, 30% of the investments were less than DM 5,000 and in terms of mixed companies, 36% were in this category. This contrasts all joint venture investments are greater than DM 5,000 and 75% of them are greater than DM 200,000.

(iii) Outstanding Issues

2.36 The improvements in the legal framework for foreign investment are important and could provide a crucial mechanism whereby potentially viable enterprises in need of restructuring can gain access to capital, export markets, management expertise, and technology. However, the above statistics imply that while there is considerable interest in investing in Yugoslavia, most foreign investors are reluctant to make a large commitment and are proceeding cautiously. The current economic and political situation is uncertain and this uncertainty is restricting the inflow of foreign investment. Other specific factors which have directly discouraged investment in 1990 included: (i) uncertainties surrounding property rights; (ii) the income tax treatment of enterprises; (iii) a shortage of liquidity available from the banking system; and (iv) returns from exports and repatriation of profits, which at the fixed exchange rate prevailing during 1990, were perceived to be inadequate relative to other investment opportunities. In cases where the initial investment was in kind (i.e. the provision of

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12/ In 1989, 376 of the 555 contracts (68 percent) were in the form of mixed companies, 88 (16 percent) were wholly owned foreign companies and 90 (16 percent) were the traditional joint venture form.

13/ The investment for the 376 mixed company contracts was DM 248 million ($148 million) in 1989 while the 90 joint ventures brought in DM 288 million ($173 million). The 88 wholly owned foreign companies accounted for DM 31 million ($18 million).

14/ It is not clear how much the Hyatt hotel in Belgrade, which is a traditional joint venture distorted the figures for 1989.

machinery), expectations of an imminent devaluation may also have contributed to a "wait-and-see" attitude on the part of foreign investors.

E. Labor and Social Safety Net

2.37 Enterprise visits by the Bank mission confirmed the previous estimate that around 20 to 30% of the work force employed by socially owned enterprises is surplus to the needs of the enterprises (para 2.35). In the past, not only were enterprises prevented by law from discharging surplus workers, they were often required by law to increase the number of surplus workers. Even with the removal of some of the legislative barriers to labor shedding, the cost to the enterprises of laying off surplus labor has been prohibitive and thus constitutes a major obstacle to the restructuring of enterprises.

2.38 The following four tasks must be undertaken simultaneously to address the problem of surplus labor, namely: (i) the legal framework must facilitate the shedding of surplus labor; (ii) the burden for temporary income support payments to displaced workers should, in many cases, be shifted from the enterprises to the public sector; (iii) jobs for displaced workers must be created in new small and medium sized enterprises; and (iv) the constraint on labor mobility imposed by the lack of housing needs to be dealt with.

2.39 The rigidity and underdevelopment of the labor market in Yugoslavia aggravates the task of labor force redeployment. Although the new 1989 Labor Law allows enterprises to lay off workers, the procedures prescribed by the law are cumbersome. Severance costs paid by enterprises under the various options for laying off workers are often too high [15]. In particular those enterprises which are financially distressed and have the greatest need to reduce surplus labor are the least able to afford the high cost of laying-off workers. Under the present law, the cost of retrenchment can be avoided only if an enterprise is declared to be bankrupt.

2.40 Both institutional arrangements and financial resources are needed for the establishment of a system to protect the incomes of displaced workers. Although Yugoslavia has had a loose network of so-called "Self-managed Communities of Interest", which provides certain unemployment and social security benefits, the system could not hope to cope with the job losses associated with a 20% reduction in the work force of the socially owned enterprise sector. A new system, linking federal, republican and municipal agencies should be established, or the existing system restructured and

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15/ For example, the law prescribes that enterprises should pay an amount equivalent to the worker's salary of 24 months for layoffs, or up to 5 years of pension contributions and associated tax liabilities in the case of early retirements. The Federal Government proposed an amendment to the Labor Law in July, 1990 to reduce the severance fee to a maximum of 12 months salary, but the amendment was rejected by the Parliament.

expanded. Funding for the provision of a social safety net should be substantially increased and transparently administered at all levels of government.

2.41 Policies and programs which promote higher employment in the medium term are required to supplement short-term measures such as the social safety net. For this purpose, attention should be focused on: (i) policies and legislation to remove various rigidities in the labor market and increase labor mobility across the country, in part, through a coordinated effort in housing and relocation assistance; (ii) efforts to accelerate positive job placement, restructuring of the economy and the development of small and medium sized enterprises (SMEs), especially in the labor-intensive, service-oriented sectors. Presently, the banking sector in Yugoslavia is not well equipped for financing SMEs and the current tax system treats private individuals in a discriminatory manner. Thus, in addition to removing existing legal, financial or institutional obstacles to the development of SMEs, certain incentives in the areas of credit and taxation will be needed to stimulate their development.

F. Exit Mechanisms and Bankruptcy Proceedings

2.42 Two important pieces of legislation enacted in 1989 have strengthened the possibilities of enforcement of greater financial discipline and enterprise restructuring. These are the Financial Operations Act which provides for automatic triggering of bankruptcy actions under specified circumstances of non-performance by enterprises, and the new Law on Compulsory Settlement, Bankruptcy and Liquidation, which significantly strengthened the rights of creditors and official agencies in seeking initiation of settlement and bankruptcy proceedings. With regard to laws on securitization and debt recovery, a system of land registration has been put in place, including registration of all dealing in land which is the basis of a system of mortgages in real estate. Foreclosure actions have been simplified and no recourse to the courts is necessary. The Federal Government plans to undertake further work to develop a workable system of mortgages and securities equivalent to those of the advanced market economies.

2.43 The Yugoslav Financial Operations Act of 1989 provides that if an enterprise is insolvent for 30 days running, or for 30 days within a 45 day period, it is bound to hold a meeting with its creditors within the next 15 days, for the purpose of arriving at a settlement or deferment of payment. In some cases, the creditors, including banks, have converted their loans to a controlling equity position in insolvent enterprises and the enterprises have continued to operate. Under the Act, the creditors and not Government are given the primary responsibility for achieving a settlement. If a settlement is not achieved, then SDK is obliged to institute bankruptcy proceedings at a competent court. Once an enterprise is bankrupt, in most cases its workers would receive no severance payments. The table below shows the number of enterprises in bankruptcy and actual liquidations in 1989 and for the period January to September 1990.

Table 2.1

Bankruptcies and Liquidations

	1989				Jan. to Sept. 1990			
	In Bankruptcy		Liquidated		In Bankruptcy		Liquidated	
	No. of Firms	Workers 000's	No. of Firms	Workers 000's	No. of Firms	Workers 000's	No. of Firms	Workers 000's
Size of Firm by no. of workers								
0 - 200	119	7.8	24	0.6	451	20.1	15	0.7
201 - 500	61	19.0	2	0.5	181	61.5	7	2.3
501 - 1000	20	13.3			105	73.1		
> 1000	22	48.2			130	367.4		
Total	222	88.3	26	1.1	867	522.1	22	3.0
Region								
Bosnia - Herzogovina	46	17.7	8	0.0	125	97.6	2	0.5
Montenegro	4	6.6			34	23.0		
Macedonia	43	23.5	4	0.2	142	77.5	11	1.1
Croatia	16	1.8	2	0.0	52	5.0	2	0.6
Slovenia	13	4.8	8	0.7	77	26.5	4	0.3
Serbia	63	17.7	3	0.2	248	207.0	3	0.4
Kosovo	29	15.0			117	59.3		
Voyavodina	8	1.3	1	0.0	72	26.2		
Total	222	88.4	26	1.1	867	522.1	22	3.0

Source: Federal Secretariat for Industry and Energy

2.44 From the table above, it can be seen that there has been a dramatic increase in the number of bankruptcies during 1990 with about 12% of all enterprises and 20% of the total industrial work force affected by the end of September 1990. The heaviest concentrations of bankrupt firms were located in Serbia and the southern republics. The data on liquidations clearly shows that the exit mechanism tends to be applied mainly to smaller enterprises while larger firms seem to be able to avoid liquidation.

G. Taxation

2.45 Taxation is another macroeconomic problem which most likely has impeded the restructuring effort and growth potential of the industrial sector. The problem originates from the structure of the public sector as established by the 1974 Constitution. Direct taxes on persons and enterprises are levied by various authorities, including RAP and local governments and the self-managed communities of interest. Income from wages and salaries are taxed, at source, by RAP and local governments through income taxes and numerous contributions, most importantly the contributions for education, health and old age pensions. In addition to sales taxes and import duties, enterprises pay five types of taxes: (i) income taxes levied mainly by RAP governments, but sometimes by local governments; (ii) compulsory

contributions, levied by communities of self interest, to fund local social services, housing and infrastructure needs and RAPs to cover the deficits of loss making enterprises; (iii) resource pooling to contribute to the investment in public service enterprises engaged in the generation and distribution of electricity, and oil and gas refining, as well as transportation facilities such as railways, roads, ports, and airports; (iv) compulsory loans, at concessional rates and long maturities, to less developed regions; and (v) miscellaneous charges ranging from communal taxes on land and compensatory charges for water and power consumption to membership fees and scholarship programs.

2.46 There are numerous problems with the existing system, including: (i) too many different taxes and contributions; (ii) too much taxation associated with labor input; (iii) large variations in tax rates across RAPs and sectors; and (iv) the possibility for frequent adjustments to rates and hence uncertainty concerning future tax liabilities. The combination of these factors results in a system which is strongly biased against the efficient growth of the industrial sector.

2.47 Under the current system of enterprise taxation, even loss making enterprises are required to pay income taxes. Wage costs are not considered as a deductible expense when calculating enterprise taxable income. Thus, gross wages were taxed twice, once as personal income and then as enterprise income, where the taxable income includes the personal tax component of the gross wage. On an aggregate level, nearly 40% of total public sector revenue is mobilized through taxes and contributions related to wages. In addition to the regressive nature of payroll taxes, one inadvertent problem of heavily relying on payroll taxation is to increase the price of labor thus distorting the relation between the cost of labor and the cost of capital. In the longer term, this policy reinforces the natural bias of socially owned enterprise in favor of capital intensive approaches to production and thus results in higher levels of unemployment. It is important, however, to point out that heavy payroll taxes do not necessarily imply that the tax incidence rests with labor. Indeed, in Yugoslavia's context, there is probably little differentiation between payroll taxation and enterprise income taxation, since enterprises are responsible for the actual payment of both taxes, and workers in most instances are not even aware of their tax obligation. Nevertheless, heavier reliance on wage related taxes results in distortions in resource allocation.

2.48 Particular systemic attributes, legal provisions, and ideological biases all contribute to a system of taxation which is best characterized as arbitrary and capricious. The detrimental impact of such a system on incentives for investment, savings, and profit maximization are both theoretically and empirically confirmed. The factors giving rise to the high degree of arbitrariness in the tax system are outlined below.

(i) A public sector, which is extremely decentralized and heavily dependant on earmarking mechanisms to fund most of its functions, inevitably displays variations of tax regimes across regions (between RAPs and between communes). This regional disparity in

taxation discourages the expansion of business and the formation of a uniform market, while encouraging economically inefficient operations.

(ii) The legal requirement in Yugoslavia of balanced budgets on an annual basis for various public sector bodies (the Federal and RAP governments, and communities of self interest) necessitates the frequent adjustment of tax rates during the course of the year, particularly in the last quarter of a business year. Therefore, the tax liability for Yugoslav enterprises is not certain, and varies not only across localities, but also according to the time of year. Uncertainty concerning tax liability hinders meaningful business and investment planning, and in addition, undermines motivation to achieve better financial results.

(iii) The need for equalized levels of personal consumption compels authorities to use tax instruments in a discretionary manner for achieving this objective. The most relevant examples are (a) the compulsory loans to less-developed regions; (b) the compulsory contributions for RAP and/or community reserve funds which are established for covering enterprise losses; and (c) various compulsory loans for the rehabilitation of other enterprises. In many instances, additional taxes are imposed on profitable enterprises. At the macroeconomic level, this practice implies a shift of resources from profitable activities to often loss-making activities, thereby impeding economic growth rates.

(iv) Since enterprise resources are finite and contributions are levied independently by various responsible authorities, there is often a tendency among agencies (fiscal and para-fiscal authorities) to attempt to maintain or improve their share of such resources. This, at times, can result in very rapid increases in tax rates, or slower than required reductions in rates. Enterprises are often confused and unclear as to their tax liability and how that liability may change from year to year.

2.49 The Federal and some Republican Governments recognize the need for tax reform in order to address the problems discussed above. The major elements of tax reform include the introduction of (i) a tax on enterprise profits replacing the current enterprise income tax levied on profits plus wages (to be introduced by January, 1991 with revenues from the tax received by the RAPs), (iii) an income tax on the gross wages of workers replacing numerous contributions to "Communities of Self Interest" (to be implemented by January, 1992 with revenues from the tax going mainly to local governments), and (iii) a levy on the gross wages of workers to fund pension, medical and unemployment insurance programs (to be implemented by January, 1992).

H. Financial System Structure and Industrial Financing

(i) The Current Financial System

2.50 The financial system of Yugoslavia consists of: (a) the banking system, including (i) the National Bank of Yugoslavia (NBY), or the central bank), (ii) National Banks of eight Republics and Autonomous Provinces (NBPAPs) which carry out the policies of NBY in each of the RAPs, (iii) the commercial banking system, consisting of 63 banks; (iv) savings banks including Post Office Savings Banks, and (v) the Yugoslav Bank for Economic Cooperation which specializes in export finance; (b) insurance companies; (c) investment loan funds for financing projects in the less-developed regions; (d) a money market which was established in 1989; and (e) recently established stock exchanges in Belgrade, Zagreb and Ljubljana which are regulated by a Federal Securities Commission.

(ii) The Commercial Banking System Prior to the 1989 Reforms

2.51 Up to the beginning of the reform process, the commercial banking system consisted of about 150 basic, 9 associated and more than 200 internal banks. The Basic banks, which were founded, owned and directed by enterprises, accepted individual and enterprise deposits and extended short-term and long-term credits, mainly to the founding enterprises. The larger founding enterprises dominated the management of the banks and were also their largest borrowers. Unlike banks in market economies, these banks were not oriented toward generating profits while minimizing their exposure to risks. Instead, they endeavored to provide their founding enterprises with credit at the lowest possible cost regardless of the creditworthiness of the enterprises. The Associated banks were founded by several basic banks in order to pool resources, undertake borrowings for large operations and handle foreign exchange and credit activities on behalf of their member basic banks. The main task of the internal banks was to place in circulation the pooled resources of their member enterprises and to channel resources according to priorities set by them. The internal banks conducted the BOALs' payment operations and credit transactions. They were allowed to accept deposits only from member BOALs' and from workers within the group. The internal banks were not subject to monetary regulations and therefore some of them were able to expand their activities and become major sources of enterprise financing without being subjected to any prudential checks.

2.52 During the 1980s, a substantial decline in resource mobilization reduced the total volume of bank credits from 87% of GSP in 1980 to 41% of GSP in 1987 though the volume of foreign currency credits decreased much less from 21% of GSP in 1983 to 18% in 1987. During this period, even though bank losses due to non-performing loans were mounting, the banks deferred recognition of these losses and were able to report profits and pay dividends to the very same owner-borrowers that did not repay their debts. By the end of 1987, the portfolios of the banks had deteriorated to the point where problem loans accounted for over 40% of total loans. Also, the banks faced major losses on their foreign exchange deposit exposure as well as their off-balance sheet contingent liabilities such as loan guarantees.

2.53 Clearly, the ownership of banks by their largest borrowers was the root cause of the fundamental problems of the banking system which included: (i) inefficient allocation of credit; (ii) excessive concentration of loans to a limited number of borrowers; (iii) lack of profit orientation; and (iv) lack of management independence and accountability. Another fundamental weakness was the absence of any safeguards to protect depositors.

(iii) Reform of the Banking System

2.54 Legislation imposing major reforms on the banking system was adopted 1989 and 1990, including the 1989 Banking Law, the 1989 NBY Law, the 1990 NBY law, the 1989 Law on Rehabilitation, Bankruptcy and Liquidation of Banks which was amended in 1990 and, finally, a special law in December 1989 which established a Federal Agency for Insurance and Bank Rehabilitation. The institutional and legal reforms, which are designed to establish a commercially oriented independent banking system. The legislation clearly indicated the intent of the authorities to transform the banks into independent profit oriented institutions while removing structural impediments to competition in the banking sector. Most significantly the 1989 NBY Law gave NBY the authority to issue and revoke banking licenses. As a result, Internal banks and Associated banks were eliminated and of 150 Basic banks, Under this system only 63 commercial banks have been licenced. These Banks, most of which were formed from mergers and reorganizations of the previous Basic and Associated banks, were also required to transform themselves into joint-stock companies. In addition, the 1990 NBY Law empowered NBY to:

(i) require that banks maintain adequate capital;

(ii) require that banks write off uncollectible claims and provision against problem assets; and

(iii) wherever required, replace bank management and remove other irregularities through the imposition of stringent holding actions upon the bank's operations.

2.55 NBY has already issued regulations governing loan classification, capital adequacy, lending limits to a single borrower, and the conduct of bank supervision. New regulations, in accordance with international supervisory practices, will soon be issued covering loan provisioning and non-accrual of interest, foreign exchange exposure, other exposures to liquidity and interest rate risks, and lending to insiders and groups of related borrowers. During 1991, a new accounting framework for banks will be adopted in order to provide the necessary financial transparency. The new framework will be consistent with international standards and will be complemented by disclosure and reporting requirements to support the completion of a surveillance system by NBY and the NBRAPs. Also, to upgrade the skills of bank managers and staff, a Banking and Finance Institute will commence operations in 1991 to provide specialized training in banking and security markets in Yugoslavia.

2.56 Finally, to reduce intermediation spreads, thus reducing enterprise losses, while at the same time maintaining the banks' net interest income, GOY has reduced taxation on banks. Both the NBY and Banking laws will soon be revised to a provide a basis for the development of central banking and bank supervision according to the norms achieved in developed market economies.

(iv) Banking Restructuring

2.57 Restructuring of Yugoslavia's banks and banking system is currently underway. The relicensing of banks was followed in late 1990 by audits of the 1989 financial statements of all 63 relicensed banks. These audits were used to assess the needs for restructuring and recapitalization and a study based on the audits concluded that, at the end of 1989, the total assets of the banking system amounted to Dinar 424 billion (US$ 31 billion equivalent) and total accumulated losses of the system amounted to Dinar 146 billion (US$ 11 billion equivalent). In comparison, the total capital of the banking system was found to amount to Dinar 47 billion (US$ 3.5 billion equivalent).

2.58 The Federal Agency for Insurance and Bank Rehabilitation, which was set up in June 1990, will manage individual bank restructuring and the reprivatization of restructured banks. The agency will be empowered to purchase bad loans from the banks and seek to recover the maximum amounts possible from the borrowers.

2.59 The banking sector restructuring program will include across the board as well as case by case measures designed to initiate restructuring of major problem banks as well as providing for comprehensive restructuring of individual insolvent banks. The program will be governed by the principle that the cost of rehabilitation will not exceed the cost of liquidating non-viable banks and it is the Government's objective to accomplish the program in a period of five years.

2.60 As part of the restructuring program, the banks will be subject to lending guidelines which will restrict their lending to problem borrowers. They will also have to commit to a program for strengthening of their project evaluation skills.

(v) Second Type of Development Funds

2.61 In addition to the Development Funds already established under the Law on Social Capital in each RAP, it has been proposed that, given the weakness of the banking sector, a second type of Development Fund (DF2) be established in each RAP. These DF2s would compliment the restructuring agencies and the Bank Rehabilitation Agency in that they could undertake a number of activities in connection with restructuring of the enterprise sector, including:

(i) the purchase from the Bank Rehabilitation Agency the non-performing loans to enterprises located in the concerned RAP;

(ii) the exercise the rights of a financial institution to impose financial control over the enterprise whose loans it has accepted, including, if necessary, the authority to:

(a) prohibit any further borrowing, short term or long term, by an enterprise whose loans it holds;

(b) prohibit the payment of dividends or the sale of any of the enterprise's assets including inventories;

(c) replace the senior management of the enterprise; and

(d) where deemed desireable, on the basis of sound financial principles, assist the enterprise in arranging lines of credit with banks, and provide financing to the enterprises, both in the period pending commencement of restructuring and during approved restructuring.

(vi) Securities Market and Non-bank Financial Institutions

2.62 The Government recognizes that the financial sector must be further diversified to include non-bank financial institutions (NBFIs) as well as banks. Specifically this means the establishment of a securities market and the development of different types of NBFIs such as collective investment funds, investment management companies, brokerage firms and insurance companies. This would widen the choice of savings instruments available to the public and increase the channels for mobilizing and allocating financial resources. In turn will increase the range of choices available to enterprises in meeting their specific needs, including risk capital and long-term debt financing.

CHAPTER III ENTERPRISE LEVEL FINDINGS AND ISSUES

3.01 Enterprise level analysis was conducted through visits to 30 enterprises located throughout Yugoslavia covering four major subsectors: engineering (14), chemicals and refineries (6), wood-based industries (4) and textiles and footwear (6). These subsectors have been selected mainly because of their export potential and restructuring prospects. At present they account for over one third of industrial value added and about half of total exports.

3.02 The main topics discussed below complement the policy and institutional issues discussed in Chapter II. They include the managerial and organizational capabilities of enterprises and an appraisal of their ability to adjust flexibly and in a timely way to changing internal and external market conditions. They include an assessment of labor productivity, technology and product quality, all heavily influenced by the equipment in the work place. No single indicator, however, can fully explain the performance or competitiveness of the products of these enterprises but as a whole they attempt to determine their restructuring prospects and long-term potential to compete internationally. A technical note on each enterprise was prepared describing its most salient features with regards to organizational structure, product-mix and market potential, technology, efficiency and cost competitiveness, adequacy and skill level of the labor force, management and MIS, financial situation and strategic awareness and development plans. These technical notes provided the basis for the findings described in this chapter, which are summarized in Table 3.1, and are available in the Study file. Four of these technical notes, in condensed form, are attached in Annex 4.

A. Organization Issues

(i) Excessive Integration

3.03 As previously described (para 2.01), during the 1970's and until the early 1980's, the BOALs became the basic building block of the economic system. Since 1982 their number has declined to the mid-1970 levels with the recognition that BOALs had become far too fragmented and that coordination problems had increased manyfold with adverse effects on the efficiency of operations. These reorganizations, however, represent only a small step towards rationalizing industrial enterprises because of the existence, in many enterprises, of excessive vertical and horizontal integration.

3.04 The level of vertical integration through in-house manufacture of products used in the enterprise is generally high, particularly in the engineering sector. This often leads to high costs resulting from duplication and under-utilization of facilities within the enterprise, and can result in high inventories of work-in-process. There are many examples of under-utilized production facilities with products being manufactured in-house when it would be more economic to buy them from a specialized producer. Spinning-off of such activities would not only lead to greater efficiency but also

could provide an impetus for the development of small and medium scale industry. While vertical integration may have developed in order to ensure a stable supply of essential inputs, horizontal integration developed in enterprises where a wide range of products were derived from a common technological bases. This is particularly noticeable in the pharmaceutical industry where enterprises have gone from producing basic materials to health food and cosmetics. In the engineering industry excessive horizontal integration has resulted from enterprises trying to provide, through a diversified product mix each with its varying business cycle, a cushion against the inevitable the peaks and valleys which occurs in the sale of capital equipment and projects.

3.05 Many enterprise managers now recognize that enterprise reorganization will be crucial for determining the future growth and profitability of the enterprise and its ability to attract foreign investment. Former BOALs were amalgamated into a new enterprise or transformed into functional divisions for common services (e.g. marketing, accounting and finance, maintenance) in the headquarters of WO/CO or departments for discrete production activities. The process of adjustment to the new structure is still under way. By these changes, it is expected that duplication of administrative functions will be reduced and the decision-making process will be centralized, leading to greater efficiency.

3.06 However, these reorganizations have not necessarily resulted in actual reductions of surplus staff, nor in the redefinition or transformation of ownership. Managerial responsibility is not based on any ownership interest, since this has yet to be clearly defined. To rectify this situation, many managers wish to transform their enterprises into joint stock companies. Workers' Council are generally supporting this proposal, particularly because workers' equity participation is also being considered. An inadequate institutional framework as well as lack of initiative on the part of Government are often cited as major bottlenecks in the process of ownership transformation (para. 2.09).

(ii) Inadequate Governance

3.07 The Workers' Council at the level of the WO is still the ultimate decision-making body. It has the authority to decide operational and strategic issues (e.g. appointment of managers, approval of enterprise budgets, investment programs, wages and salaries, employment, organizational changes and appropriation of profit). Reportedly the Councils seldom disagree with management's proposals and have become more aware of the difficulties faced by their enterprises and thus are becoming more receptive to management's proposals for enterprise restructuring. On the other hand, there is also a growing awareness in many enterprises that Workers' Council meetings are held too often and impose an excessive administrative burden. It is still uncertain what attitude Workers' Councils of chronic loss-making enterprises would take vis-a-vis a proposed surrender of their decision-making authority and proposals for massive lay-offs.

3.08 In the case of COs, the coordination function of headquarters management is generally not strong and member WOs tend to be financially autonomous. Member WOs often collectively agree to obtain management assistance from the central office of the CO, such as planning, finance, marketing, R&D, etc. These arrangements, being voluntary on the part of participating WOs, confer little authority upon the CO-level management. Normally, where serious differences exist between WOs and the CO-level management, WO managers are free to decide on the basis of what they perceive to be in their best interest. Thus, the current form of CO organization is not always conducive to the development and implementation of long-term strategy at the CO or WO level, and the system works only in exceptional cases where strong leadership is provided by CO management.

3.09 Some COs are considering the establishment of holding companies, under which the member WOs would become joint stock companies and the CO would become the majority shareholder of each WO. Other COs would prefer to structure themselves as multi-division corporations in which member enterprises are grouped by product-area into profit centers. However, neither form may prove to be effective unless the ultimate ownership interest is fully defined. Also, in practice, most of the existing COs do not have financial resources to invest in their WOs since there is no common treasury.

3.10 Most enterprises are interested in establishing joint ventures with equity participation by foreign partners. But most examples of joint ventures are either medium- to long-term supply relationships without foreign equity participation or subsidiaries jointly owned by socially-owned enterprises in Yugoslavia and foreign investors. There have been only a few examples of direct foreign investment in socially owned enterprises because foreign investors are reluctant to commit themselves to large-scale equity joint ventures without having a clear picture of their legal status vis-a-vis their partners. [17]

B. Management and MIS Issues

3.11 The general level of management competence in the technical and production areas is quite high. The wood and engineering industries, however, have reported shortages of qualified middle managers particularly in the financial and accounting professions. At the senior management level there is also a keen awareness and receptivity to new ideas for improving organizational structures, planning, operations, marketing, and other functions. Two of the biggest engineering companies visited by the Bank mission have already developed, with the assistance of foreign advisors, new business strategies as well as preliminary plans for restructuring their operations. Practically all of the enterprises have the capacity to carry out basic self-diagnosis analyses, but they acknowledge that they need to retain foreign consultants to assist them to develop business plans and strengthen

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17/ During the Bank mission's stay in March 1990, a major pharmaceutical producer sold the majority ownership to a US firm.

management capabilities in corporate strategy, product-mix and market development.

3.12 In most enterprises visited, cost control and MIS do not appear to be well developed. Not only are some of the basic tools lacking (i.e. proper accounting information, data processing facilities, etc.), but also most managers, though technically competent, were not trained to analyze costs, establish long-term objectives and plans, and formulate the strategy needed to attain these objectives.

3.13 Regardless of the scope of enterprise restructuring undertaken, all enterprises would benefit substantially from improvements in their MIS leading to the knowledge required to determine which products and markets are profitable and which plants to expand or close. In order to achieve these improvements, the enterprises should undertake a comprehensive analysis of existing information and management systems so that they can establish their adequacy as a base for the MIS. This should include, inter alia, systems relating to financial and cost accounting, budgeting, payroll, administration, sales and marketing, inventory control, maintenance, planning and control and manpower. They should also assess the capability of their staff to implement and operate such MISs, so appropriate training programs could be carried out as required.

C. Marketing Related Issues

(i) Lack of Competition

3.14 Historically, the lack of competition has been the main barrier preventing enterprises from gaining a good knowledge of consumer needs and preferences. Thus enterprises were ill-equipped to adjust their product mix in response to changes in market conditions. In some cases, domestic competition among enterprises was avoided through product segmentation whereby producers specialized in a specific product range. This was not a form of active collusion but probably a response to perceptions of scale economies relative to the size of the total domestic market.

3.15 While real domestic market competition does exist for a wide variety of products, e.g. rubber products, transport vehicles, industrial equipment and machinery, electrical equipment, pesticides, and some types of wood products, the Yugoslav market is less demanding than some export markets with respect to product design and quality and thus the market tends to be supply driven. Also, some exporters, for example, of textiles and furniture have tended to concentrate their efforts in selling to the lower end of the market where customers are normally more sensitive to price than quality. But even in these price sensitive/quality insensitive export markets, Yugoslav producers are losing their ability to compete with lower cost and more efficient producers. Also they can no longer offset exporting losses with profits derived from foreign exchange trading. Such enterprises are now attempting to adjust through developing new higher value-added product lines (e.g. life-style furniture) and rationalizing product lines to cut costs.

(ii) Exports and Product Quality

3.16 Most of the enterprises visited are exporting from 10% to 50% of their production of certain product lines. It is not uncommon that exports are subsidized either by high prices on domestic sales or by cross-subsidization by other business units within the enterprise. In some cases, enterprises have had to export at a loss in order to obtain the foreign exchange required to import needed inputs before the currency convertibility was achieved partially in 1990. Recent increased export efforts have been particularly successful in pharmaceuticals, specialty chemicals, and engineering goods.

3.17 Exports are carried out directly by the enterprise itself, through FTOs (para 2.25), and in a limited number of cases through marketing arrangements with foreign companies. Several of the enterprises have sales representatives and offices abroad. Export market intelligence is gathered through visits to trade fairs, and feedback from FTOs, foreign marketing partners, and the enterprises' sales representatives. Only a few of the enterprises have the capability to aggressively develop export market opportunities, and the contribution by Federal and Republican Governments towards export promotion and market intelligence gathering and dissemination appears to be minimal.

3.18 The quality of goods produced by the engineering, rubber, chemicals, and garment subsectors is adequate to meet the needs of their traditional export markets[18/]. Furniture, textiles and footwear exports appear to face quality problems traceable to the equipment used in their manufacture. Building a good image in the international markets is a slow process, particularly when the existing image of Yugoslav manufactured products, such as the "Yugo" passenger car, must be overcome[19/]. Most of the enterprises are keenly aware of the need to maintain customer confidence in terms of product quality and reliability, but they need to devote more attention to complaints from both domestic and foreign customers.

(iii) Corrective Actions Required

3.19 In the context of import liberalization and increasing competition in domestic and export markets, the enterprises are facing an urgent need to improve product-mix and product design and quality and offer more competitive prices. Several issues need to be addressed in order to build up enterprise capabilities. First, the enterprises, in collaboration with the FTOs and foreign marketing partners, need to develop a systematic market data base for export markets and update it regularly. Second, cost accounting and MIS systems need to be improved to identify true costs and those activities

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18/ Some of the garment enterprises manage to export through jobbing work based on designs provided by customers.

19/ There are a few products, such as Elan skis, which are accepted as the top of the line in international markets for an upscale product.

requiring efficiency improvements. Third, the impact of tariff levels and structure on domestic and export market competitiveness needs to be studied and tariffs adjusted accordingly (para 2.24). Fourth, the quality and image issues need to be addressed through modernization of technology and machinery and collaboration with foreign partners as a means of achieving a broader acceptance in the international markets.

D. Technology and Human Resources

(i) Continued Use of Obsolete Technology

3.20 Historically the pace of acquisition of modern technology has been hostage to foreign exchange constraints, government controls on the establishment of foreign collaborations and reluctance from foreign licensors to operate in the Yugoslavian environment. Thus, in all the enterprises visited for this study, production technology is varied and it is quite usual for state-of-the-art equipment (mostly from Western Europe and the USA) to exist alongside obsolete and old equipment, some of domestic origin. Surprisingly, very few of the technologies employed are from other CMEA countries. Typically, the older machinery is less productive and more labor-intensive and hence overall manufacturing costs may not be internationally competitive. Product technology has lagged behind in textiles and chemicals but not so in engineering and pharmaceuticals where technology is frequently good, and in some cases excellent, fully capable of competing in the world markets. It is expected that the ongoing reform of industrial and trade policy will heighten the competitive pressures, lead to a faster pace of technology acquisition and therefore of productivity growth.

3.21 Facilities for testing and quality control as well as quality assurance programs exist in all the enterprises. The applicable codes and standards for manufacturing (particularly for fabricated mechanical and electrical equipment), as well as for the end products, are being followed. Quality assurance programs at enterprises include the frequent testing of statistically representative samples which are aimed at reducing the incidence of substandard units among the total units produced. National standards also exist for consumer products sold in the domestic market. The major equipment and engineering goods enterprises have certifications from internationally recognized inspection agencies and their products are certified as conforming to international manufacturing codes. One of the pharmaceuticals firms visited has passed stringent US Food and Drug Administration certification tests for most of its antibiotics and biological products. In the textile sector, quality in garment and finishing where technology is high, has been able to meet western requirements for quality control. In the wood products sector, deficiencies in some areas, such as the surface finish of otherwise very high quality furniture, are largely attributable to the equipment used rather than lack of concern for quality. In summary, current problems with quality are more closely linked to the existence of old equipment and technology than to the lack of appropriate standards or lack of awareness of the importance of product quality.

(ii) Linkage Between R&D and Market

3.22 Most of the enterprises have developed in-house research and development capabilities (some of them lead in their respective fields) through which imported technologies have been absorbed, adapted, and improved over time. Some of the pharmaceutical enterprises have secured international patents for products and also license manufacturing technology abroad. Awareness of proven technological progress elsewhere is fairly high and many of the enterprises are capable of incorporating these improvements in their existing manufacturing processes. Besides literature, the enterprises have access to technological developments from research and development institutions, both Yugoslav and foreign, as well as through formal or informal arrangements with foreign enterprises. Expenditures for research and development typically varies from 1 to 5% percent of value of sales. In large COs, funding is provided by constituting WOs to cover their specific needs for R&D. However, enterprise efforts for product development is not closely linked with marketing (para 2.25).

3.23 While enterprises appear capable of absorbing technological developments and even improving upon them, in many cases the scope for improvement is limited because they are built upon core technologies which are no longer internationally competitive in terms of operating efficiency and product quality. Many of the enterprises, particularly in engineering subsector, have acquired capabilities in computer aided design and manufacturing (CAD/CAM). Others, like those in textiles, are lagging behind despite the fact that CAM methods are indispensable to reduce their high wastage rates which offsets part of the competitiveness derived from lower labor costs.

(iii) Organizational/Labor Issues

3.24 Enterprise visits by the Bank mission confirmed the previous estimate of 20 to 30% of surplus employment in the sector of socialized enterprises. Surplus labor is present in the engineering sector and reportedly higher in the textiles and wood-based industries; only in the chemicals sector excess labor is not a problem but there is obviously some scope for rationalization. In the majority of cases, the surplus labor is employed in administrative and support functions. A significant proportion of these workers will, therefore, have to be displaced as a result of the enterprise restructuring programs, adding to the pool of those already unemployed, which at present is estimated at 11% of the total labor force. The sheer magnitude of the problem, and its implication for enterprise reform warrants the most urgent and serious policy and institutional attention (para. 2.33).

3.25 The common wage policy in the industry is to pay a basic wage with an incentive linked to productivity. On an average, a worker earns a bonus of about 20% over his basic wage. Due to low production target fixed for each worker, bonus has come to be treated over time as part of the wage, and the productivity-linked bonus scheme has lost its meaning.

(iv) Willingness to Restructure

3.26 Experience in Yugoslavia indicates that restructuring at the firm level is not likely to take place automatically in response to macroeconomic policy changes or rapid shifts in global conditions. In many cases the enterprises' management -- accustomed to catering either to protected domestic markets or CMEA markets under bartering agreements -- are only vaguely aware of global changes in technology, organization and markets. However, because the plant visits covered a variety of subsectors and enterprises with vastly different degree of sophistication, the level of awareness of the need and the willingness to restructure varies significantly among these enterprises. Nevertheless it seems that senior management, in most cases, is more interested in new investments and physical restructuring than in the broader issues of enterprise restructuring and is therefore looking for immediate financial assistance to carry out physical investments for modernization. They also seem clearly uncertain about the appropriate corporate strategy needed to complement their investment plans.

E. Environmental Protection

3.27 There are established standards for pollution levels in inland and coastal waters and most Republics have adopted these standards and some have agencies who periodically monitor pollution levels. However, there are no established standards for the various types of factory effluent which are discharged into the receiving waters. There are also no established municipal and industry-specific standards. Concerning airborne emissions from industrial plants, there are federal standards for allowable levels of pollutants at ground levels measured at defined distances from the source. However, no standards exist for levels at the point of emission. The environmental impact of the various enterprises visited in the different subsectors are discussed in the following paragraphs.

3.28 Engineering enterprises: Environmental problems in general do not appear to be a serious problem in the enterprises visited in this sector. However, areas such as noise pollution, pollution from liquid effluence from painting operations and operations of foundries and forges should require further review.

3.29 Chemical enterprises: The enterprises visited in the chemical sector appear to be fully aware of the need to contain environmental pollution and to reduce work-place safety hazards. Some companies are in contact with specialized international agencies for improved treatment and disposal of liquids and hazardous solid waste. Financial considerations are not seen as a major constraint to the installation of pollution control equipment in this sector.

3.30 Pulp and paper enterprises: Environmental problems were cited as a major factor leading to the closure of two bleached sulphate pulp mills, one at Dravar, Bosnia Herzegovina, and the other, visited during the Bank mission,

at Ivangrad, Montenegro. The main problem in the industry is generally associated with the discharging of contaminated effluents into rivers or lakes normally in the vicinity of the plant, as was the case in the two enterprises mentioned. Although the closure of these mills indicates awareness and concern by local Governments, a systematic review of the industry to ensure environmental safety in the pulp and paper process is yet to be made.

3.31 Textile enterprises: Because of the lack of and, in some instances, the absence of effluent treatment facilities, the textile plants discharge large quantities of waste water containing dyes and chemicals, some of them highly toxic, into nearby waterways, thereby raising serious environmental concerns. In some case, the local municipality has levied fines on these enterprises. However, such fines are minimal and do not provide an adequate incentive for the enterprises to address the problem by upgrading existing or installing new effluent treatment facilities. As a result of operating obsolete equipment, the noise pollution and dust levels within the plants are excessive and need to be dealt with. In order for the enterprises to comply with accepted industry standards they would be required to make large expenditure, which, under the current weak financial conditions of most enterprises, may not be possible.

CHAPTER IV STRATEGY FOR INDUSTRIAL RESTRUCTURING

A. Framework of Enterprise Restructuring

(i) Need for Restructuring

4.01 As was discussed in Chapters II and III, the inefficiency of Yugoslav industry and huge losses generated by socially owned enterprises have to be dealt with at the enterprise and at the policy and institutional levels. From the enterprise viewpoint, organizational, financial and operational restructuring is urgently needed to reduce losses, improve profitability, and increase international competitiveness. This can be achieved through improved organizational and managerial capabilities, technological innovations, product-mix upgrading and new product development, and rationalization of production facilities. Restructuring must begin immediately with the Government taking over from the commercial banks, on an interim basis, the responsibility for covering by way of capital contributions, losses incurred by enterprises until it is known which are potentially profitable and which should be shut-down. Otherwise, in the absence of Government support, there is a risk that the banks will make additional loans to undercapitalized enterprises thus compromising the efforts to restructure the banking sector.

4.02 In the absence of any source of financial support there is a serious risk that enterprise losses will be financed by other enterprises (suppliers) and when the entire system becomes illiquid there could well be the simultaneous bankruptcy and closure of most industrial enterprises with job losses on a massive scale. On the other hand, since the cost of supporting all the loss-makers exceeds existing federal and republican budgets, there must be a program for the phased closure of large loss makers who have no prospects for becoming profitable. Closing such loss makers will lessen the drain of liquidity from the enterprise sector. In addition, new sources of fiscal revenues must be developed to fund potentially profitable but undercapitalized enterprises as well as the social safety net for displaced workers. Additional employment opportunities need to be generated in rejuvenated enterprises and new SMEs, some of which would be created by the divestiture of parts of existing enterprises. The development of SMEs also requires the existence of financially sound large enterprises as customers.

4.03 As explained in Chapter II (para 2.07), change in ownership represents the most essential aspect of enterprise reform in Yugoslavia. Numerous previous attempts to restructure industrial enterprises have not produced sufficient and enduring benefits because they excluded ownership reform. Not only should socially-owned enterprises be transformed into a joint stock companies so as to clarify the management accountability and governance, but also their ownership should eventually be transferred to private persons. Rapid privatization of socially-owned enterprises is a desired component of enterprise reform in Yugoslavia for the following reasons: (i) the performance of enterprises under state ownership and control has not been satisfactory in many former centrally planned economies and, in general, people have lost confidence in the capability of the state as an

owner of enterprises; (ii) state-owned or socially owned enterprises are so dominant that it would take years for a private sector based on newly established private enterprises to become a significant part of the economy; and (iii) only privatization of large socially owned enterprises offers immediate prospects for bringing in the new money and dynamic management required to rapidly rejuvenate such enterprises while maintaining and perhaps even increasing employment. Therefore, only privatization can produce a sufficiently large-scale and sustainable "supply response" to the ongoing economic reform.

(ii) Overall Framework For Restructuring

4.04 The table on the following page, outlines a comprehensive overall framework for restructuring the industrial sector, including the enabling environment and the various elements of a restructuring program, both sector wide and enterprise specific.

Table 4.1

Framework for Industrial Restructuring

A. Creating an Enabling Environment	A1. Macroeconomic stability (contain inflation)	· Strict monetary policy · Incomes policy
	A2. Improve capital mobility	· Banking sector reform · Capital market development
	A3. Ownership reform	· Corporatization · Reform of social ownership · Privatization
	A4. Changing macro-incentives	· Continue price liberalization · Tax reform
	A5. Trade Policy	· Continue import liberalization · Export Promotion · Develop support services · Flexible exchange rate policy
	A6. Market competition	· Deregulation · Anti-trust policy ·
	A7. Private sector development	· Encourage small and medium scale enterprises · Tax reform · Promote direct foreign investment
	A8. Environmental Protection	· Establish environmental standards · Establish enforcement mechanisms
B. Government Actions in Direct Support of Industrial Restructuring	B1. Institutional framework for enterprise restructuring	· Strengthen Restructuring Agencies · Develop business support service
	B2. Holding Action	· Quantify fiscal resources required to recapitalize banks so that they can provide liquidity to potentially viable enterprises
C. Enterprise Actions for Restructuring	C1. Diagnosis/restructuring study	· Markets · Product mix · Cost structure · Management · Management systems · Financial structure · Technology · Training requirements
	C2. Defensive restructuring	· Enforce bankruptcy law · Eliminate loss-making operations
	C3. Reduction of surplus labor	· Amend labor code · Develop a social safety net
	C4. Positive Restructuring	· Modernization · Product development · Training · Development of marketing skills and new markets ·

B. Creating an Enabling Environment

4.05 For industrial restructuring to achieve the results cited above (para. 4.01), including improved profitability and increased international competitiveness, the necessary elements of an enabling environment are: (i) macroeconomic stability; (ii) capital mobility; (iii) clearly defined ownership; (iv) competitive markets, including competition from imports; (v) a fair, predictable and transparent system of taxation; (vi) an adequate social safety net; (vii) labor mobility; and (viii) an appropriate legal and administrative framework governing ownership changes, divestitures, private sector development, bankruptcies, capital markets, environmental protection and accounting, as well as the restructuring process itself.

(i) Macroeconomic Stability.

4.06 Lack of financial discipline on the part of self managed enterprises, in the absence of appropriate monetary, fiscal and incomes policies, can quickly lead to high rates of inflation. Attempts to deal with high rates of inflation by imposing controls on prices, interest rates, imports and access to foreign exchange lead to further distortions in the signals which govern decision making by enterprises and households. In an environment where uneconomic enterprises may flourish, while potentially viable enterprises flounder, attempts to reform and restructure the enterprise sector are unlikely to be successful.

(ii) Capital Mobility.

4.07 As discussed in Chapter II, restructuring of Yugoslavia's banks and banking system is currently underway. However, steps need to be taken to ensure that credit is allocated to viable enterprises and withheld in the case of undercapitalized and/or non-viable enterprises. The practice by some banks of offsetting losses on non-performing loans by charging high real rates of interest on loans to viable enterprises should be discouraged. Provision of funds to undercapitalized or loss-making enterprises is clearly not the responsibility of the banking system but, in some cases, where justified, could be the responsibility of Government.

(iii) Ownership Reform.

4.08 Legal Framework. The efficient implementation of enterprise restructuring and encouragement of privatization require a properly functioning legal framework both at federal and at republican levels. In terms of the legal framework at the federal level, the Law on Social Capital enacted in August, 1990 has established the basis for transformation of socially owned enterprise into private or mixed enterprises. In particular, it provides for the partial privatization of socially-owned enterprises through the sale of shares at discounted prices to workers and specified agencies associated with the enterprise. The Law also provides for the sale of entire enterprises following valuation of their assets and approval of the sale by the Republican

restructuring agencies. However, in Slovenia, specific approval of sales is not required and sales would be contested by the Privatization Agency only in exceptional cases.

4.09 The 1990 amendments to the Enterprise Law reduced workers' rights to self-management and opened business activities thus far reserved for public enterprises to all enterprises. The Federal Government plans to improve the Enterprise Law by transforming it into a body of corporate laws equivalent to similar laws in advanced market economies.

4.10 Perhaps, the most determining regulations, from the view point of enterprise restructuring, will be the regulations that are currently being prepared by the National Bank of Yugoslavia and the Federal Government with respect to lending by the commercial banks, to the carving out of problem loans from the banks' assets by the Bank Rehabilitation Agency, and to conversion of enterprise debt into investment by the banks in the concerned enterprises. The proposed guidelines would: (a) generally restrict lending to enterprises with problem loans except in cases when the risk is assumed by the concerned Republics; (b) would expand responsibility for dealing with the problem loans beyond the banks of the concerned enterprises to the Bank Rehabilitation Agency and to the RAP Agencies and Funds, and would thus place the handling of these matters squarely within the context of restructuring/ privatization and liquidation; and (c) would (by permitting debt/equity swaps but placing progressively more stringent limits on the aggregate amount of such investments by the banks), expand the role of the banks in the enterprise privatization process.

4.11 The Federal Government's program for ownership transformation has been based on a number of basic principles: (a) privatization should not be done through free distribution of social capital, but through sale at market value with the objective that enterprises be taken over by owners who will manage them more efficiently; (b) one of the important objectives of privatization should be the dispersion of ownership to the broad strata of the population with the aim of creating a broad coalition for a market-oriented economic development; (c) it is important to preserve the positive aspects or the gains achieved through the prior system of self-management, by increasing the motivation of employees arising form their identification with the enterprise; (d) given the dominant position of social property at present, ownership transformation will involve a long-term process which will unfold gradually; (e) nationalization may be justified in economic terms in certain activities (e.g. infrastructure), but across-the-board takeover of social capital by the State should be avoided, even on a temporary or transitional basis; and (f) the approach to privatization should be pragmatic and should encompass all the successful methods of privatization known from other countries.

4.12 There is recognition of the risks, the drawbacks, and the gaps in the present transformation framework provided by the Enterprise and Social Capital Laws, and the anticipated privatization legislation in the Republics. Among the main concerns have been the possibilities that the internal transformation schemes would be inequitable and that they may encourage abuse

and insider speculation, that savings would be insufficient to generate significant external sales, and above all that the predominantly voluntary and decentralized nature of the approach adopted would not elicit a substantial response and spur transformation.

4.13 Action Program. **Government needs to strengthen the ongoing efforts to establish a legal and administrative framework for ownership reform and promote privatization by an action program including some targets and milestones. As next steps, the Government should (a) submit to the Federal Assembly constitutional amendments, and subsequent legislation, on property rights providing for equality in the treatment of public and private property rights, (b) develop a privatization strategy including, inter alia, an action program of Federal as well as each Republican Government on targets and milestones of privatization and a strategy for enterprises that may continue to remain in, or substantially in, public ownership, and (c) amend the Law on Enterprises so as to establish a body of a company law consistent with market economies.**

(iv) Changing Macro-incentives

4.14 Liberalization of Prices. Quite simply, prices should be determined by market forces in competitive markets. Where monopolies or oligopolies exist, they must be exposed to competition from imports (paras 4.18 and 4.20).

4.15 Tax Reform. The Yugoslav taxation system has impeded the growth potential of the industrial sector and the effort for its restructuring (Section 3.5). There are three major shortcomings in the system which need to be rectified: (i) complexity (too many types of taxes and contributions by three stage tax authorities); (ii) built-in bias against labor input (heavy taxation on payroll related expenditures); and (iii) non-transparency due to excessive variation. These problems would continue to inhibit the capital mobility within the country and discourage investment from abroad as well. The Republics of Serbia and Slovenia have developed a proposal for a comprehensive tax reform so as to achieve a stable, simplified and transparent tax system. Their new tax system will consist of two main elements, i.e. a personal income tax and contributions and a corporate tax on profits. It is recommended that their initiatives should be elaborated and implemented as soon as possible and followed by other Republics.

4.16 Action Program. **Government needs to remove remaining price controls wherever the possibility exists for prices to be freely determined by competitive forces. Government needs to define and implement the proposed tax reform aiming a stable, simplified and transparent tax environment for enterprises and investors, both domestic and foreign.**

(v) Trade Policy

4.17 As a further step in the liberalization of trade started in 1989, the Federal Government should review the trade policy regime, focusing on the remaining import quotas and the tariff structure (paras 2.23-2.24). In

addition, the Federal Government should reduce further the number of items under import quotas and the general level of tariffs, with due consideration to the tariff structure (see para 5.20). The tariff structure should be designed in such a way to provide a harmonized effective protection across the board while the general tariff level should be gradually reduced to an internationally acceptable level. The Federal Government should also review its administration of the duty drawback system and export/import controls so that exporting industries can compete on an equal footing with foreign suppliers. The Government should also maintain a flexible exchange rate policy to keep neutral price incentives for both exporters and importers.

4.18 Action Program. **Government needs to develop and administer properly the trade policy so as to promote import competition, develop exports and reduce existing biases in protection for domestic industry.**

(vi) Competition Policy

4.19 A major factor behind the inefficient operations and management of Yugoslav enterprises has been lack of competition, whether imports or domestic producers (Section 3.2). Since 1989 the Government's import liberalization program, has had a positive impact in competition in two ways: (a) providing domestic producers with more options to access quality inputs; and (b) forcing domestic producers to become more efficient in order to survive import competition. Furthermore, a series of deregulation measures have allowed new firms, both large and small ones, to enter activities once monopolized or dominated by a small number of established large-scale enterprises. The Federal and Republican Governments should now cooperate in a comprehensive review and reform, if necessary, of a regulatory framework in various subsectors to reduce entry barriers for new entrants, particularly small firms. In addition, the Federal Government should administer properly the Law on Trade enacted in September, 1990, which includes anti-trust provisions, to eliminate monopolistic or competition-restrictive behavior of enterprises (e.g. explicit or implicit cartel or any arrangement to restrict competition). Finally, in parallel with this effort, the Government should encourage restructuring of highly integrated enterprises which would result in spin-offs and divestitures as long as market or technological conditions support them.

4.20 Action Program. **Government needs to promote market competition through the proper implementation of ongoing imports liberalization and deregulation programs and the further development of a legal and administrative framework for anti-trust policy.**

(vii) Private Sector development

4.21 Yugoslav Governments, at both federal and republican levels, recognize the importance to promote small and medium size enterprises (SMEs) and have started developing various schemes to promote SMEs. A Federal Agency for SMEs and Entrepreneurship has been established. The idea of establishing eight SME consulting centers throughout the country is being considered and

procedures for establishing SMEs have already been greatly simplified. About 10,000 new private firms were formed in the first nine months of 1990. However, the banking sector in Yugoslavia is not well equipped for financing SMEs and this represents a major bottleneck for their development. Other major policy issues for the SME sector include a discriminatory treatment of private individuals in taxation and the expensive indirect costs of labor. The tax reform being proposed in some Republics (para 4.16) will address this issue.

4.22 Action Program. **As the next step, the Federal and Republican Governments should coordinate efforts to develop a strategy for promotion of SMEs and establish an effective set of priorities. One of the priorities should be to encourage spin-offs of production units from large enterprises and the formation of SMEs in labor-intensive, service-oriented sectors. Government also needs to develop small businesses through deregulation, debottlenecking and promotional measures. However, most importantly, financing must be made available to SMEs by the commercial banks.**

(viii) Environmental protection

4.23 The Federal Government should coordinate the efforts of local authorities in developing appropriate, internationally acceptable environment standards and establish an institutional mechanism to enforce compliance with them. The Government should ensure that any enterprise restructuring program is environmentally sound as measured by these standards by requiring an environmental assessment as an integral part of such program.

4.24 Action Program. **Government needs to develop a proper administrative framework for environment protection through the development of standards and the institutional capacity to enforce enterprise compliance.**

C. Government Actions in Direct Support of Industrial Restructuring

(i) Institutional Framework for Enterprise Restructuring and Privatization

4.25 Although privatization presents a powerful tool for enterprise reform, the pace of privatization is constrained by a number of factors. Most importantly, there is a serious bottleneck in the institutional capacity and mechanisms available to manage a fair and transparent transfer of social capital to private owners. To eliminate this bottleneck, the Restructuring Agencies need to be strengthened (para 4.10). Also, there is a shortage of wealthy private individuals with experience in the active ownership of enterprises. However, enterprise reform cannot be postponed until all the major enterprises have gone through the privatization process. Thus, it is essential that enterprise restructuring be given the highest priority. Needless to say, a clear definition of the ownership of the enterprises should be a precondition for restructuring. Successful restructuring would also facilitate the inflow of capital from foreign investors when the restructured enterprise is privatized.

4.26 Restructuring Agencies. The Yugoslav Governments both at the federal and republican levels recognized the need to develop appropriate institutions expedite and support enterprise restructuring. The Federal Government is coordinating the Republican Governments' initiatives to establish Restructuring Agencies and a Development Funds in each Republic in accordance with the Law on Social Capital. In practice, much of the authority and responsibility concerning restructuring of individual enterprises rests with the Republican Governments. While the legal basis of Restructuring Agencies has been provided by federal law, details of their responsibility and administration are being specified by Republican Governments. Restructuring Agencies are primarily responsible for providing or procuring consulting services in connection with restructuring of individual enterprises. In particular, they would have the following main functions:

(i) valuation of socially-owned enterprises to be sold in part or in whole under the Law on Social Capital;

(ii) development of a restructuring/ privatization strategy for the Republic, indicating the priorities for individual enterprises, based on diagnosis of the urgency of restructuring of all major enterprises;

(iii) provision of assistance to individual enterprises for the development of their respective restructuring program;

(iv) supervision of the implementation of the enterprise restructuring programs;

(v) recommendation of conditions to the Republican Government under which the Government would provide funding for working capital and other financial assistance to the enterprises, particularly during the holding action period; and

(vi) assistance of individual enterprises in obtaining necessary funds for implementing their restructuring programs.

4.27 Except for Slovenia, all Republics had established Restructuring Agencies by November, 1990. The Republic of Slovenia, putting the first priority on privatization rather than restructuring, established a Privatization Agency with the authority to license valuation agents. It granted a mandate of restructuring of specific enterprises to the Agency in March, 1991.

4.28 Development Funds The Law on Social Capital provides for a Development Fund to be established in each Republic. Development Funds receive the proceeds arising from sales of social assets and reinvest them to assist restructuring of socially-owned enterprises and to develop the private sector.

4.29 There is currently a critical shortage of business support services in Yugoslavia, including, inter alia, (a) management consulting, (b) cost accounting, financial management and the design of MIS in general, and (c) training services related to these areas. The entry of private domestic and foreign firms in these areas should be encouraged and SDK's monopoly in accounting and auditing services should be eliminated.

4.30 Action Program. The Republic Governments should accelerate their effort to establish legislation that provide for clear definition of authority and responsibility of an Restructuring/ Privatization Agency as well as a Development Fund and ensure proper operations of these institutions through appropriate budgetary support, staffing and training. Thirdly, the Government, both federal and republican levels, should encourage the formation of private firms which provide services related to enterprise restructuring.

(ii) Holding Action (Crisis Management)

4.31 Many potentially viable enterprises are currently in a crisis situation due to losses and illiquidity. This is due to a number of factors including: slumping domestic demand for consumer goods and particularly capital goods as a result of the stabilization program; loss of sales to collapsing CMEA markets; and losses due to price controls. Unless appropriate emergency restructuring measures are taken by the enterprises themselves, their banks (or the new Agency for Bank Rehabilitation), the restructuring agencies, and Government, many of these enterprises may be forced to close. However, in order to avoid bail-outs, financial assistance to these enterprises in the form of debt relief should be given only after certain preconditions are met, including: (a) the preparation, by the enterprise, of a restructuring plan demonstrating long term viability; (b) the shedding, by the enterprise, of surplus labor; (c) ownership reform, including privatization; and (d) the implementation of relevant price reforms by Government. In some cases even the above preconditions will be not be sufficient to restore enterprise creditworthiness and capital contributions by Government may be the only potential source of such funding. However, the main role of Government will be to facilitate labor shedding by establishing an adequate social safety net.

4.32 In Slovenia, an analysis was carried out in 1990 to determine for which enterprises recapitalization payments might be justified. In that analysis, loss making enterprises are considered to be potentially viable if they generate a positive income after all expenses except financial charges. Those that only generate a positive income if depreciation and financial charges are excluded are considered to be marginal. While this approach is crude, it is at least a way of making an initial estimate of the cost of the holding action, while avoiding bailouts of enterprises which are unlikely to ever be viable. However, in areas where the simultaneous closure of a large number of non-viable enterprises would cause overwhelming social problems, it may be necessary to provide temporary funding to such enterprises so that their closure can be phased over a period of time. As the cost of such holding actions could easily crowd out new investment, it is important that the actions are time bound and that the total support made available to non-

viable enterprises decreases rapidly over time.

4.33 Action Program. The Governments of all the Republics, working with the Federal Government, need to ensure that their RAs have sufficient resources to assist potentially viable enterprises in determining the holding actions necessary to survive the current crisis. Governments also need to estimate the potential costs of the holding action and determine the ways of raising sufficient fiscal resources to fund this action.

D. Enterprise Actions for Restructuring

4.34 Based on diagnostic restructuring studies, industrial enterprises need to take actions for two types of restructuring: defensive restructuring, i.e. elimination of economically non-viable operations; and positive restructuring, i.e. the development of viable operations. The two main elements of defensive restructuring are: (a) the whole or partial closure of loss making enterprises (LMEs) which have no visible prospect for becoming viable; and (b) the shedding of surplus labor in the remaining viable or potentially viable enterprises.

(i) Exit of Loss-makers

4.35 The persistence of large enterprise losses in the Yugoslav economy requires immediate attention since losses have already undermined the stabilization program adopted in December 1989. As previously discussed (Para 1.13), most of the large losses are concentrated in a limited number of large enterprises and in a few sectors affected by price controls and other regulations. On the other hand, if the financial loss of an ailing loss-making enterprise (LME) resulted primarily from economically non-viable operations, defensive restructuring of the LME should focus on the elimination of such operations. In general, however, inefficiency in production is widespread and is a major cause of financial losses. This can be addressed at the individual enterprises through specific defensive restructuring actions including: (i) ownership changes such as privatization, (ii) change in the management team, (iii) major financial restructuring including writing-off debt or sale of assets, (iv) closure of production lines, and (v) reduction of labor. If such measures could not return enterprise to viability, it should be liquidated.

4.36 Bankruptcy. The 1990 Law on Bankruptcy has been enacted to provide the legal framework for the exit of illiquid enterprises. However, this law needs to be administered efficiently and properly while giving careful consideration to the risk of an avalanche of bankruptcy cases which could overwhelm bankruptcy courts and delay the process of enterprise restructuring.

(ii) Shedding of Surplus Labor

4.37 Most Yugoslav enterprises employ labor surplus to their needs and typically, this surplus amounts to 20 to 30% of the workforce. The excessive cost of shedding surplus labor is a major bottleneck for enterprises seeking to adjust to the changed business environment and to become more efficient. A

developed social safety net is required not only to facilitate the ongoing economic reform from the viewpoint of social equity but also from the individual enterprise's point of view.

4.38 Action Program. The Federal Government is already preparing a quick action program for large LMEs in the context of the second Structural Adjustment Loan (SAL II). This government initiative focuses on short-term measures to drastically reduce financial losses of large LMEs. An Interim Action Group, consisting of foreign consultants, has been commissioned by the Government to diagnose the causes of losses for the 60 largest LMEs within a year and to classify, in cooperation with Restructuring Agencies, the LMEs into several categories by their needed action programs (e.g. restructuring, privatization, liquidation). As a next step, Government needs to implement quickly and carefully monitor the implementation of the recommended loss reduction programs for the large LMEs.

4.39 The Federal Government should adopt amendments to the labor codes providing for reduction of the period of guaranteed income to workers to be displaced. The current Law on Providing Funds for Workers Affected by the Restructuring of the Economy (the LPFWAR) should be amended so as to define the income maintenance and employment programs to be supported by federal financing. The Federal and Republican Governments should coordinate the efforts on programs for retraining of unemployed workers, locating job openings nationwide and promoting labor intensive small businesses.

(iii) Positive Restructuring

4.40 For potentially viable, but currently distressed enterprises, positive restructuring may offer a way to expedite resource redeployment from non-profitable operations to profitable operations and accelerate the growth of the latter. Positive restructuring should proceed at individual enterprises and also on an economy-wide basis and should be sustained in the medium to long term. Development of small and medium enterprises is a good example of economy-wide positive restructuring. Positive restructuring can be effected through market forces, but in Yugoslavia, where the financial sector has yet to be restructured, even economically-viable operations may not survive the very tight monetary conditions which are required to stabilize the economy. As a result, there could be serious delays in recovery and widespread unemployment. Therefore, an enterprise's own efforts for positive restructuring merit external support.

4.41 Positive restructuring also includes actions necessary to undertake economically-viable activities such as (i) investment for modernization or even expansion, (ii) product development, (iii) development of marketing skills, and (iv) training of workers. However, since most Yugoslav industrial enterprises, whether they are a Work Organizations or a Composite Organizations, normally contain non-performing units, the above measures for positive restructuring should follow, or at least be implemented in parallel with, measures for defensive restructuring such as financial restructuring and the elimination of non-profitable production lines and

excess labor. Organizational aspect should also be an integral part of the positive restructuring of any socially-owned enterprise.

4.42 Framework for Positive Restructuring of Enterprises. A restructuring program for large scale enterprises in Yugoslavia which are faced by financial and operational difficulties should be comprehensive in its scope, covering organizational, financial and operational aspects, and likely include the measures summarized in Table 4.2:

Table 4.2 - Framework For Positive Restructuring of Enterprises

Type of Restructuring	Objective	Strategy
A. Organizational Restructuring	A1. Ownership/ governance clarification	- Transform socially-owned enterprise into a joint stock company - Define ownership interest - Appoint a Board of Directors - Make management accountable to the Board of Directors
	A2. Establish decision-making system	- Set well defined goals - Monitor performance relative to such goals
	A3. Where necessary, change management	- Appoint new management team - Contract out management to potential strategic investor
	A4. Establish program for privatization	- Identify foreign technical or marketing partners - Offer shares to the public through the new stock exchanges
B. Financial Restructuring	B1. Develop meaningful financial statements	- Carry out proper audits including revaluation of assets
	B2. Restructure debt and/or convert debt to equity or quasi equity	- Divest assets to raise funds for debt repayment and recapitalization
C. Operational Restructuring	C1. Identify profitability and relevance of each business unit	- Close and liquidate business units with no potential for profitability, - Divest non-core and unrelated business units with the goal of greater specialization,
	C2. Determine whether to make or buy components	- Spin off operations to subcontractors who would supply goods and services presently produced within the enterprise
	C3. Further develop "core business" of the enterprise	- Develop new products - Develop new marketing skills - Invest in capital assets and human resources
	C4. Implement measures to protect environment and workers' safety in the new product-mix of the enterprise.	- Carry out an environmental and safety audit - Institute safety training - Prepare a plan for pollution abatement

4.43 Diagnosis/Restructuring Study In order to develop the comprehensive restructuring program indicated above, it is desirable to obtain the assistance of foreign consultants who have considerable experience in enterprise restructuring and privatization, since these concepts are new to many Yugoslav enterprises. Domestic consultants may also play an important role as subcontractors to foreign consultants. A typical example of Terms of Reference for a consultant study for enterprise restructuring is presented in Annex 4. While the methodology and the scope of work of consultant studies vary from enterprise to enterprise, in most cases such studies will cover the following tasks:

(i) identify each discreet business unit within the enterprise and determine the current and potential contribution of each unit to the overall profits or losses of the enterprise, assuming an appropriate product-mix and marketing effort;

(ii) for each business unit within the enterprise and determine the current versus the appropriate level of staffing;

(iii) determine, while taking into account the desirability of increasing competition and assuming a transformation of the enterprise into a joint stock company with mixed or private ownership, whether each business unit should: (a) remain as part of the restructured enterprise, (b) become and independent enterprise (owned wholly or partially by the parent enterprise), (c) be sold to another enterprise, either domestic or foreign, or (d) be closed down,

(iv) determine which changes, if any, should be made in the internal organization of the enterprise and the senior management;

(v) determine the needs for financial restructuring, including the revaluation of assets, restructuring of debt and sale of assets for debt repayment and recapitalization;

(vi) identify the needs for strengthening (a) management skills and tools (e.g. a management information system), (b) staff skills in the areas of finance, marketing and sales, product development, and production technology and (c) workers' qualification, motivation and discipline;

(vii) identify the corrective actions necessary to address problems associated with pollution and workers safety; and

(viii) develop a medium to long-term business plan, covering (a) desirable product-mix, (b) new ownership structure of the enterprise, (c) a labor adjustment program and (d) an investment program, for the restructured enterprise(s), identifying future needs for external financing of both working capital and investment capital.

4.44 Action Program. The Federal Government has started, with World Bank assistance, a demonstration project for enterprise restructuring in the industrial sector. In this project, consultant studies for comprehensive restructuring programs in accordance with the scope of work and methodology outlined in paras 4.24 and 4.25 will be undertaken by selected industrial enterprises. Close coordination between the Federal Government and the Restructuring Agencies is required throughout the preparation and implementation of the demonstration project.

4.45 To assist member enterprises to undertake restructuring studies and develop their own restructuring program, the subsectoral associations of Chambers of Economy at the federal and RAP levels should do the following:

(i) publicity of restructuring methodology: the Chambers should publicize the methodology for preparing a restructuring program based on a comprehensive review of their operations;

(ii) policy review: Each subsectoral association should undertake a review of policy and institutional factors affecting enterprise management and operations and identify bottlenecks.

(iii) subsectoral study: some subsectoral associations may be expected to lead and coordinate a subsectoral study which might support a reform of subsectoral policies.

4.46 Finally, the socially-owned enterprises in Yugoslavia should initiate immediately actions to reduce costs, including reduction of surplus workers and undertake a diagnosis of the entire enterprise management and operations with assistance of external Yugoslav and/ or foreign consultants, within such a framework suggested in paras 5.07 and 5.08, and develop a comprehensive restructuring program. Such a comprehensive restructuring program should identify financial, organizational and physical measures to be introduced to improve the efficiency and competitiveness of the enterprise.

YUGOSLAVIA - INDUSTRIAL SECTOR REVIEW

Industrial Enterprises - Consolidated Operating Results

1989 and Jan. to Sept 1990

(New Dinars, millions, May 15, 1990 prices) 1/

Sector	Energy	Metal-lurgy	Non-metallic Minerals & Construction Materials	Metal-processing & Electric	Chemicals & Paper	Wood Processing	Textiles	Food	Other	Total
1989 Results										
- Profitable Enterprises										
No. of enterprises	383	160	442	1,397	532	479	938	821	391	5,543
No. of employees	99,704	79,800	96,269	436,022	135,045	120,241	422,641	193,226	49,130	1,632,078
Profit	3,485	2,910	1,492	7,331	5,388	1,177	4,236	4,244	819	31,084
- Loss Making Enterprises										
No. of enterprises	216	77	157	687	180	208	266	260	119	2,170
No. of employees	95,806	84,047	58,357	391,343	68,717	82,538	205,836	88,394	23,227	1,098,265
Loss	(35,207)	(9,437)	(3,096)	(31,587)	(14,936)	(4,661)	(10,442)	(7,085)	(1,060)	(117,510)
- Total										
No. of enterprises	599	237	599	2,084	712	687	1,204	1,081	510	7,713
No. of employees	195,510	163,847	154,626	827,365	203,762	202,779	628,477	281,620	72,357	2,730,343
Profit (Loss)	(31,721)	(6,527)	(1,604)	(24,255)	(9,548)	(3,484)	(6,206)	(2,841)	(241)	(86,427)
Jan. to Sept. 1990 Results										
- Profitable Enterprises										
No. of enterprises	56	70	353	1,605	516	460	788	678	570	5,096
No. of employees	58,436	48,135	88,377	312,313	145,281	91,913	364,425	209,992	44,774	1,363,646
Profit	788	145	253	1,113	1,074	121	576	1,755	165	5,990
- Loss Making Enterprises										
No. of enterprises	84	72	157	885	176	269	428	212	152	2,435
No. of employees	153,985	151,492	60,044	477,152	71,844	105,638	244,479	59,639	21,017	1,345,290
Loss	(9,016)	(6,888)	(1,014)	(10,065)	(3,593)	(1,992)	(3,534)	(1,199)	(710)	(38,011)
- Total										
No. of enterprises	140	142	510	2,490	692	729	1,216	890	722	7,531
No. of employees	212,421	199,627	148,421	789,465	217,125	197,551	608,904	269,631	65,791	2,708,936
Profit (Loss)	(8,228)	(6,743)	(761)	(8,952)	(2,519)	(1,871)	(2,958)	556	(545)	(32,021)

1/ 1989 Results expressed in new Dinars and coverted to May 15, 1990 price levels

YUGOSLAVIA - INDUSTRIAL SECTOR REVIEW

Loss Making Enterprises - Consolidated Operating Results

1989

(New Dinars, millions, May 15, 1990 prices) 1/

Sector	Energy	Metal-lurgy	Non-metallic Minerals & Construction Materials	Metal-processing & Electric	Chemicals & Paper	Wood Processing	Textiles	Food	Other	Total
Sales Revenues										
Domestic sales	54,652	25,586	9,629	76,469	28,960	12,047	32,488	36,418	4,386	280,635
Export sales	3,148	12,683	2,565	35,319	12,653	5,732	15,531	2,717	909	91,258
Total	57,800	38,269	12,195	111,787	41,613	17,779	48,019	39,136	5,295	371,893
Direct Operating Costs										
Material/energy/spare parts/small tools	34,908	23,282	4,660	49,559	25,015	8,210	15,326	19,482	1,729	182,170
Wages and salaries	10,838	8,166	4,129	32,543	6,517	5,124	12,881	6,709	1,643	88,550
Other	10,486	14,263	2,452	19,169	9,773	2,343	7,184	5,611	1,620	72,902
Total Direct	56,232	45,710	11,241	101,272	41,305	15,677	35,391	31,802	4,993	343,621
Contribution Margin	1,569	(7,441)	954	10,516	308	2,103	12,628	7,333	302	28,272
Depreciation	9,890	5,980	982	6,843	5,570	1,027	2,722	2,203	298	35,515
Net Financial Costs	28,052	3,692	3,269	41,711	11,034	6,551	20,584	14,371	1,007	130,273
Operating Income	(36,373)	(17,113)	(3,298)	(38,038)	(16,296)	(5,475)	(10,678)	(9,241)	(1,003)	(137,516)
Other Income	4,242	8,481	838	10,321	2,670	1,382	2,007	3,574	187	33,703
Income Before Taxes and Appropriations	(32,131)	(8,632)	(2,461)	(27,717)	(13,626)	(4,093)	(8,671)	(5,667)	(816)	(103,814)
Taxes and Obligatory Contributions	2,343	765	563	3,329	1,075	526	1,504	1,212	237	11,552
Appropriations	733	40	73	541	234	43	268	206	8	2,145
Loss for Current Year	(35,207)	(9,437)	(3,096)	(31,587)	(14,936)	(4,661)	(10,442)	(7,085)	(1,060)	(117,510)

YUGOSLAVIA - INDUSTRIAL SECTOR REVIEW

Loss Making Enterprises - Consolidated Operating Results

Jan. to Sept. 1990

(New Dinars, millions)

Sector	Energy	Metal-lurgy	Non-metallic Minerals & Construction Materials	Metal-processing & Electric	Chemicals & Paper	Wood Processing	Textiles	Food	Other	Total
Sales Revenues										
Domestic sales	30,271	24,319	8,305	55,904	14,291	10,002	21,023	[illegible]	3,729	185,123
Export sales	1,102	13,904	1,241	21,576	5,652	4,525	9,359	1,411	789	59,559
Total	31,373	38,222	9,546	77,480	19,943	14,528	30,382	18,690	4,518	244,682
Direct Operating Costs										
Material/energy/spare parts/small tools	21,388	31,254	4,372	43,239	13,366	8,559	15,678	11,704	1,477	151,036
Wages and salaries	11,059	8,761	2,668	24,845	4,192	4,297	9,789	3,087	1,172	69,871
Other	13,014	10,019	3,235	17,850	4,454	3,203	8,542	5,614	2,016	67,948
Total Direct	45,462	50,033	10,275	85,934	22,012	16,059	34,009	20,405	4,665	288,855
Contribution Margin	(14,089)	(11,811)	(729)	(8,455)	(2,069)	(1,532)	(3,627)	(1,715)	(147)	(44,173)
Depreciation	10,612	5,404	792	6,020	3,482	1,081	2,071	1,154	376	30,992
Net Financial Costs	974	(250)	366	6,128	263	1,000	1,721	1,050	475	11,727
Operating Income	(25,675)	(16,965)	(1,887)	(20,602)	(5,814)	(3,613)	(7,419)	(3,919)	(998)	(86,892)
Other Income	17,668	10,683	1,148	12,686	2,616	1,854	4,635	3,144	414	54,847
Income Before Taxes and Appropriations	(8,007)	(6,282)	(739)	(7,917)	(3,198)	(1,759)	(2,785)	(775)	(584)	(32,045)
Taxes and Obligatory Contributions	936	587	265	2,096	384	231	716	388	124	5,726
Appropriations	73	19	10	53	11	3	33	36	2	240
Loss for Current Year	(9,016)	(6,888)	(1,014)	(10,065)	(3,593)	(1,992)	(3,534)	(1,199)	(710)	(38,011)
No. of enterprises	84	72	157	885	176	269	428	212	152	2,435
No. of employees	153,985	151,492	60,044	477,152	71,844	105,638	244,479	59,639	21,017	1,345,290
	(9,016)	(6,888)	(1,014)	(10,065)	(3,593)	(1,992)	(3,534)	(1,199)	(710)	(38,011)

YUGOSLAVIA - INDUSTRIAL RESTRUCTURING STUDY
SUBSECTORAL SURVEY

A. Engineering Industry

1. Organizational Structure: Many enterprises in the engineering industry sector are multi-plant Composite Organizations (COs), with a structure of component enterprises as Work Organizations (WOs) and an umbrella body to control the entire CO. The linkages and arrangements between WOs, being voluntary on the part of participating enterprises, confer relatively little authority upon the corporate-level management, and in cases where serious differences exist between enterprises and the corporate-level management, enterprise directors are somewhat free to decide what they consider to be in the best interests of their enterprise as determined by the Workers Council. Thus, the current form of complex organization is not conducive to the development and implementation of long-term strategy at the corporate or enterprise level.

2. Product-mix and market development: The engineering enterprises visited by the Bank team had generally a very wide product-mix, catering to both domestic and export markets. In the case of exports, the emphasis in the past has generally been towards LDC markets, with sales frequently tied to bilateral trade arrangements and with deferred payment terms. Some of these contracts have not been commercially profitable to the enterprise, whereas others have strained the liquidity of the enterprise. The current trend is to concentrate on markets in which higher profits can be realized. In order to make inroads into such markets, the enterprise will have to pay greater attention to quality, delivery and response time. and competing merely on the basis of price will not be sufficient.

3. Engineering enterprises will need to define their core business so as not to dissipate scarce resources in marginal activities and products. although in the current uncertain environment product diversification may be a reasonable response to the risk of specialization. However, once the environment stabilizes, enterprises will need to spin-off certain non-core businesses and merge other activities. This will result in some businesses losing the strong central leadership currently provided by the headquarters of CO's. In this context, functions of industrial marketing and business intelligence will need to be improved at both corporate and enterprise levels. In all enterprises visited, there was a clear indication that managements are only now beginning to improve their abilities in this area.

4. Product development: Although there are obvious weaknesses in a number of enterprises, product technology is frequently good and in some cases excellent, fully capable of competing in world markets. This can be attributed to many cooperative links between the Yugoslav enterprises and major firms in the industrialized countries and efforts made to assimilate

technology and to develop own products through intensive R&D efforts. For example, in both RADE KONCAR and ENERGOINVEST, the companies have targets for annual R&D expenditures amounting to at least 2% of sales, and the companies indicated that these amounts were determined on the basis of comparison with the practices of their international rather than domestic competitors. While we have not been able to ascertain that the funds are allocated and used efficiently, their effectiveness may be indicated at by the claim from RADE KONCAR that 85% of their sales come from products designed within the company. (While this is a high proportion, it appears that other firms visited were also developing a good share of their product mix themselves.) However, we were also made aware that there are many products that require redesign or replacement, which in many cases is the result of companies buying product or process technology on a one-off basis and then failing to develop the product or process until recently, when greater import competition began to pressure the firms.

5. Inefficiency due to high vertical integration: The level of vertical integration through in-house manufacture of products used in the enterprise is generally very high. This often leads to high costs resulting from under-utilization of facilities and duplication of facilities within the enterprise, and can result in high inventories of products as work-in-process. The team observed many cases of production facilities being under-used and of products being manufactured in-house when it would be more economic to but in from a specialized producer. Such spinning-off of such activities might provide an impetus for the development of small and medium industry. Larger companies could provide the SMEs with technical assistance and product-specific tooling, and it may be that old machine tools no longer required by the large companies could be given or sold to SMEs or individual workers.

6. Production technology: The level of production technology in Yugoslav engineering industry is varied; it is, as one enterprise manager described it "in the gap between old and new", and it is quite usual for state-of-the-art equipment to exist alongside obsolete and old equipment. This results in finished products with widely varying quality levels. While modernization of production facilities will be necessary, one important part of corporate planning will be a careful assessment of existing facilities within the enterprise and within the industry at provincial and national levels, to determine whether other enterprise have unused equipment which can be purchased or sub-contra ted. In the tight financial situation facing many firms in the next few years, it will be wise to scrutinize investment requests from enterprises to try to curtail spending for new equipment as much as possible. Enterprises will need to be looking for possibilities of sharing resources, buying in products, etc and thereby saving on their own investment expenditures. One example of the savings possible: ENERGOINVEST has a testing facility which it is willing to rent out since it is less than fully used; RADE KONCAR has in its investment plans a project to build one for its own (limited) purposes.

7. Cost competitiveness: In general, Yugoslav engineering firms have the potential to derive a 15-20% cost advantage in labor-intensive, customized engineering products, providing low wage costs can be translated into low unit

labor costs through increased productivity and other measures aimed at operational efficiency. However, the starting point for these exercises is an accurate analysis of manufacturing costs.

8. Material inputs and capital goods: The engineering industries do not appear to have major problems with either imported or domestic inputs, but there are two exceptions worth mentioning. First, their imports of capital equipment remain subject to quotas and clearance procedures which appear to delay procurement at times. Second, enterprises find the quality of some domestically-produced steel products of very low and variable quality.

9. Investment Programs: Despite large investments being made in most of the enterprises, some of which have been rather unprofitable frequently because production and sales levels have been too low, the investment needs foreseen by the enterprises the team visited are sizeable. Extrapolated on a national basis, the programs of the companies visited would be several hundred million dollars. There will be a need for these programs to be screened carefully; preferably, the screening should be done after the company has developed its strategic plan and defined its core business and rationalization programs for products and facilities. Only in the most obvious cases, (such as where investment delays would clearly jeopardize exports or worsen production bottlenecks) should investment approval be given before the company has its corporate plan prepared.

10. Surplus labor: It is generally accepted that the engineering industry suffers from excess manpower, particularly in the indirect labor category, but also on the shop floor. The team believes that there is significant scope for increasing sub-contracting, which may be a way of mitigating the unemployment that will result, at least in the short-term, from labor reduction programs.

11. Lack of skilled workers: The companies visited indicated some shortages of skilled labor; this may not be a general problem, but may affect a few areas, in particular information processing occupations. It is clear that there are shortages of skilled management personnel, particularly in the areas of business planning and strategic planning; unfortunately, the research institutes do not appear to be able to supply many personnel and consulting services in this area, since most are staffed by personnel experienced mainly in macro-economic and theoretical work.

12. Finance: By and large, there were few enterprises within the companies visited that are loss-makers, although all the companies experienced liquidity strains in 1989. TAM suffered losses due to the severe shrinkage of its domestic market at the time it was carrying out a major investment program in a non-core business area. Similarly, the refrigerator factory in RADE KONCAR ran into difficulties because of its poor financial structure. Its operations were totally debt-financed. Although an enterprise-by-enterprise analysis has not been possible, it is probable that there are several enterprises that will need financial restructuring provided they have a viable production program. There is considerable cross-subsidization within a CO to cover the losses of some WOs. There are several operational areas where

improvements would improve the enterprises' financial results. One of them would be better management of inventories; another would be greater attention to commercial terms and conditions, particularly in project contracts.

13. Conclusion and Next Steps: Yugoslavia has a broad-based engineering industry with significant strengths in product design and manufacturing capabilities and manned by capable personnel. It therefore has the potential to compete in global markets, but it will need to orient its products in order to improve capacity utilization and to compensate for the temporary shrinkage of the domestic market. Moreover, the industry continues to be handicapped by systemic issues outlined above. While steps are being taken too change legislation to provide a firmer basis for proper industrial management and planning, in the meantime engineering industries need to undertake restructuring actions based on comprehensive analysis of the enterprise system and its business environment.

B. Chemical Industry

14. Diversity of product groups: The Yugoslav chemical industry is extremely diverse, comprising several major subsectors such as inorganic chemicals and derivatives; organic primary building blocks, intermediates, derivatives (plastic resins, synthetic detergents, rubber, fiber intermediates, etc.); drugs, pharmaceuticals and fine chemicals; petroleum refining; fertilizers; and several industrial and consumer products. Each of the major subsectors comprise a very large number of product groups and individual products. The characteristics of constituent subsector and product branches, in terms of markets, capital-, and technology-intensity, and product quality requirements differ considerably, as also the impact of the general and sector policy framework on the performance and growth prospects of the branches as well as the sector as a whole. Visits to chemical sector enterprises included: two drugs and pharmaceuticals firm, three firms engaged in production of diverse organic and inorganic intermediates and final products, one pneumatic tires and rubber products firm; one fertilizer manufacturing firm; and one petroleum refinery.

15. Performance of the sector: The share of the chemical industry sector in the total industrial sector in terms of GSP increased from 5.3% in 1965 to 10.0% in 1980, and to 10.6% in 1988. This translates to about 10.8% annual average growth rate during 1965-80, declining to 4.2% between 1980-86 and to about 2.4-2.8% during 1987 and 1988. The sector accounted for Dinar 3.0 billion output in 1965 (in constant 1972 old Dinar terms), increasing consistently to about Dinar 18.8 billion in 1988. It is among the fastest growing sectors in industry, able to maintain a positive growth rate in 1988 when most others registered a negative growth. However, there has been a decline in rates of growth in output and productivity in the recent years, and an increase in financial losses in some of the subsectors. Investments in capacity expansion, modernization of technology and equipment, as well as growth in domestic and export markets have stagnated despite the growth potential of the sector.

16. Constraints on development: Several factors, iteratively and cumulatively, have hindered the development of the chemical sector. First, the inward-looking orientation of the sector coupled with market segmentation along republican boundaries, have contributed to over-investment and sub-optimal capacity utilization leading to higher production costs. This negative impact is most relevant in capital-intensive subsectors sensitive to economies of scale of investments, such as refining, fertilizers and primary petrochemicals. Second, past policy environment including distorted taxation and tariff regimes, relative prices, lack of labor mobility, price regulation, and distortion in incentive systems arising from ownership and self-management systems have led to a sector structure which avoids local market competition and product segmentation, lack of financial discipline, and limited import and export competitiveness. Third, as a consequence of the above-mentioned factors, enterprises have had little incentive to develop domestic and export market opportunities, to control and improve operational, financial and investment efficiency, and to develop a suitable business strategy to improve these shortcomings.

17. Enterprise organization: Since January, 1990 the enterprises have integrated the previous BOALs and are reorganizing along functional lines with common support departments, such as marketing, accounting and finance, general administration, maintenance, etc. Reorganization on such functional lines should lead to more efficient management. A notable feature is that in some of the enterprises, corporate strategy developments have been created which are of importance, particularly in the export markets which require not only productive efficiency, but also attention to quality, service, innovation, product differentiation and market segmentation. Ownership and the relationship between Management and the Workers' Council, however, are issues that remain to be resolved.

18. Management authority and responsibility: At all enterprises reviewed, management personnel exhibited a high level of professional capabilities in their respective areas of expertise. There is also awareness of the need to take a unified approach to decision-making to improve the profitability of the enterprise, especially concerning those for future investments. This approach would need to be systematized and strengthened perhaps with some external assistance.

19. Corporate Strategies: Although most enterprises have short and medium-term development plans of various magnitude, the degree of analysis justifying these investments is suspect. While such investments may be technically justified, they would need to be thoroughly re-evaluated taking into account the changing domestic and international environment. The concept of long-range strategic planning is missing at all enterprises reviewed.

20. Product-mix and marketing: The enterprises visited are engaged in exports ranging from about 20% to 80% of their main products lines. Modernization investments are being planned to increase capacity, productivity, and to reduce costs. Currently most of the exports are being subsidized by the high prices in the domestic market. Institutional arrangements for export marketing, including collaboration with foreign

companies/customers appear satisfactory. A comprehensive study would be most useful to quantify the contributions to the total business of the enterprise of each line of manufacturing leading to divestiture of certain unprofitable product lines, and to fully assess export market potential and devise methods and exploiting the market competitively, including joint ventures or straight marketing collaboration in other countries. Market data base should be created and maintained to provide the basis of future investments. All the firms are satisfied with the level and administrative system for export incentives, including the duty drawback system on imported inputs.

21. Technology: Manufacturing technologies used are generally old and need modernization for better efficiency and energy conservation to improve competitiveness in export markets. Nevertheless, considerable innovations in process and product design have been made through in-house development.[1] Product quality and internal systems for quality control appear quite good. Joint ventures and manufacture under license with international firms would further improve product recognition and market expansion.

22. Employment: Labor redundancy does not appear to be a crucial problem especially in capital intensive subsectors of refining, primary petrochemicals and fertilizers although there is scope for shedding excess labor in some of the enterprises visited. Attracting and retaining skilled labor did not seemed to be a problem, particularly since some enterprises had salary levels higher than for comparable jobs in the industrial sector. Managerial capabilities are quite high and at the senior levels of management, there is good understanding of the reasons for performance deficiencies, receptivity to new ideas, and general willingness to change. R&D capabilities in pharmaceuticals is particularly high. Some of the companies appear to need more structured training arrangements, especially for higher-level personnel. None of the enterprises have a comprehensive incentive scheme for any level of personnel.

23. Financial situation: All of the enterprises visited are, for the time being in adequate financial position although some deterioration of the financial ratios has occurred during the last couple of years. Inflation, higher financial costs, particularly for working capital given the increase in receivables and collection delays, reduced profit margins on account of the depressed domestic market, stiff competition in export markets and accounting practices are amongst the primary reasons for reduced profits. These companies were able to minimize the deterioration of their financial position because they are well established in the market with recognizable and good quality product lines, have generally achieved good capacity utilization, labor redundancy is not a major problem and have minimum levels of long-term debt. Under the present banking constraints and lack of long-term funds for capital

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1/ For example, OHIS was able to absorb Courtauld's imported technology for its initial 4,500 ton per year acrylic fibre plant, and then expand it to 30,000 ton per year, while incorporating a computerized control system for its spinning lines. All of this was done through its own efforts.

investments, however, there is an increasing danger that enterprises either postpone needed investments to reduce costs, improve quality and enhance their competitiveness in the export markets or will rely on expensive short-term funds to finance investments, a practice that will quickly impair their liquidity.

C. Forest Industry

24. Sectoral overview: Forestry and wood processing, excluding pulp and paper, employ a work force of 275,000 persons in almost 1200 enterprises and in 1989 accounted for roughly $1.0 billion in exports, 75% of which were to Western Europe and North America and 10% to CMEA countries. The enterprises in the subsector can be divided into three groups: (i) forestry enterprises which produce roundwood (logs); (ii) primary processing enterprises which produce sawnwood, wood based panels and veneer; and (iii) secondary processing enterprises which produce furniture and joinery products. Restructuring needs are most apparent in the forestry group and the furniture subgroup.

25. Low efficiency in log production: A national workforce in forestry of 67,000 produces an average of only 165 m3 of wood per man-year. One forestry enterprise visited during the mission produces about 285 m3 per man year, but does not deliver the wood to the processing plants. On the same basis, in North America, where logging is highly mechanized and clear cutting is the prevalent practice, the average can exceed 3000 m3 per man year. The apparent inefficiency of the forestry enterprises is sheltered by a log market where the demand exceeds the supply and the forestry enterprises, who have exclusive rights to harvest a specific forest area, have no need to compete for sales and are free to raise their prices to a level equal to the price of imported logs plus import duties. In addition forestry enterprises have little incentive to produce logs to the specifications which maximize the profitability of their customers, the wood processing enterprises.

26. High prices of domestic logs: As a result of market failure, the price of wood is high. Coniferous wood, for example costs $70 to $80 per m3 delivered to a sawmill. In the Northwest US it costs about US$15 per m3 to harvest logs and another $15 to deliver wood to a sawmill. Thus, a potentially large economic rent is collected by the forestry enterprises, one that manifests itself in excessive costs rather than excessive profits. On the other hand, the wood processing enterprises, which have a much larger investment per m3 of wood than the forestry enterprises and which must sell in competitive markets, pay a premium price for their raw material and thus may not be able to earn an adequate return on their invested capital.

27. Need for divestiture of forestry enterprises: To reduce this distortion and increase efficiency in log production, while fostering the development of small scale enterprises, it may be desireable to break-up the forestry enterprises and allocate logging rights to the wood processing companies. The next step would be to permit the workers in forestry enterprises to buy the chain saws, tractors and horses and become independent

contractors producing wood at an agreed rate per m3 for the wood processing enterprises. Road building equipment could also be sold off and independent contractors would also be hired to build and maintain main forest roads and skid roads. Similarly, the processing enterprises could sell off their truck fleets to individuals who would become independent contractors for delivering wood from the forest to the mills.

28. Any remaining economic rent accruing to wood processing enterprises could be taxed away by imposing royalties and this revenue could be used to improve the productivity of Yugoslavia's forests and pay the wages of government foresters who would insure that the regulations governing the forest concessions were respected by the enterprises.

29. Cost burden for reforestation: Another issue concerns recent regulations which require the industry to plant 14 m2 of forest for every m3 of wood harvested. The enterprises estimate that this will impose a cost equal to 15 to 25% of the current price of logs or $80 to 140 million per year. While reforestation is important, the burden placed on the industry should be reasonable and take into account the fact that the enterprises must wait 60 to 70 years before enjoying any return on this investment. Thus the rate of return is very low and consideration should be given to alternative and more productive uses of scarce capital.

30. Primary Processing: For the enterprises visited, it appeared that the primary processing of wood into sawn timber, plywood, veneer, and wood based panels for sale on the domestic market is profitable, but in some cases not profitable enough to justify the replacement of existing equipment at the end of its normal economic life. Thus some of the production lines are 20 to thirty years old. Even in newer facilities with equipment which is 5 to 15 years old, the technology is equivalent to that prevalent in North America in the 1960's. In most cases, the export prices available for primary wood products are too low to provide for a profit. However, it can be expected that the domestic market will continue to consume most of the primary products produced, and thus, given lower wood costs and a reduction in the number of surplus workers, there is no need for major physical restructuring of primary production facilities. Rather, they need to be gradually renewed and upgraded.

31. Secondary Wood Products: For 1989 furniture exports totalled $450 million or 20% of total furniture output. Furniture is also, by far, the major employer in the wood processing subsector (about 113,000, or 40% of the total work force in the forest industry). However, exports to North America, which account for 40% of the total, are concentrated on the low priced end of the market for solid wood "colonial" type of furniture. In general the manufacture of this type of furniture is not profitable.

32. For exports of other types of furniture, Yugoslav manufacturers are also at a competitive disadvantage. Even when the quality and design of upholstered and panel board furniture produced is equivalent to that produced in Italy, prices are lower than those for Italian furniture because the latter has a superior image. In other cases producer prices must be lower in order

to be competitive in the face of various forms of protectionism. More commonly, however, prices are low either because the furniture is targeted to the low priced end of the market or because surface finishing, though good, needs to be improved in order to obtain the best prices.

33. Thus, it is in the area of furniture manufacturing where major investments will be required to restructure existing plants and upgrade the quality of products produced, so that Yugoslavia can become an supplier to the higher priced and design and quality sensitive segments of the market.

34. Management Development: At the present time most of the managers of the enterprises in the sector are not accustomed to making production decisions based on profit maximization. The are not aware of their costs and when they find themselves with available production capacity they will except any order, particularly any export order, even if filling the order results in a loss. Training of these managers in management accounting and production cost accounting is of the highest priority in any restructuring effort.

D. Textile Industry

35. Sectoral overview: The textile industry occupies an important position in the Yugoslav economy: its share in GDP is 5.7% and in industry's value-added is about 11.5%. It provides employment to about 470,000 workers accounting for 17% of industrial and 7.2% of the entire work-force. Its export (about $930 million in 1989) accounted for 10.4% of the country's industrial exports in 1989 and about 7.4% of the total exports.

36. There are 413 enterprises in the textile industry: 131 are operating as integrated enterprises, 16 weaving and finishing, 169 clothing, 61 knitting, 11 man-made fibers (MMF) and 25 others. A typical enterprise in the primary textiles is an integrated textile plant covering spinning, weaving, and finishing operations. Only about 10% of the enterprises (mostly, weaving and finishing units) are not integrated. A large number of primary textile enterprises are further integrated forward to include clothing and household textiles. The knitting enterprises are frequently integrated forward to encompass the underwear and outer-wear garment manufacturing. In contrast, the clothing enterprises are generally fragmented. The Yugoslav textile industry, with about 1.5 million spindles and 21,000 looms, could be could be considered comparable in terms of size with most West and East European countries.

37. Inefficient management of large integrated plants: The industry is characterized by a heavy concentration of basic production facilities in a limited number of integrated mills which are too large to be managed efficiently. Excessive integration in these plants makes it difficult for these integrated enterprises to respond to the increasing diversity of the market. Most plants lack specialization of product-mix and produce too many varieties of materials. The garment units are often too small to benefit from economies of scale.

38. Export market: Exports of textile products are destined predominantly to the East European markets (about 56% of the total export). This is primarily because of their lower demands on quality and fashion, and their "clearing agreements" with Yugoslavia which provides relatively assured market with no competition pressure for business on merits. In developed countries, there is a considerable export activity in "commission work" (an arrangement under which semi-finished goods are brought in Yugoslavia and re-shipped to the supplier after conversion). The most popular item is the conversion of fabrics into garments. Although on a smaller scale, there is also an import of textile yarns which are converted into woven fabrics or knitwear on a commission basis. Finally, monomers and polymers are imported for conversion into MMF under commission arrangements. It is estimated that the net foreign exchange earning through commission exports is about 65% of the gross earning.

39. Unprofitable export to developed countries: The export of textiles (yarn and cloth) to developed countries is invariably done at 15-20% below the cost due to high level of taxes and duties, low productivity, and over-manning that makes Yugoslav textile export on cost-plus basis almost impossible. Export earning data underscore that Yugoslavia has, despite low productivity and over-manning, maximum advantage in the most labor intensive (garment manufacturing) activity. It also indicates that in "commission work" since no import duties and taxes is involved, it remains the only economic export operation.

40. Production technology (1): The spinning subsector, with about 1.5 million spindles, is largely obsolete in terms of age and technology. Excepting for 43,000 spindles, or 3% of the total, and about 47,000 rotors which are of advanced technology, the rest is technologically outdated. The weaving subsector, with 21,000 looms, is technologically more backward excepting for 12% looms which are of shuttleless type. The subsector has a high number of shuttle looms which are of low width and hence cannot weave variety of wide fabrics which are in greater demand in the export market. A large portion of shuttleless looms are sourced from Eastern Europe and reflect an earlier generation technology. Partly due to the outmoded technology the quality of yarn and cloth is generally low. The overall efficiencies in the spinning and weaving plants are low at 75% and 72% when compared with 90% and 87% respectively in Western Europe. The finishing subsector is largely installed with over 15-year old equipment which typically is narrow-width and discontinuous (batch) type. Most finishing plants are not equipped with effluent treatment plant and discharge waste water, some toxic, into the nearby river or water bed.

41. Production technology (2): In the wool subsector, the plants are smaller in size than found in West Europe, and the production is fragmented into a large number of small lots of different yarn count resulting in a very low overall efficiency of 60%. The wool subsector is poorly structured, as about half of the spinning plants operate their own wool-scouring and top-making facilities. A more efficient practice is to limit the number of these up-stream operation to achieve economies of scale. The hosiery and knitting subsector, despite being relatively more modern, has a low overall efficiency

of 73%. The main factors are unsatisfactory yarn quality, shortage of spares, and low level of operator training. The MMF subsector has provided a good raw material support to the highly import-dependent textile industry. However, the polyester plants are somewhat outdated and half of the units are below the minimum economic size. Rayon and acrylic plants are old and outdated, and produce fibers of lower quality when compared with West European fiber quality. The prices of domestically produced fibers are about 15-20% higher than the imported fibers. The garment subsector is characterized by low technology and high labor intensive operation. Due to the absence of more modern computer-aided-design (CAD), and computer-aided-manufacturing (CAM) facilities in the garment sector, the fabric wastage is higher (up to 18% against a norm of 8%).

42. Low labor cost: The abundant availability of a skilled, and semi-skilled work force at a relatively low cost provides a major competitive strength for Yugoslavian textile sector. The average wage of a textile worker in Yugoslavia is about Dinar 1,500 per month or about US$0.75/hour compared to the average hourly wage rate for a textile worker in Pakistan of $0.59; in India, $0.83; in Taiwan, $6.60; in the US, $7.92; and in Switzerland, $13.80. More importantly, unlike many other developing countries the Yugoslav textile industry is comparatively free from trade union tensions, labor disputes and lost man-days due to strikes etc.

43. Redundant workers: However, much of this advantage is lost because of the low work-assignments in the Yugoslavian textile plants and consequently the sector is very much over-manned (roughly estimated at 25 to 40%). A comparative study of labor productivity with developing economies highlights that over-employment in Yugoslavia textile sector ranges from 1.5 to 2.0 times in most plants visited. A study which compared labor productivity of a few Yugoslavian textile plants with a modern and specialized mill in the UK indicated that operative hours required to produce 100 kgs. of yarn (also called HOK) in Yugoslavia is about 4 times higher than in the UK. This means that the labor productivity of Yugoslavian worker is about one-quarter of the specialized plant in Western Europe. The management teams in the enterprises visited are actively seeking to reduce the work force through retirements and voluntary departures. However, still a large work force is employed in production and, in particular, in administration and non-operational areas.

44. Labor skills: Based on the observations of the running mills and final product quality, it is clear that both technicians and machine operators are capable of acquiring skills to run modern machinery (e.g. open-end spinning and shuttleless looms). Some of the older machines are still producing reasonable quality of yarn and cloth, indicating good practice by technical staff and workers over a long period. In particular, the maintenance staff are adequately skilled.

45. Financial situation: Most of the textile enterprises have been incurring heavy financial losses in their operations year-after-year. Some of these losses are due to high production costs and low prices that are below production costs on export items. The high production costs is in major part due to exceedingly high interest burden on the enterprises, and in part due to

high level of import duties that are not fully refunded. Higher cost of production is also the result of low levels of productivity due to some obsolete machinery and production bottlenecks and surplus labor employment. By and large the textile enterprises are excessively indebted.

YUGOSLAVIA - INDUSTRIAL RESTRUCTURING STUDY
SUGGESTED TERMS OF REFERENCE FOR A RESTRUCTURING STUDY

Introduction

1. The primary objective of restructuring is to assist the enterprises in formulating and implementing long-term comprehensive strategic plans which would enable them to improve their operational efficiency and competitiveness through optimal development of their managerial, technological, human resource, marketing and locational (proximity to EEC markets) strengths etc. and to enable them to overcome weaknesses in operational areas which have an impact on their international competitiveness. The medium term goals are to realize growth in sales, profitability and market share both in the domestic and export markets through the development of well-formulated product-market stratagies, introduction where appropriate of new products and production technologies based either on in-house research or technology transfer agreements, facilitate the formation of joint ventures or other strategic alliances where these are considered useful for realizing synergistic advantages; increasing operational efficiencies through modernization of facilities, improvements in productivity, implementation of cost reduction programmes; and introducing organizational structures , management systems, and human resource development programmes to meet the challenges of the emerging global competitive environment. On the assumption that economically and financially viable product/market strategies can be formulated, an important aspect of the restructuring plans would be the inclusion of recommendations which would lead to a healthy financial structure of the enterprise.

2. The assistance of international consultants with considerable experience and expertise in restructuring of enterprises is being sought to undertake a comprehensive review of the enterprise's operations and strategies and to develop medium to long term plans including practical and realizable action plans for implementation of the recommended strategies so as to assure the enterprise's future competitiveness, growth and profitability. The total involvement of the top and senior management of the enterprise in the development of these strategic plans is considered as an essential element for the effectiveness and future success of these restructuring programs. Consultants would therefore be expected to advise top management of the enterprise on the formation of competent task forces who would be expected to work closely with them and be totally involved in the initial diagnosis of the critical issues facing the enterprise and the development of alternative strategies for their resolution. The involvement of local consultant organizations, to the extent that such consultants are available is also considered as an important aspect of these consultant assignments - the objective here being twofold - namely to facilitate the development of Yugoslavian consultants to undertake similar restructuring assignments in future (there is extensive need for such restructuring) and to reduce the total cost of consultant work.

Scope of the work.

Enterprise-specific Restructuring Plans

3. The major effort in this assignment would need to be devoted to assisting the enterprises in developing comprehensive restructuring plans, and consultants should plan their work accordingly. The end-product of this phase would cover the proposed enterprise restructuring plan based on the analytical work indicated below, as well as specific programs which can be implemented in the short-term including and aimed at improving the operational effectiveness and performance of the enterprise through well-considered cost reduction and productivity improvement programmes, formation of joint ventures or spin-offs of non-core activities.

Present Activities of the Enterprise-Situation Analysis.

4. Description on the growth of the enterprise's individual operation with documentation of its recent performance, financial history and cash generation. The consultants should critically examine the information that has been already prepared by the enterprise. This examination includes a critical analysis of product and operation-wise profitability with a view to identifying on a preliminary basis profitable and non-profitable areas.

Product and Market Strategy.

5. This includes current and potential competitiveness of major product groups in the domestic, and export markets(separately for export to CMEA countries, industrial market economies and other developing countries) to lead to recommendations for product groups/markets that should form the enterprise's focus to ensure its economic and financial viability. The product and market strategies should be based on a detailed analysis of product groups, technologies, prices (external and transfer), market demand, market share of the domestic and foreign competitors, including the impact of quality differences as well as a full breakdown of cost comparisons by major cost category and developing value-added chains between domestic and foreign competitors as well as action required to rectify any major deviation in such categories. The analysis should consider the full range of enterprise's product-mix in order to provide product choices, including need for specialization in product groups i.e. what product lines have the potential to continue and what should be phased out, what products should be consolidated to avoid overlapping and duplication. The primary consideration should be the enterprise's capacity to make the product to international standards of cost, quality and technology. Any diversification program of new products should be examined for their strategic fit with current operations.

Technology

6. Evaluation of product technology of existing and proposed product-mix with special consideration of available inputs providing recommendations for alternative materials/components substitution and additions; proposed

technologies in terms of product and manufacturing processes including development of tooling, jigs and fixtures; examination of existing licensing and know-how arrangements with recommendations for necessary strategic alliances in order to enhance international competitiveness; assessment of present production facilities indicating areas for upgrading, replacement, improvement and rationalization and productivity improvement, cost reduction measures, assessment of environmental impact; role of sub-contracting and its impact on technology upgrading and renewal of existing equipment; evaluation of quality control and testing facilities; appropriateness of R&D at headquarters and/or plants including recommendations for strengthening technology management indicating costs and benefits expected from the program.

Organization Structure

7. Based on the recommended product/market strategies, to review the adequacy of the current organization structure of the enterprise and its affiliates/subsidiaries/sister enterprises and make recommendations for an appropriate structure that would improve the flexibility and the response time of the organization and its sub-units to meet the challenges of the emerging international competitive environment under which it would be expected to operate. The design of the organization would encompass all critical management functions including marketing, finance, manufacturing, product development, human resource development and support facilities. The proposed structure would include recommendations related to corporate structure and to the appropriate levels of management to facilitate communications and to provide an environment of efficient operations, and recommendations for a programme of organization development (including role-playing activities) that would bring about the necessary changes in the organizational culture, and spell out the need for (and availability of suitable management training facilities) at various levels to bridge current skill gaps. The actual conducting of these training and developmental activities is however outside the scope of the present assignment.

Management Systems Development.

8. Assessment of the present status and adequacy of the enterprise's management information systems and computerization covering major operational and functional areas in the context of the proposed organization structure and product/market strategy. In particular the linkage between the headquarters and the plants with a view to facilitate production planning, marketing and financial controls should be critically reviewed. Specific recommendations for short-term improvements in management reporting on operational activities and long-term development of MIS should be included. Emphasis in system development needs to be given to cost accounting, materials management and budgetary controls.

Human Resources

9. Examine the existing manning strengths and work culture and the constraints it imposes on operational efficiency. Based on the proposed product/market strategies and the related organizational structure, establish the optimal staffing at all levels for both direct and indirect employees, identify skill gaps, and recommend incentive systems to bring the operational efficiency to internationally competitive levels. If possible make recommendations on suitable measures for dealing with surplus employees including retraining, opportunities for utilization for subcontracting activities (in manufacturing or service operations), and separation schemes to facilitate rehabilitation.

Strategic Management

10. It is important to create a management culture where strategic thinking is the norm. Consultants should recommend a program which would institutionalize strategic planning with greater emphasis on the process of planning and strategic thinking at senior management levels, rather than one which results in a mechanistic approach of developing long-term plans and budgets.

Investment Requirements and Likely Sources /Joint Venture Partners.

11. To support the strategies in the above areas, establish investment requirements in local and foreign currency for different categories (technical assistance, training, technology transfer, software, MIS, equipment, civil works etc) separately for different product groups/operations and the enterprise as a whole. The proposed investments should be analyzed for their financial and economic viability.

Financial Restructuring

12. Identification of the need for any financial restructuring which may be required to bring the enterprises s financial position to a reasonable healthy level for future sustained operations, based on a review of the latest balance sheets, income statements and projected investments for the proposed product/market strategies as determined under para 5. In defining options for financial restructuring consideration should be given to:

- debt restructuring
- asset write-down
- sale of assets
- leasing of assets
- improving debt:equity (through infusion of new equity)
- joint ventures with foreign and local partners
- ownership diversification; privatization
- contract management
- closure of parts of the enterprise etc.

Preliminary recommendations as to the sources of finance, including potential joint venture partners interested in equity participation (some suggestions can be made by the consultants), sale of surplus assets or of poorly performing enterprises within the group are expected as a part of this analysis.

Impact Analysis.

13. Establish impact of recommended strategies and investments on production, value added, profits, foreign exchange earning, employment etc. for the fiscal years 1992 and 1997.

Implementation Plan

14. Formulate terms of reference, organizational arrangements and action-oriented implementation plan of with schedule for various tasks to implement the proposed strategies.

YUGOSLAVIA - INDUSTRIAL RESTRUCTURING STUDY

LIST OF ENTERPRISE CASES IN THE STUDY FILE

Engineering Industry

1. TPK, Zagreb	thermal power eq., boilers
2. Braca Karic, Pec	engineering, food processing machinery
3. Radoje Dakic, Titograd	construction machinery
4. METALNA, Maribor	industrial machinery, metal structures
5. MIN, Nis	locomotives, cranes
6. MZ "Tito", Skopje	machine tools, appliances, brakes
7. ZASTAVA, Kragujevac	transport vehicles
8. TAM, Maribor	transport vehicles
9. FAMOS, Sarajevo	diesel engines, transmissions
10. 3 MAJ, Rijeka	shipbuilding
11. ENERGOINVEST, Sarajevo	electric machinery, oil refinery, non-ferrous metallurgy, etc.
12. Elektronska Industrija, Nis	industrial and consumer electronics
13. Rade Koncar, Zagreb	electric machinery
14. Mosa Pijade, Svetozarevo	cables

Chemical Industry

15. Pancevo Refinery (NAFTEGAS), Pancevo	oil refinery
16. ZUPA, Krusevac	organic and inorganic chemicals
17. OHIS, Skopje	acrylic fibers, PVC products, detergents, pesticides and fiberglass
18. KRKA, Novo Mesto	pharmaceuticals, cosmetics
19. PLIVA, Zagreb	pharmaceuticals, bio-intermediaries, food
20. Miloje Zakic, Krusevac	rubber products

Forest Industry

21. NOVOLES, Straza	sawnwood, plywood, furniture
22. SIPAD, Sarajevo	sawnwood, chipboard, hardboard, veneer, plywood, furniture
23. Fabrika Celuloza, Ivangrad	pulp and paper
24. MATROZ, Sremska Mitrovica	pulp and paper

Light Industry

25. Branko Krsmanovic, Paracin	wool textile and garment
26. TEKSTILINDUS, Kranj	cotton textile
27. Djuro Salaj, Mostar	cotton textile and garment
28. TITEX, Titograd	textile and garment
29. BEKO, Belgrade	garment
30. BOROVO, Borovo	footwear, rubber products

Agro-Industry

31. Servo Mihalj, Zrenjanin	farming, cattle breeding, meat processing, leather processing, brewery, bakery

Rade Koncar, Zagreb

A. Basic Features

1. Rade Koncar began as a subsidiary of Siemens and became a company governed by a Workers Council in 1950. Today, it is the largest manufacturing concern in Zagreb, and one of the largest manufacturers of electrical equipment for power generation, distribution and transmission in Yugoslavia, with 37 enterprises employing 24,186 people nation-wide. The company, which consists of a few large enterprises surrounded by a group of small and medium-sized enterprises, plans to organize itself under a holding company structure once ownership issues are resolved. The company had sales of about $300 million in 1989, of which 40% were exports.

B. Product Mix

2. RK has a wide range of products, with major emphasis in power generation, transmission and distribution equipment, supplying power plants on a turn-key basis. It is also engaged in industrial electronics, computer-based central process-control systems, industrial catering equipment, electrical consumer durables, electric locomotives, elevators and escalators, and solar power equipment with generating capacity up to 1200 kw.

C. Marketing and Sales

3. The company had sales in 1989 of 1,275 million dinar, equivalent to about $350 million. This was equivalent to about $13,000 per worker, which is far lower than the $100,000 that a good European company in a similar business would expect as a minimum. In 1990, the company is projecting an increase in sales to the equivalent of $500 million, on the basis of domestic market growth of 9% and export growth of 66%. In 1989, exports amounted to about $120 million, out of which approximately $80 million was to hard currency markets. The company exports to some 70 countries, the major being USSR, Czechoslovakia, Italy, E. Germany, and China; its exports to industrialized and developing countries are composed of many relatively small amounts to each individual country.

4. RK has a central marketing organization (with some overseas branch offices) which looks after both domestic and export marketing for all enterprises, although the company has now, as part of its policy of decentralizing responsibility for profits to each enterprise, given the enterprises the power to decide whether to use the central marketing organization or to make its own arrangements.

5. With the recent reforms in economic policy and the convertible dinar, the company has shifted emphasis from exporting at any cost to exports where profits can be realized and where there are no constraints on payment.

(The company claims to have experienced a number of export contracts where payments have been delayed and bank borrowing has been necessary to finance production costs.) In addition, the company aims to change its previous practice of selling standard products to industrialized countries and turn-key projects to developing countries, and is focussing on increasing turn-key and product sales to industrialized countries, which it recognizes will require major efforts to improve quality and cost competitiveness. The company anticipates rapid growth in exports over the near future, which will offset slower domestic sales.

D. Technology

6. RK has a strong in-house R&D effort, with 3% of annual sales revenues allocated to this area. The company estimates that 85% of total sales revenues derive from products designed and developed by itself. Today, the responsibility for product engineering has largely been decentralized to each enterprise, and the central R&D department has more advanced and specialized functions. In addition, RK is active in obtaining technology transfer licenses from leading international firms; it has research cooperation agreements with eight European firms and one US firm, as well as several Yugoslav research institutes. In addition, RK has its own Electrotechnological Institute, which contains some 800 engineers and technicians (which means almost certainly that it is overstaffed, given the level of business conducted by the group), and the company has sold its own licenses internationally, to Iran and India among others. Thus, the firm has considerable technological confidence and competence and an international reputation, and it clearly sees its future as a high-technology, knowledge-based company. In the hydropower field, it considers itself to have international competitiveness in all aspects of power plant design and production (particularly in their control facilities), whereas in other areas it is willing to claim at best only prominence among Yugoslav firms.

7. Due to the large number of manufacturing enterprises within the company, production equipment of widely varying ages is installed; the company itself described the situation as being "in the gap between old and new". In general, the company appears to consider that its technology and product range problems are most severe in the household goods enterprises. RK has an investment program of over $100 million for the next five years, which includes not only modernization of facilities but also purchase of technology, training, etc.

8. Two investment programs, one concerning the manufacture of servo-motors and the other for manufacture of porcelain and industrial ceramics, were presented to the mission. The servo-motor project is supposed to replace partially motors for washing machines, for which demand and sales have been dropping. The mission visited the enterprise (in Ivanec) where the motors are being produced. The work-flow and layout of the manufacturing facilities were good, and with the equipment available (much of it quite old, but modernized in critical quality areas) direct labor productivity appeared good. Quality

of product is also good; the enterprise supplies its motors to an Italian firm under a zero-defect contract, and has introduced a number of design changes in the motor to reduce weight and cost which were being tested for durability when we visited. However, the enterprise has difficulties in selling its output, although it has recently signed a contract to supply the improved model to Italy again. Its experiences are an excellent example of a classic product cycle; the product was introduced in the 1970s and experienced good sales, in both domestic and foreign markets, until the mid-1980s, when the lack of product development, competition from new producers and the removal of export incentives combined to reduce sales in both markets. The enterprise's response to the situation was delayed until last year, when it began an internal design improvement exercise and started to design a new product, servo-motors for CNC machines, which it considered would build on its existing skills and offer rapid market growth in both domestic and foreign markets. The enterprise has carried out market research on the domestic market, which is relatively small (maybe 4,000 units a year), but not on the export market, which is where sales will need to be concentrated in the foreseeable future.

9. In general, RK does not experience any constraints in obtaining inputs domestically or from overseas. The company indicated that government and Chamber of Economy controls had diminished and that the company was able to pursue more rational material management as a result. Its chief concern was in the financial field; currently, working capital financing is expensive and getting more so, its credits receivable account is not good because of the pressures on customers from the financial situation, and the firm's competitiveness against foreign competition is hampered by the absence of funding mechanisms in Yugoslavia for capital goods sales.

As evidence of cost consciousness, we were shown a detailed value-engineering exercise carried out in-house to cut costs of motor components without sacrificing specifications or quality. The company also uses linear planning techniques to determine optimal product mixes for a group of produ ts, based on market considerations, production costs, prices and shop capacities and designed to maximize profits. RK is aware of industrial engineering techniques and uses them in its enterprises. The company also has CAD/CAM/CAE in-house facilities for a number of product groups and is widening their application.

E. Labor

10. RK employs a total of 24,186 people in 37 enterprises, an average of 636 per enterprise; the number of employees ranges from 20 to 1,700 persons. In common with the other firms visited, RK is over-staffed, in particular in terms of indirect labor. In one small enterprise that we visited, the employment figures contained much larger numbers of indirect labor than are required, many of whom were relatively highly-qualified and highly-paid. Output per worker is about $13,000 across the company, which is very low compared with similar firms in W. Europe which would expect at least $100,000 per employee; however, the figure varies considerably from enterprise to

enterprise, and the recently established solar cell enterprise (in collaboration with an American firm) is already producing $100,000 per employee. RK's President is fully conscious of the problem, but considers that proposals to deal with the problem must await legislative changes clarifying ownership issues. The President indicated that there was a possibility that, in addition to the labor-shedding allowed by the current Law on Labor, there might be more drastic reductions in the labor force because of the technical bankruptcy of three enterprises within the company. In fact, he stated that bankruptcy proceedings were already underway at one factory, which was closed in December 1989 and is expected to reopen in April 1990, after selling one plant and rationalizing the operations of another.

11. RK takes some considerable pride in its technical skills and the fact that it established many years ago its own technical school (which is also over-staffed) to compensate for the weaknesses of the official education and training system. In the past, as one of the largest and most prestigious employers in Zagreb, RK had the practice of hiring a significant proportion of the engineering and electronics graduates from Zagreb University, putting them through training in its own school and hiring permanently only the best. The company is also supporting the establishment of a new Institute for Business Administration which is soon to be established in Zagreb in collaboration with Florida State University.

F. Enterprise Organization and Management

12. RK is a Complex Organization with 37 enterprises formed from the amalgamation of a larger number of BOALs in 1989. The President acknowledged that these groupings were not necessarily consistent with either the commercial needs of individual enterprises or a coherent corporate structure of a holding company that RK proposes to become. RK now proposes to create a holding company in which it would have a majority share-holding in each enterprise that remains in the group.

13. Currently, the company regards itself as in a transitory situation, with its enterprises treated as independent profit centers, with common services of finance, marketing, research, training, and some welfare services being provided by the central corporate group. (The President indicated that a decision had been taken formally in 1976 to make all BOALs within the RK group profit centers, but that this decision had never been followed through in fact.) Enterprise managers are now free to make all decisions relating to day-to-day operations of enterprise so as to ensure profitability. They are linked to corporate headquarters in Zagreb by a computer network. Although we were not able to discuss the MIS system in detail, our discussions suggest that a reasonable system already exists that is capable of extension.

14. The company has a Corporate Development team led by a VP. Its first responsibility is to work on the company's internal organization.

G. Other Constraints

15. Except for liquidity, no other major problems appear to exist. The environmental impacts of the company's enterprises are generally limited, as is usual in this area, and investment programs executed in 1988 and 1989, as well as others now in the pipeline, are designed to deal with residual programs related mainly to disposal of effluents from painting operations and disposal of metal by-products.

H. Overall Evaluation of Efficiency and Competitiveness

16. RK gives an impression of a competently-run organization which has secured international competitiveness in one main area of business and has the potential to become competitive in other areas of its operations. It is a business operation that is aware of its deficiencies and appears to have internal management and technical resources capable of responding to the challenge of restructuring if the problems of manpower and finance can be handled.

I. Enterprise Restructuring Program and Observations

17. The earlier paragraphs give the impression of an alert and dynamic company. The company's President (who was VP of R&D under the previous President) outlined the critical issues facing RK and his strategy for restructuring and future development. He demonstrated a clear awareness of the company's problems and possible solutions, including the direction in which he wishes to see RK move over the next decade. In response, we informed him of our approach to restructuring, which would involve the development of a comprehensive strategic plan, including the overall objective of the company, organization structure (exploring possibilities of strategic business units and spinning-off of non-core enterprises), rationalization of products and production facilities, technology assessment and upgrading, management systems, financial and cost controls, etc., as a prior basis for evaluation of specific investment proposals. The President expressed great interest in our proposals and said that he would welcome an objective and sharply focussed look at RK by a competent international consultant firm with expertise in both organizational and technology issues.

Annex to RK Brief

A Brief Note on the Refrigerator Enterprise

This enterprise, which is located in Bitola, Macedonia, incurred heavy losses during 1989 amounting to the equivalent of about $9 million. It has the capacity to produce 250,000 refrigerators and other domestic appliances. The director of the enterprise indicated that the enterprise had never been strong financially because it has been operating with 100% borrowed funds, but had been able until 1989 to operate profitably. In the hyper-inflationary environment in 1989, its financial situation worsened dramatically because market prices for output could not keep pace with manufacturing costs and interest charges became excessive. In addition, the director indicated clearly that the firm lost the ability to calculate its costs accurately, partly because of its unfamiliarity with cost accounting in a hyper-inflationary situation, partly because it maintained stable ex-factory prices for too long and partly because its accounts receivable escalated, creating new borrowing requirements. All firms producing refrigerators (the firm's competitors are Govenja in Slovenia, Govenja in Bosnia, and Obed in Montenegro, with annual capacities of 400,000, 400,000 and 250,000 units respectively) had raised prices in 1989, reflecting the increase in non-production costs, but other firms with a better equity base had been able to live with lower increases. (It should be pointed out that domestic business has not been very good for several years because of the excess production capacity, about 1.3 million compared to annual demand of about 400,000.) Technically, the enterprise had become bankrupt, but was being kept afloat by a transfer of resources from RK, which the director said were carefully identified in the enterprise's accounts.

In 1990, the enterprise considers that it will not make a loss. However, the enterprise has been hit in the first two months of 1990, as have all producers, by the depressed domestic market, which has been made worse by official statements that prices of many goods will fall in the next few months as restrictive demand and monetary policies take effect. The director indicated that the enterprise would be able to deal with a 10-20% decline in prices, but would not cut its own prices until an "appropriate" time. While the enterprise exports, largely to hard-currency markets, it does not anticipate that sales can be increased enough to offset fully the weakness in the domestic market.

We reviewed the company's costs in general terms. Factory costs for various sizes of refrigerator appear to be comparable to international levels, although some of the cost advantages of low wage rates are lost by fairly serious over-staffing. The company had a technology tie up with Zanussi until 1980, and since then has manufactured a range of refrigerators of varying quality. (The quality variations are basically in the quality of the compressor, and the company buys local and imported compressors to allow it to tailor its noise and reliability specifications to the demands of the different markets.) For most of its sales, the enterprise is producing at the lower end of the market, although it has introduced some new lines in recent years. Some of the enterprise's longer-term problems are:

a) although the equipment in the factory is generally good and there is scope for cost reductions, the technology needs upgrading;

b) the company needs to develop a larger model for the US market which is seen as offering good opportunities;

c) accounts receivable remains a problem, weakening the financial situation and reducing the willingness of banks to lend, which in turn means the enterprise has to export to generate funds for investment;

d) the enterprise has too many workers.

The plan to produce a larger model for the US market will require new investment. In view of the current financial situation of the enterprise, it will be difficult to obtain funding for such investment. The enterprise will need to be examined very carefully as part of the overall RK restructuring program, and even if it is found to be viable on a long-term basis, it will require financial restructuring.

20. "Miloje Zakic", Krusevac

A. Basic Features

1. The company was established in 1889 with the manufacture of black gunpowder and this facilities were destroyed after WWI. After reconstruction, it was engaged in the production of chemical products, primarily for defense, from 1918 to 1945. These facilities were destroyed during WWII and were rebuilt after the war. Production increased to include masks and absorbent canisters. Currently the primary area of business is pneumatic tires and tubes. It employs about 6,200 people and has annual sales of about US$ 250 million equivalent. MZ plants are in four locations: (i) Obilicevo (tires for commercial vehicles, small trucks, tractors, wheel barrows, aviation tires, masks and rubber-based protective devices); (ii) Tryal (automobil tires of various sizes); (iii) Oktober-13 (bicycles and motorcycles tubes and tires); and (vi) explosive factory.

2. Until the end of 1989 the total activities of the company were organized into 8 BOALS. As of January 1990, the facilities are being reorganized on functional lines, with four departments for production and fours departments for support services. Each is headed by an Asst. Gral. Mgr. reporting to the GM. The GM reports to the Workers' Council with 35 members. The reorganization process, which will proceed along functional lines, is still in progress.

B. Product Mix

3. The product mix and production during the last four years are as follows:

Product:	1986	1987	1988	1989
	----------	'000	----------	
Tires for Tractors, cultivat., min. equip. wheel barrows, motorcyc. fork lifts.	1973	1927	2154	2245
Tubes for the above	2031	2425	2535	2293
Automobiles tires	1567	1577	1678	1652
Tires & tubes for bicycl. n/a	n/a	n/a	n/a	

C. Marketing and Sales

4. Export of rubber products has grown from 1,500 tons ln 1980 to 11,000 tons in 1988, or about 10% p.a.. In value terms, exports increased from US$9.6 million in 1980 to about US$13.0 million in 1988 or about 13% p.a. In 1988, MZ's share in the export market represents about 18% of total domestic rubber products and 20% in value. About 85% of the exports in value terms, are to convertible currency areas and the balance under clearing trade with GDR, USSR and Czekoslovakia. In 1988, the production of rubber products accounted for three fourths of total revenues with the balance for explosives and protective devices. About 40% of the rubber products production is exported. About 40% of the domestic sales are primarily for the local car manufacturer (Zastava) as original equipment and the balance as replacements. About 75% of all the inputs required for tires and tubes manufacture are imported, including all kinds of rubber, all reinforcement fabrics or steel cords, carbon black and other processing chemicals. The balance consisting mainly of solvent oils, bead wires, some carbon black and packaging materials are from domestic sources. Imports of inputs are allowed duty free if the company exports products of not less that 150% of the value of such imports; there are no other export incentives. Ad-valorem tariffs for domestic products range between 0% for natural rubber to about 25% for some inputs. About 80% of total exports is done through FTO, in some cases the FTO finances some exports and promotes publicity through fairs and exhibitions. The company does not have sales offices abroad.

5. The company makes little or no profit on export sales, which prior to the convertibility of the dinar, had to be made to earn the foreign exchange required for imported inputs. Preliminary review for a typical product indicates that exports are partly subsidized by domestic sales for which prices are substantially higher, particularly for replacement tires. Because of excess supply from domestic manufacturers prices are depressed and MZ has been unable to raise prices since late 1989.

6. MZ reported that they have few customers' complaints and that such complaints are attended attended to and their causes are rectified at the manufacturing stage.

D. Technology

7. MZ radial tires manufacturing technology was obtained from Kleber, France, in 1974 and from Dunlop, USA, for the manufacture of aircraft tires a few years ago. Technology for the manufacture of all kinds of tires and tubes has been developed by the company itself. It has developed its own formulations for several of its products. MZ appears to have adequate quality control equipment and systems. The manufacturing lines seem well maintained. The company intends to eliminate the textile reinforced tires in favor of all steel-belted radial tires where reportedly have a better profit margin. While doing so it intends to replace the manual system of tire making to automated machinery which is expected to increse productivity and sustain quality.

8. Over the last 3 years, MZ has spent about 1.5% of turnover for manufacturing development. It has made some innovations in its manufacturing process and has developed some new product lines. New investments are planned for modernization and expansion of capacity (about 30%) estimated at US$26 million, half of which would be in foreign exchange.

E. Labor

9. As of the end of 1989, MZ four plants employed 6,300 staff and workers. Total employment in the Tryal plant is 880 out of which 94% are in direct production and technical service functions and the balance in administration. At the Obilicevo plant, direct production personnel account for 96% of the total employment of 1,145 staff and workers. All production facilities operate round-the-clock. The total workforce includes about 70 mechanical engineers, 12 electronic engineers and technologists/engineers in other disciplines totalling about 340. At the shop floor worker level, MZ has an incentive bonus scheme for productivity improvements.

10. MZ appears to have a structured training program in rubber processing carried out in its technical center for 60 personnel every year. It actively encourages its personnel to attend graduate courses and languages skills. The company's development department currently employs 3 MSs, 40 BSs, 25 technicians and 35 skilled workers.

F. Finances

11. Miloje Zakic domestic and export sales have grown consistently during the last 10 years based on a strong production growth of about 9% during the period. In current terms, investments in new capacity and modernization of existing facilities totaled 58 billion dinars. In 1988, MZ total sales turnover placed it amongst the 200 biggest companies in the country. The production of rubber products, has grown from 5,800 tons in 1976 to 28,000 in 1988; within this product line, the production of tires has increased its share in the consolidated income and now accounts for 3/4 of total revenues. Despite the competitive nature of the market, MZ has achieved an impressive and sustained growth in its export sales increasing from 5.1 thousand tons in 1980 to 11.1 thousand tons in 1988 representing almost 20% of Yugoslavia's total export of tires. Despite a strong domestic and export sales, MZ posted in 1989 the first loss of its history on account of the increased cost of imported rubber, higher short-term interest costs and exchange losses on its foreign loans. Despite this lossess MZ appears financially sound with a current ratio of 1.4 and a debt/equity ratio of 5/95. At the end of 1989, MZ had foreign-denominated long-term debt of about US$12 million repayable in five years at Libor plus margin partly offset by about US$4.0 million on long-term receivables in forex exchange. MZ forsees no difficulties in servicing the foreign loans.

12. As previously explained, despite its limited ability to increase its domestic prices given the competitive nature of the market, the company expects to make profits in 1990. A somewhat limited analysis of the 1989 production costs and export revenues on some types of passenger tires has shown that these sales are made almost at cost in order to generate the foreign exchange the company needs to cover its substantial foreign exchange needs. MZ expects that the substantial productivity gains to be realized from the investment that has been previously described will provide the additional capacity to reduced fixed costs, particularly labor costs, and the productivity edge to increase its profit margins.

G. Enterprise Organization & Management

13. As summarized earlier, the organization of the company will be on functional lines with 4 Departments each managing the four production operations, namely rubber, protective devices, explosives and common utilities and maintenance services. There will be 3 assistant directors for marketing, transport and materials mangement, one for accounts and finance, and one for personnel, general administration and security. In addition, a separate department for strategy development it is to be created headed by an Assistant Manager.

14. MZ has developed computer-based production control with the assistance of the local data processing institute. The company has new computer hardware and its engineers are presently undertaking CAD (computer aided design) work. The company is not happy with the present batch processing of accounting and financial data done at the institute , and expects to transfer the whole system to to its own premises, particulalry since now all financial information will be prepared on a consolidated basis. An MIS system is being conceptualized with local assistance.

H. Environmental Considerations

15. The manufacturing process at MZ does not cause significant air pollution. The oil-fired steam generation facilities will be converted to gas from the middle of 1991. AIr quality is measured by a special station belonging to the Republic of Servia, half a km from the plant site. Liquid effluents are treated bilogically and is said to meet published standards. Scrap rubber and other solid waste is presently sent to a nearby cement factory for disposal. MZ is investigating the possiblity of installing steam generation facilities using the 1,500 tpa rubber scrap from the italian company Marangani. The estimated cost of this facility is about US$4-5 million.

16. Worplace safety concerns only high temperatures, particularly near the vulcanization facilities. Good ventilation system is provided which effectively controls fugitive emissions of the chemicals used for compunding and carbon black dust. Automatic CO2 fire extinguishers, together with

monitors have been installed in places along the manufacturing lines prone to fire. Workplace safety and pollution control arrangements appear satisfactory.

I. Future Plans

17. As mentioned earlier, the company has prepared pre-feasibilty studies for modernizing it Tryal and Obilicevo plants. For the Tryal plant, the forex component es estimated at US$ 7.7 fcr import of tire building machines, vulcanization presses and several control machines and laboratory equipment. Similar machine for the Obilicevo plant are planned to be imported at an estimated forex cost of US$ 5.5 million. The total expansion project for both projects is estimated at US$ 26 million.

J. Restructuring Potential

18. MZ has a record of continuous growth, innovations and capacity to adapt imported technology with in-house development capabilities. Besides the modernization investment planned by the company, the company needs a comprehensive study of its total operations for efficiency and cost reduction to increase its competitiveness in the domestic and export markets. The company would also need to investigate possibilities of joint venture or manufacture under license of well known international tire manufacturing companies to improve its acceptance in the international market as original equipment.

NOVOLES, Straza

A. Basic Features

1. Novoles, a CO, employs around 2500 persons including 2100 distributed among 4 WOs. These include primary wood products (820 persons), furniture (1040 persons), sanitary products (220 persons) and machinery (140 persons). Common services provided by the CO employ around 400 persons. Total 1990 sales are projected to be around Din 880 million. The company is suffering major losses and liquidity problems and it is probable that it will become insolvent before medium and long term restructuring programs can be implemented.

B. Product Mix, Markets and Marketing

2. Product group sales for 1990 and the percentage of sales to be exported are projected as follows:

(i) primary wood products, including sawn softwood timber, sawn beech timber, plywood, laminated wood, vinyl coated particle board drawers, furniture stock and joinery, Din 210 million (19%);

(ii) furniture and furniture components, including chairs, tables, cabinets and turnings, Din 470 million (70%);

(iii) sanitary products, Din 204 million (30%); and

(iv) machinery, mainly lacquer spraying equipment, Dinar 47 million (22%).

3. As shown in the table below, primary products are either sold on the domestic market or used internally for further processing into furniture stock which is in turn used by Novoles for furniture manufacturing or sold or sold to other manufacturers.

Novoles - Primary Producers

Wood Usage and Sales (in m3)

Item	Plywood & Laminate	Softwood Lumber	Hardwood Lumber	Furniture Stock
Logs Consumed	25000	20000	45000	
Beech Sawnwood Consumed				33000
Laminate Consumed				1000
Production	9200	14000	32850	16830
Used Internally	1000		22000	16830
Outside Sales	8200	14000	10850	0

4. Furniture exports in 1989 were reported to US$ 24 million, of which 80% were to North America. At one time Novoles was the worlds largest producer of colonial style rocking chairs. Its North American sales consist mainly of colonial style chairs and tables. With entry of new suppliers from Taiwan and South East Asia, Novoles faces intense competition in this market and with the convertible Dinar its losses on sales to North America can no longer be covered by using foreign exchange revenues to generate other sources of profits. Novoles has its own sales organization, including 2 retail outlets and normally sells directly to both foreign and domestic customers. Market intelligence is gleaned mainly through visits to markets by sales and technical staff. The company visits trade fairs abroad and participates at trade fairs in Yugoslavia.

5. Because furniture operations suffered losses during last 3 years, the company is attempting to develop new marketing strategy. Management has determined that furniture prices are much higher in Europe than in the United States and feels that European furniture manufacturers will pay a higher price for furniture components than US distributors will pay for finished pieces of furniture. It is thus planning to close restructure it manufacturing operations accordingly. However, no data was available concerning either the prices available for components or the volume that might be sold. Given the complete lack of data, it is very difficult to see how Novoles can develop a strategic plan covering furniture marketing and the reconfigurration of its existing production lines.

B. Raw Material Supply

6. Novoles purchase logs from a number of forestry enterprises, each of which has the exclusive right to exploit a specified forest area. The

available local supply of logs in the region is allocated among wood processing enterprises on an informal basis and the present allocations fully utilize the available forest resource. As the demand for logs exceeds the supply, the forestry enterprises are not required to compete among each other for sales and thus prices tend to be set at a level equal to the cost of imported logs plus import duties (see discussion in sector note). Occasionally it is less expensive to import species such cherry and oak from the US than to purchase them locally.

7. Often, logs are not produced in the lengths which best meet the requirements of the processors. This results in higher wood consumption per unit of product output and reduction in the available quantity of logs suitable for plywood and veneer production.

C. Manufacturing Operations

8. The average age of the major wood processing units ranges from 20 to 30 years and thus the technology employed is typical of the 1950s and 1960s. Operations are generally labor intensive with very little automated materials handling.

9. With capacity calculated on a 2 shift per day basis, capacity utilization for the primary wood products operations is estimated at 50% for softwood lumber and over 80% for hardwood lumber and veneer.

D. Labor

10. Though net wages for production workers were reported on the questionnaire to vary from Din. 2400 to 3000 per month, the company claims that other associated costs bring average wages costs to Din 6,000 per month and that contributions related to wage costs bring the total to Din 12,000 per month. This seems high but seems to check with the finding that wage costs in Slovenia are twice the level of those in Bosnia and Serbia.

E. Financial Structure and Performance

11. As shown in the table on page 5, financial performance has been rapidly deteriorating. Gross profit as a percent of sales has fallen from 44% in 1985 to 20% in 1989 and operating income(gross profit less selling and admin. expenses) has fallen from 30% of sales in 1985 to a loss of 6.6% in 1989. The large drop in gross margin is probably due more to the large increase in depreciation charged against revalued assets, rather than it is to shrinking cash margins. In addition, net interest cost has risen from 10% of sales in 1985 to 20% in 1989, thus bringing the loss, after interest expenses, for that year to 26% of sales. Contributions have remained at about 6% of

sales and in most years exceeded gross profit. Thus Financial performance has been deteriorating and total manning is excessive, particularly in the areas of furniture manufacturing and common services.

12. Some of the other key ratios are shown below.

Novoles - selected Financial Ratios

	1985	1986	1988	1989
Ratios				
- current	1.3	1.1	1.1	1.2
- avg. collection period		3.3	2.4	3.9
- avg. payment period		4.5	2.0	5.2
- inventory turnover		3.8	1.2	5.1
- Debt:Equity ratio		1.2	1.1	1.1

It is interesting, that the balance sheet does not indicate the same degree of distress as the income statement. Again, due to the revaluation of fixed assets, the debt equity ratio has been largely maintained in spite of mounting losses. However, the durations of the average collection and payment periods, 3.9 months and 5.2 months, respectively at the end of 1989 indicate the serious liquidity problems which have brought the company to the brink of insolvency.

13. Operating profits in primary wood products, sanitary products, and machinery, were more than offset by a loss of US$ 2.0 million in furniture manufacturing. While trying to determine, on a product by product basis, the sources of profits and losses, it became readily apparent that Novoles management was not in the habit of carrying out such an analysis, nor did the financial and other data available facilitate a profit center approach. Never the loss, even a crude analysis shows clearly that when market prices are used to cost the material used in furniture manufacturing, the true losses are much greater than those indicated by the company's accounts. On the other hand, primary products, including sawnwood and plywood are generating positive cash margins, as is the manufacture of furniture stock, which is an intermediate product. All further processing of furniture stock, into joinery for solid wood furniture or directly into furniture, involves losses, particularly in the case of solid wood chairs and tables.

Novoles - Common Size Income Statement
(as a % of Sales)

	1985	1986	1988	1989
Sales	100.0	100.0	100.0	100.0
Cost of Sales	55.6	63.4	74.4	80.0
Gross Profit	44.4	36.6	25.6	20.0
Selling, administration and General Expenses	29.4	26.2	24.8	26.7
Operating Income	15.0	10.4	0.8	(6.6)
Other Income				
- Interest receivable	3.2	1.9	0.4	8.9
- Profit on exchange	6.3	7.5	2.5	15.9
- Investment income	0.6	0.5	0.2	1.0
- Sundry	0.0	0.0	0.0	0.0
- Total	10.1	9.8	3.2	25.8
Other Expenses				
- Interest Payable	13.0	13.4	3.7	28.1
- Loss on Exchange	0.0	0.6	0.0	5.3
- Sundry	0.0	0.0	0.0	0.9
- Total	13.0	14.1	3.7	34.2
Obligatory Contributions to community Funds	6.2	6.5	3.8	6.1
Net Income	5.8	(0.4)	(3.5)	(21.1)
Appropriated as follows				
- Business Reserve	3.6	0.0	0.0	0.9
- Reserve Fund	1.2	1.0	0.7	0.9
- Collective Consumption Fund	1.9	1.1	0.7	0.6
- Total	6.7	2.1	1.4	2.4
Other J.V Fund Partners	0.5	0.1	0.4	0.1
Net Loss	(1.4)	(2.6)	(5.3)	(23.7)

F. Enterprise Organization and Management

14. Novoles currently provides common services to 4 worker managed enterprises, primary wood, furniture, sanitary products and machinery. A fifth enterprise, producing plastics, split away from the group at the end of 1989. Novoles has proposed that the enterprises be transformed into joint stock companies with Novoles as the holding company. Under the proposal no more than 30 people would be left in the holding company which would be responsible for such functions as accounting, strategic planning and personnel development. Other common services staff would be allocated among the operating companies. This proposal will be voted on by all the workers before the end of April, 1989 and approval will require a simple majority.

15. The proposal contains no provision for the levy of management fees by the holding company as it is expected that its costs will be covered by dividends paid to it out of the earnings of its holdings.

G. Enterprise Effort at Restructuring

16. A new manager has been brought in to attempt to turn around the furniture operations. Two production lines, both producing chairs and employing 350 to 400 workers, are to be shut down for 3 to 4 months to move equipment and improve the production flow. No estimates had been made of the reductions in work force or losses which would result from these changes.

H. Recommended Restructuring Programs and Observation

17. The company clearly needs assistance in developing a restructuring program. However, given its illiquid condition, it is probably to late for even defensive restructuring prior to forced reorganization. As part of such a reorganization, a strategic plan should be developed for the company which clearly identifies lines of furniture which can be produced profitably based on a much reduced labor force and using to the greatest extent possible the existing equipment.

18. Technical assistance is clearly needed in order to train managers to make production decisions based on profit maximization rather than on the basis of utilizing production capacity.

"Djuro Salaj", Mostar

A. Basic Features

1. PI (Cotton Industry) "Djuro Salaj", located in Bosnia and Herzegovina, is one of the major textile and garment manufacturers in Yugoslavia, accounting for about 3% of total output of textiles. It was established as a cotton spinning mill in Mostar in 1950, and has subsequently grown through expansion and absorption of other textile plants within a 70 km radius of Mostar, to its present integrated operations which include spinning, weaving, finishing and garment manufacture based on cotton and cotton mix fibers in eleven different manufacturing plants. The annual production in 1989 was: 1. about 4,500 tons of cotton yarn; 2. 8 million meters of woven cloth; and 3. in the garment sector, 90 million pieces of bed linen garments and 400,000 pieces of protective garments. Total sales were about 109 million dinars in 1989, out of which about 9% was exported, mostly to western markets. The enterprise employs about 5,200 workers and is the major employer in the region.

B. Operational Results

2. The operational and financial performance of the enterprise has deteriorated over the last several years although the company remains solvent. Profits have been low or even negative, aggravated by the depressed domestic market, a heavy burden of debt service and substantial surplus labor. Since the enterprise's competitiveness has been declining in terms of productivity and quality of products, the ongoing import liberalization program has affected adversely the enterprise's sales and profitability in domestic market. The existing machinery is a mixture of obsolete and relatively new technology, but capacity utilization has been very low, due to difficulties in securing raw material supplies as well as a shortage of working capital. From January, 1990, the enterprise has been reorganized into eight separate Work Organizations, which have shown varying levels of profitability in the first six months of 1990. The enterprise has also developed a comprehensive restructuring plan, which consists primarily of investments to increase production and improve quality, but which also addresses the need for a significant reduction (perhaps 30%) of the labor force.

C. Financial Results

3. Company accounts show a healthy operating income (sales less cost of sales and administration/selling expenses) for both 1989 and the first six months of 1990. However, this income is converted to a loss by major extraordinary adjustments including excess interest payments in 1989 (around 105 million dinar, amounting to 95% of sales) and provisions for doubtful receivables in the first six months of 1990 (equivalent to 17% of sales). Hyperinflation and rapidly changing accounting rules make a realistic

assessment of the enterprise profitability very difficult during this period, although the continuing solvency of the enterprise is demonstrated by the reasonable levels as at June 30, 1990 of long term debt:equity (33:67) and current ratio (1.1). Nevertheless, payables and receivables have risen to almost three months of costs and sales respectively, and low levels of liquidity are beginning to seriously restrict operations. Despite the reorganization of the company into eight financially separated operations, only the consolidated accounts were available for review so that the relative financial position of each of the subsidiaries could not be assessed.

D. Labor

4. The main operational problem of this enterprise is the generally low quality of much of its output (yarn and fabrics) which first, makes them uncompetitive in international markets, and second, also makes them uncompetitive in domestic markets, even with levels of protection which range from 16% to 31%. Under these circumstances, the weaving operations generally prefer to use imported yarn rather than the in-house product, and the garment producers prefer to use imported or purchased fabrics, or at least fabrics produced from imported yarns. At present this strains the relationships between the various factories included in the enterprise. Liquidity problems along with unproductive labor have reduced productivity levels in many operations to about two-thirds of capacity. At the same time there is an excess of labor, estimated by the enterprise to be about 1500 persons or nearly 30% of the work force. As further elaborated below, management's approach to addressing these problems is to purchase new equipment to improve quality (and marginally, increase output), while at the same time beginning a program of ridding itself of excess employees.

E. Organization and Management

5. The internal organization is somewhat fragmented and the flow of information between the various factories is inadequate. The enterprise has recently converted itself from a single work organization into a group of eight "independent" work organizations, under the controlling umbrella of the parent company. The longer term view is to transform the parent enterprise into a joint-stock holding company which would hold all or most of the shares of the subsidiary companies. A supporting MIS system is an integral part of this proposal. Most of the ideas concerning reorganization of the company are not very well developed, reflecting the preliminary nature of the enabling legislation and the lack of familiarity of company management with the Government's intentions and the reorganizational techniques available.

F. Basic Concept for Restructuring

6. Management has no radical or particularly imaginative view regarding the enterprise's future: it's main vision is a technological

improvement to allow it to continue doing what it does now more efficiently. It does not appear to have given any serious thought as to whether its current integrated operations encompassing all levels of textile activities makes sense in a truly competitive environment. Nevertheless, it does appear to be receptive to the view that these fundamental questions must be examined in developing a long range enterprise strategy encompassing any necessary restructuring.

7. The present reorganization into eight separate operations is not an obvious precursor to subsequent spin-offs or privatization. Rather, management believes that this organization can continue under a holding company formed by the parent enterprise. Nevertheless, in informal discussions, management acknowledged that some of the subsidiary units could survive better as individual operations and this type of reorganization will clearly be a key element in developing a future strategic plan for the enterprise. The view of the local or Republican governments in this respect is not known.

G. Policy/Institutional Constraint

8. Management cites "inequitable" taxes and duties as a major barrier to improved financial performance, but as an integrated textile operation, is quite aware of the inconsistencies in a position which calls for high duties on its products and low duties on its inputs. As a company which presently imports more than it exports, it recognizes that its present satisfaction with an over-valued exchange rate is not shared by exporters. Nevertheless, it notes that as an employer of perhaps 500,000 people (mostly unskilled women), it believes that the textile industry is deserving of some special consideration. In particular, it compares its treatment with those of the protected textile industries in OECD countries, and seeks some kind of similar preference. Quotas on Yugoslav exports are cited as a problem no trying to increase exports.

9. In a more general note, the enterprise notes that one of its biggest problems in trying to devise a long range corporate strategy in a time of uncertainty regarding macroeconomic and regulatory policies.

H. Investment Program

10. The enterprise has developed a preliminary estimate of capital cost for its proposed investment program as follows:

	Local (million Din)	Foreign (million US$)	Total a/ (million US$)
Civil Works	33	-	2.8
Machinery & Equipment			
- Spinning	-	6.2	6.2
- Weaving	-	4.2	4.2
- Finishing	2	3.4	3.6
- Garment Making	3	0.8	1.1
- Terry Cloth	6	1.9	2.4
- Pollution Control	-	2.0	2.0
Customs Duty	69	-	5.8
Other Items	12	-	1.0
Training	-	0.5	0.5
Management Assistance	-	1.0	1.0
Working Capital	-	2.0	2.0
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	125	22.0	32.4

a/ In equivalent US$, with local costs converted to dollars at an exchange rate of US$1=Din 12.

This estimate does not include any allowance for contingencies (physical or price), nor for interest during construction. If the base estimate is reasonably accurate, the total financing required for the program would probably be of the order of US$42 million equivalent of which US$29 million would be foreign exchange.

11. The enterprise has also prepared a tentative financing plan for the above estimate of cost, as follows:

	Local (million Din)	Foreign (million US$)	Total a/ (million US$)
World Bank	-	22.0	22.0
Internal Funds & Depreciation	40	-	3.3
Federation Funds	50	-	4.2
Yugoslav Banks	35	-	2.9
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	125	22.0	32.4

This estimate may also need some upward adjustment following more precise development of capital costs.

I. Issues on Environmental Protection

12. The company has a number of environmental problems. All of these would be addressed, at least to some extent, under the proposed investment program:

A. Effluent from finishing operations at Mostar is currently discharged into the Neretva river with only basic primary treatment. The proposed investment program would address this problem indirectly, by replacing outmoded bleaching and dying facilities with more efficient and less polluting modern equipment, and directly, by installing a complete biological, chemical and mechanical treatment system for finishing plant effluent.

B. Coal-fired boilers are not currently installed with filters and emit considerable quantities of ash. Filters would be installed under the proposed investment program.

C. Dust levels in all operations, and noise levels in weaving operations, are excessive. More modern equipment would alleviate this problem to some extent at Mostar. The enterprise also plans to relocate looms from Mostar to Ljubuski where the plant is very old and the noise levels are particularly high. While these proposed measures will improve the situation of in-plant working conditions, there may still be a need for further action.

ANNEX 6

Preliminary Draft

YUGOSLAV INDUSTRY: STRUCTURE, PERFORMANCE CONDUCT

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CHAPTER 1

PRODUCTIVITY PERFORMANCE: THE MACRO VIEW

A. Introduction

1.01 This Chapter focusses upon the performance of Yugoslav industry over the period 1955-1987. In particular, the major institutional developments and reforms over this period are outlined as well as the sources of GDP growth. The contribution of various production factors will also be assessed. It will be shown that new investment and capital productivity played a major role in determining the industrial output dynamics throughout the period under review. Capital grew at exogenously determined growth rates effectively limited by the current account balance/deficit constraint or cumulative foreign debt constraint. Buoyant capital growth appeared to have little to do with the realized efficiency of capital use which, consequently, lead to persistent erosion of capital productivity and worsening total factor productivity (TFP) performance. The analyses is, in general, consistent with previous studies in this field.[1/] [2/] In particular, this Chapter will point to the systemic causes of the productivity slowdown and the widespread nature of the problem in that it is shared by all republics and most industries.

B. The Path of Industrial Development:

(i) Industrial policy and performance

1.02 The Yugoslav economy, has not recovered from the 1982-3 foreign debt crisis. Although the severe financial restrictions used to force a current account surplus are now over, some important consequences of the debt crisis are felt in Yugoslavia even today. The debt crisis not only imposed a long lasting macroeconomic financial constraint, but also triggered strong opposition (both by large social sector companies and within the government) to the austerity measures. The crisis has revealed some latent systemic flaws in the Yugoslav economic and political/social system. Thus the problems of Yugoslav industry are not limited to the inability to service foreign debt, lack of access to world capital markets and outdated technology. Although it obviously has a very high debt equity ratio, pays high real interest rates and suffers from an extended "systemic recession", which keeps output levels low and increases the relative burden of the all fixed interest-like costs, the Yugoslav social sector industry has, over the years, developed some permanent weaknesses which lead to inefficient use of resources and severely hampered its competitiveness on the world markets.

1/ Sapir A. [1980] "Economic Growth and Factor Substitution: What Happened to the Yugoslav Miracle?", Economic Journal, Vol. 90, pp.294-313.

2/ Nishimizu, M. and Page, J.M. [1982]. "Total Factor Productivity, Technological Progress and Technical Efficiency Change: Dimensions of Productivity Change in Yugoslavia, 1965-1978, Economic Journal, Vol.92, Dec., pp. 920-936. Bateman, D.A., Nishimizu, M. and Page, J.M. [1988]. "Regional Productivity Differentials and Development Policy in Yugoslavia, 1965-1978", Journal of Comparative Economics, Vol.12, March, pp. 24-42.

1.03 Partly, these weaknesses have to do with the very concept and definition of the socialist labor managed firm as stipulated in the Yugoslav legislation. More to the point, a greater part of the weaknesses is caused by the real socialist self-management system and presence (or absence) of specific macroeconomic policies. "Socialist self-management" (SSM), as gradually defined in the Yugoslav legislation from early 1950s until mid 1970s, bears only limited resemblance to the theory of labor managed economy. Self management in Yugoslavia is heavily affected and even dominated by non-economic (ideological, political, national, and other social) concepts.[3] Socialist self management in Yugoslavia is the outcome of a selective implementation of the legislative system decided upon through overly complex and often completely hidden mechanism of the Yugoslav regionalized political system. As the economy is brought to a complete stop and some major systemic flaws demand immediate changes in the economic institutions, the complexity of the real SSM comes into picture. This issues are taken up further in Chapter 3.

- First Institutional Reform: Farewell to Planning

1.04 Yugoslavia discarded the idea of state planned socialism by introducing workers' management in 1950. But despite the introduction of self management, the economy was still run as a planned economy throughout the 1950s and early 1960s: the state planning office had a complete control of investment, wages, and prices, and it often effectively controlled inputs and outputs. There was not much room left for real self management at the firm level since all important decisions were taken either by the Party, or by the State and the Planning Office. Consequently, the institutional setup found in Yugoslavia in the mid 1950s resembled the core of a state planning socialist system only partially modified (and softened) by self management.

1.05 During the period under review (1955-1987) three major institutional reforms were implemented. The first reform was prepared from the late 1950s but officially took place only in the mid 1960s. Major institutional changes introduced with the 1965 reform were: (a) abolishment of the Central Investment Fund as the main investment resources mobilization and allocation mechanism; Its capital was gradually transferred to the commercial banks; (b) reduction in the administratively set capital charge levied on companies; (c) introduction of a commercial banking system; and (d) Further loosening of enterprise controls with respect to wage and price setting, hiring, production, and marketing decisions, most investment decisions etc.

1.06 The institutional changes were closely followed by a major shift in economic policy. The Government introduced price reforms in order to provide incentives for faster industrial development, particularly in processing sectors. The intention of the price reform was to provide preferred industries with cheap and abundant raw materials and intermediate

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3/ Although Yugoslavia has long been the forerunner of reforms among socialist countries, and it had fewer external constraints as a non-aligned country, it still had a number of restrictive legislative clauses pertaining to human rights, political freedoms, freedom of the press, etc.

inputs relying on both price controls and liberalization of imports. The price reform was also intended to provide additional incentives to the preferred industries (processing, hi-tech and some priority "strategic" sectors). Having already been furnished with ample supply of heavily subsidized capital to acquire state of the art technology, and with favorable domestic relative prices, these industries demanded additional incentives through an increased protection consisting of tariffs, differential sales taxes (where applicable), and import and export licencing (i.e. quotas) defined in an elaborate trade regime system. Most of the industrial branches and main industrial products were protected in proportion to "the level of processing" or the share of value added in the unit price at world prices with some exceptions to that rule being justified on "strategic" and "priority" sector grounds.

1.07 The first institutional and macroeconomic policy reform of 1965 ushered in a notable slowdown in both output and employment growth rates (table 1 below). The slowdown in output and employment growth rates is a part of a longer term trend. This evidence conflicts with the claims of some commentators that self-management brought about improvements in output and employment growth.

1.08 The unemployment rate, which was already high in the pre-reform years, increased beyond most pessimistic expectations following the reform. Three subsequent years produced a reduction in the labor force (negative employment growth rates were recorded in the 1966-68 period) as companies were trying to improve their competitiveness by laying off workers. The slack labor force was not given proper consideration by the government: it seemed that layoffs came as a surprise and there was no mechanism that would take up the slack or provide safety net. This generated social tension and contributed to an increased labor outflow to Western Europe.

- <u>Second Institutional Reform: Back to Socialist Utopia in Market Disguise</u>

1.09 A <u>new institutional and economic reform</u> was initiated through constitutional amendments in 1971 and fully shaped by the new 1974 Constitution. For the analysis of industrial efficiency it is worth noting that, among other things, this reform has:

(a) disaggregated existing companies into independent business units or Basic Organizations of Associated Labor (BOAL), with an idea of fostering direct self-management, and grouped some existing or reorganized companies into Composite OALs (COALs), in order to establish stronger managerial and technological links within the same company;

(b) limited the role of companies (BOAL's, simple Work Organizations and COAL's alike) in the distribution of the value added and, in particular, of net income (the equivalent of profits), with the idea that in an economy with social ownership of capital, value added and profit distribution should also be controlled by the society; and

(c) introduced an elaborate system of a non-market investment allocation mechanism inspired by the concept of convergent planning. Instead of relying on capital markets or a central plan to determine the supply and demand of investible resources (capital), this system was based on the so called self-management agreements (SMA) and social compacts (SC). The role of companies in investment decision making was formally left unchanged or even strengthened[4]/ but the decision to raise capital and finance new investment was to be controlled by the society with the same justification: since capital is socially owned the society should decide on its use.

1.10 All of these institutional changes had some serious problems either in the very idea that they were trying to promote or because institutions, mechanisms and instruments chosen were poorly designed and implemented. The disaggregation into BOALs was often forced on companies from the outside (the regional political sphere) ignoring managerial and technological objectives and constraints.[5]/ This reorganization of the Yugoslav economy, and industry in particular, can be labeled a failure just by reference the economic results it has generated.[6]/

1.11 The prima facie right of the society to influence the distribution of profits earned by social capital, in reality turned out to be an open invitation to the regionalized political system for an increased (haphazard or arbitrary) intervention in the economy to redistribute profits according to political and regional merits. While this new style (often informal) political intervention in the "social interest disguise" was taking place at the regional level, the legal economic and economic-policy role of the Federal, but also republican and local governments has been greatly reduced.

1.12 Also, the new SMA-SC investment allocation mechanism, failed to mobilize sufficient investment resources, thus generating an unprecedented investment savings gap in the Yugoslav history (more than $15 billion in the 1974-1981 period), and equally failed to allocate investment to most profitable and most efficient uses. Very low and frequently negative real interest rates on long-term loans, abundant supply of foreign and domestic financial and supplier credits, and an overvalued local currency created additional pressures for this fragile, time consuming, non-converging and inefficient investment allocation mechanism. If operated under more stringent financial constraints and in less protected markets, this mechanism for investment

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4/ Legislation stipulates that only a BOAL can make an investment decision.

5/ It should be noted that this specific institutional change was preceded by a very strong purge of managers (labeled techno-managers) and liberals from companies and public offices (government and party). Many of them opposed the idea of mechanical BOAL-ization.

6/ Beside economic results, which will be analyzed below, this portion of the reform (BOAL-ization) has used enormous public resources just to be implemented.

allocation would have immediately proven non-operational. If operated in a less supportive and forgiving domestic and international political and economic environment it would have been stopped shortly after inception. This way, it went on until the economy has reached absolute limits of indebtedness and was stopped by the debt crisis of early 1980s.

1.13 The buildup of external debt was at first ignored both domestically and abroad. The country's economic creditworthiness, based on an impressive past growth performance, was strong enough to help perceive its growing external debt as a temporary setback caused by internal economic institutional reshuffling. Somewhat exacerbated size of current account deficits and external debt was attributed to the first oil shock, and it was expected that external debt would, nevertheless, be brought under control once dynamic economic growth was resumed. But, the institutional reform was not fully implemented and all attempts to foster economic growth in a distorted economy produced further pressures on the balance of payments and domestic inflation. At times when pressured by international economic and parts of domestic political environment the Government would revert to a partial (incomplete) set of restrictive economic policies which seemed to hurt growth much more than to cure inflation and current account deficit. It is interesting to note that the exchange rate (i.e. devaluation or at least depreciation) was never used as a part of the restrictive economic policies after the inception of institutional changes in the early 1970s. As will be shown in the effective exchange rate calculations presented below, the exchange rate was kept practically fixed to the US dollar throughout the 1972-1980 period despite current account deficit problems and notable differential inflation. The Government preferred to manipulate the complex trade regime system (and mostly restrict imports through licenses) and/or increase non-tariff barriers to bring current account deficit under control. This is the origin of the serious protection problems. As soon as real incomes would start to adjust and GDP growth would abide as a result of restrictive policies, strong domestic opposition would result in a loosening up of tight monetary policy.[7] Stop-go policies thus became a widely recognized "trademark" of the Yugoslav economic policy in the 1970s.

- Third Institutional Reform: Facing Hard Facts

1.14 When the current account deficit reached $3.7 billion in 1979 and foreign debt approached $20 billion serious concerns were raised about Yugoslav economic performance. The economy entered serious difficulties which culminated in the 1982 debt crisis and the 1983 rescheduling programs to which Yugoslavia has been subjected ever since. The Government assembled a group of economists charged with a responsibility of producing a Long Term Stabilization Program (LTSP). The LTSP was not only a short term macro-stabilization program, but also a first attempt to launch new institutional reform to result

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7/ "GO" policies followed by the Government in selected years during the 1970's were mostly based on easy money (ample supply of short- and long-term credit at subsidized interest rates) and almost no limits on foreign borrowing (at overvalued exchange rate).

in a more market oriented economy. For this paper the most relevant points appear to be:

(a) Redefinition of the company as an independent market entity which maximizes profit rather than income per worker;

(b) Explicit recognition of a need for financial (including capital), foreign exchange, and labor markets in addition to commodity markets;

(c) Introduction of positive real interest rates and realistically valued (close to market clearing) exchange rates;

(d) Abolishment of all legal and institutional barriers to foreign investment and joint ventures in Yugoslavia.

With minor changes this core program of institutional reforms has been handed over (and essencially retained) by three subsequent governments but for the most part its implementation is still pending. The dominating attitude in the political and administrative environment indeed has evolved from openly opposing market reforms to passing radical legislative and institutional changes necessitated by the reform. But it still often simply absorbs all pragmatic reform incentives and resist any real change.

(ii) Industrial Development Stages

1.15 Periods or phases between institutional reforms of the Yugoslav economy do not entirely coincide with the performance stages (or phases) of industrial development that could be observed from data on industrial output, capital formation, and employment. Table 1 provides a first glance at key growth rates for these performance stages of industrial development:

First performance stage (1955-1965 period) indeed coincides with the first institutional phase, but two subsequent performance stages cut across institutional periods;

Second performance stage (1966-1979 period) combines two different institutional periods and indicates that they might have more common features in capital and output growth than usually recognized despite the numerous institutional and functional differences briefly described above; and

Third performance stage (1980-1987- period) starts off deep in the anti-market institutional stage initiated by the 1974 Constitution and lasts through numerous market oriented institutional attempts of the 1980s aimed at getting the economy out of crisis.

Table 1: AVERAGE ANNUAL GROWTH RATES FOR THE YUGOSLAV INDUSTRY BY MAJOR DEVELOPMENT PERFORMANCE STAGES OF THE INDUSTRY

	Performance stages of industrial development (annual g.r. in %)		
	1955-65	1966-79	1980-87
Total Output	12.04	7.18	2.80
Total Capital	10.00	8.14	3.57
Total Labor	6.22	2.83	2.50
Memo:			
Industrial NMP*	12.34	6.91	2.79

* NMP stands for Net Material Product which is the Yugoslav concept of value added.

Source: Statistical Yearbook, various years.

1.16 The first stage was characterized by an impressive double digit output (12%) and capital (10%) growth, with declining capital output ratio[8]/ and, consequently, increasing capital productivity. Employment grew at very impressive rates (on average 5.6% industrial and over 6.2% total). At the beginning of the second stage, immediately following the official inception of the 1965 reform, output grew at very low rates for two years (1966-67) but then recovered to around 8% in the late 1960s and fluctuated aground that level to yield an average of close to 7.2% for the period, a loss of almost 5 percentage points. Capital growth was also slowed down but its average growth rate (8.1%) now exceeded the growth of output yielding gradual worsening in the capital output ratio (or average capital productivity). In relative terms employment growth suffered most during the second stage.

1.17 In both of these stages capital growth was the major source of output expansion. This is best demonstrated during the third stage in which output growth has recorded yet another slowdown to below 3% per annum on average, mainly because of slower capital growth (annual growth rate down to 3.6%).[9]/ Since, however, capital was still on average growing faster than output this was generating a continued worsening of the capital output ratio for more than twenty years now (i.e. throughout the second and third stage) bringing down average capital productivity to the levels recorded in the mid 1950s.

8/ Or growing output per unit of capital used.

9/ There was hardly any change in the growth rate of employment. Total employment growth was very little affected by the serious problems of the industrial sector and whole economy (growth slowed from 2.8% to 2.5% per annum), while industrial employment went on completely unaffected (it actually stepped up to 3.2% annual growth).

1.18 Growth retardation can equally be observed without relying on suggested stages of industrial performance. Figures 1 and 2 below plot annual output and capital growth rates for the whole period under review with linear trend line fitted on actual growth rates. Downward slope of the trend line clearly indicates the retardation in both output (figure 1), capital (figure 2), and labor (figure 3).

Total Yugoslav Industry 1955-1987

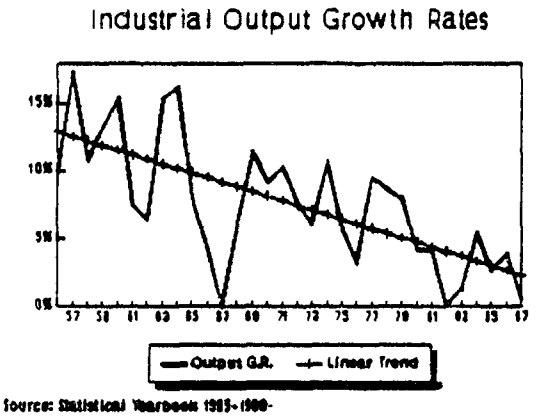


Figure 1

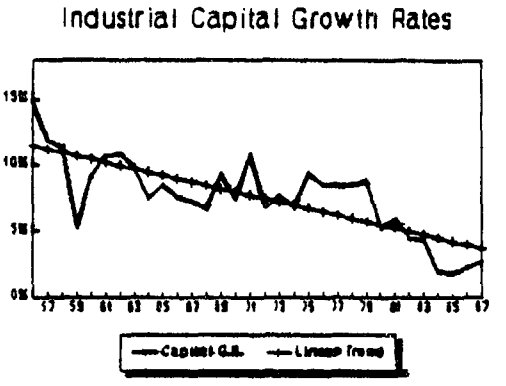


Figure 2

1.19 Sources of capital for fast investment growth differed significantly across stages. During the first stage the main source was domestic savings mobilized through the so called "forced savings" typical of all socialist economies. In the Yugoslav case it was designed as a combination of: (a) biased government price setting policies aimed at "extracting savings from the agriculture";[10] and (b) forced savings from workers incomes either through mandatory sales of government bonds (called "people's loan") yielding zero or negative real interest, or through voluntary savings deposits because of the general shortage of consumer goods. Unlike most other Eastern European socialist countries, during the first stage Yugoslavia also received substantial boost to its savings from foreign grants. In the second stage domestic savings were complemented by two additional sources: Foreign loans and workers' remittances started flowing in strongly in the late 1960s after liberalizing the movement of commodities, capital, and labor. Foreign loans

10/ Agriculture seemed to be an ideal medium for this type of socialist experiment as it was: relatively large compared to other sectors; not a priority sector; it was mostly private and susceptible to ideologically (socially) undesirable behavior; and it produced subsistence goods the low cost of which would help increase the standards of living for the industrial labor force.

and remittances gained importance over time and gradually became an important source of capital to which the whole economy has adjusted: L · domestic propensities to save of households and companies, and high investment to GDP ratios were reconciled through remittances and increased foreign borrowing. When in the late 1970s early 1980s remittances declined and further foreign borrowing was not feasible, the country has plunged into a crisis and forced to generate higher domestic savings from investment. Permanent savings-investment gap was, therefore, a systematic outcome of the Yugoslav economy in all identified institutional and industrial performance stages: The economy has moved from a typically investment driven position to a strict savings constraint system.

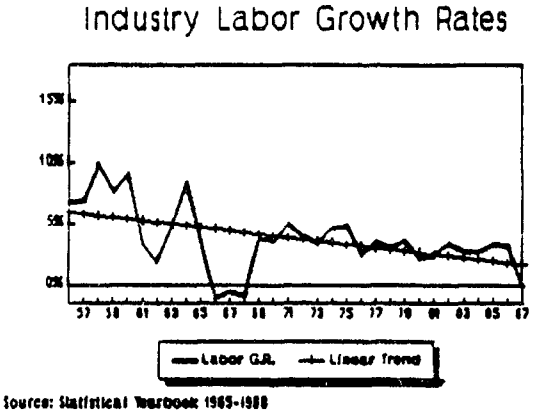
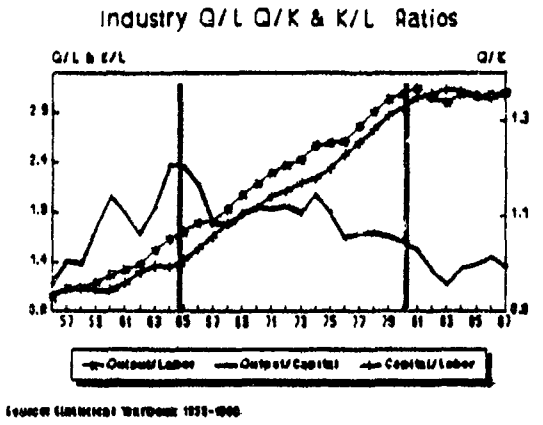


Figure 3

1.20 Employment growth deserves special attention. With the exception of three years immediately following the 1965 institutional reform, the total industrial labor force increased since 1955. Employment growth rates more or less followed industrial output dynamics until mid 1970s, and after that, with second institutional reform was well in place, employment grew at a stable rate, which hardly reflected any decline experienced by industrial output growth (figure 3).

Yugoslav Industry 1955-1987



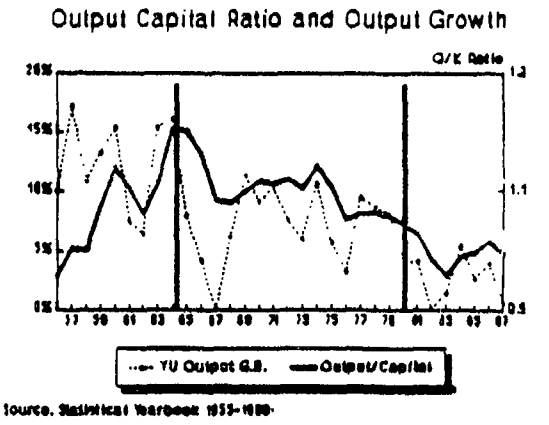


Figure 4

Figure 5

1.21 Some standard ratios between output, capital, and labor capture the nature of the industrial development. Thus, the capital-labor ratio (figure 4) increased only moderately during the first stage, accelerated during the second period, but leveled off and then slowly declined in the third period. Labor productivity (output per worker) closely followed the same path which again confirms that industrial growth was due to capital deepening through new investment. This is even better seen on Figure 5 which presents output-capital ratio[11] and output growth: output per unit of capital increases only during the first stage and then generally follows a downward trend through the second and third stage. A very mild recovery was recorded in the 1984-1986 period but the level is still below late 1950s.

1.22 Slower industrial growth in the last stage had a profound impact on the overall GDP (NMP) growth since industry had become the major source of value added in the Yugoslav economy. The share of industry in GDP has doubled during the period under review (from 22% to 44%) mostly at the expense of agriculture and construction (Table 2). Since the private sector was predominantly in agriculture and the social sector exclusively controlled industry, this change of sectoral shares also implied a significant shift in the ownership structure of the NMP towards social sector. Worsening economic performance and retardation of economic growth, therefore, also coincides with the expanding role of industry and the social sector - indicating where the major sources of problems are to be looked for.

11/ Output-capital ratio, which is simply an inverse of the more common capital-output ratio, is used in the presentation to parallel output per worker and enable graphical comparison with the output growth rate.

Table 2: STRUCTURE OF TOTAL NET MATERIAL PRODUCT (GDP)

Sector	1955	1965	1975	1987
Social	64%	80%	84%	86%
Private	36%	20%	16%	14%
Industry	22%	34%	37%	44%
Agriculture	33%	20%	16%	14%
Construction	11%	10%	10%	7%
Trade	11%	16%	18%	15%
Other	23%	20%	19%	20%

Source: Statistical Yearbook of Yugoslavia, 1988, p.166.

As will be shown below, the main cause for the slowdown in industrial growth can be associated with the capital bias of new investment after the 1965 institutional reform. Factors contributing to the capital bias were:

(a) low interest rates on investment loans implying negative real interest rates, i.e. subsidies to the borrowing companies which necessitates rationing;

(b) zero rental cost on social capital after the 1965 reform;

(c) specific maximand of the labor managed firm (maximization of income per worker); and

(d) lack of capital markets or direct investment opportunities. Enterprises with surplus funds could not profitably invest in other companies because of risk of not being able to repatriate profits. Moreover, they could not increase wages beyond certain ceilings which left only capital deepening in the existing enterprise as a viable option.

1.23 Since negative real interest rates on long term loans prevailed in the past [12] and there was no effective mechanism to transfer investment risks

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12/ Thus investment loans implied not only huge implicit subsidy for future operations, through very low capital cost, but also offered an informally recognized possibility to gain additional subsidy through: (a) directly charging accumulated losses from past operations to new investment financed at negative real interest rates; (b) overstating working capital requirements (to compensate for the lacking working capital for the existing operations) and then gradually eroding its real value utilizing nominal accounting rules in an inflationary environment which provided additional subsidy for future operations. Studies done recently for some big companies in a strong need of restructuring and consolidation confirmed that these sources of subsidies were excessively used.

to the company (nor there was any tangible accountability on the part of managers or self management bodies substituting for them in some important managerial functions), new investment projects were undertaken primarily to achieve social and political objectives (employment being one of the most prominent ones), attain the political recognition and prestige and appeal to the regional (and often national) sentiments and thus legitimize own position in the stratified political establishment, and, last but not least, to appropriate direct and indirect capital gains.

1.24 The question of investment efficiency was mostly suppressed and the entrepreneurial role was assumed and ill-performed by informal political groups made of top ranked party and (local and republican) government officials and their appointees to the managerial positions in companies and banks. These groups formed a structured political oligarchy which proved to be quite strong at the local and republican level. It read and applied (with great degree of freedom) "sectoral priorities" for investment allocation produced by technically and politically weakened planning system. In principle, their intentions were inspired by the "global modernization" which explains the development drive and dedication to progress observed in post-war socialist countries. Allowing for some exceptions to the rule, politicians were generally poor substitutes for professional managers. They lacked proper skills, the political and macroeconomic environment was wrong and misleading, and their basic underlying incentive became completely wrong: socialist idealism, which could (and in the past did) correct for some of the distorted environment, was gradually overpowered by rational individual, national and regional perceptions. This type of decentralized investment decision making, lacked technical skills, proper incentives and accountability, stable and clear economic (market) institutions and mechanisms (capital and financial markets) and macroeconomic policies.

1.25 All this produced over time: (a) large domestic investment relative to GDP and domestic savings, which then lead to fast accumulation of foreign debt in the 1970s (Yugoslav foreign debt quadrupled between the first and second oil shock); (b) Inefficient use of capital in investment projects because of the wrong choice of technology - there was a strong capital intensity bias which was fed by negative real interest rates unchecked (uncontrolled) self-management firm behavior, and, importantly, strong ideological and political bias towards modernization which was mechanically translated into an inelastic demand for most modern western technology; (c) inefficient use of capital due to excessive indirect investment costs (expensive and oversized administrative buildings to accommodate too large administrative staff) and investments costs not related to the production of goods and services (facilities for fringe benefits, schools, training centers, housing, etc.); (d) low capacity utilization rates (e.g. only 62% for industry in 1986); and (e) cost inefficiency.

1.26 Given, additionally, very high debt equity ratios, typically ten to one for big social sector companies, and high debt servicing burden, all this created an environment in which pressures for high protection were one of the few common denominators for politicians, managers and workers alike.

C. Structural Features of Industry

1.27 This section analyzes changes in the industrial structure on the basis of old 19 sector breakdown.[13] On the basis of selected summary results on the structure of industrial NMP (GDP) by sector of origin (in table 3 below) it can be seen that the industry is dominated by few large sectors: the four largest sectors (Metal, Textiles, Chemicals and Food) account presently for more than 51% of GDP. Another five medium size sectors (Power, Electronics, Wood, Building materials and Iron&Steel) contribute another 27.8% to GDP. The remaining 21.1% is distributed across 11 small sectors. This picture did not change much over time although a slight tendency towards sectoral specialization can be identified. Two new sectors advanced to the largest nine: Chemicals and Electronics, the fastest growing sectors in the economy. The chemicals branch which has more than tripled its share in GDP between 1955 and 1987, made it to the top four sectors as the only newcomer. On the other hand, Coal and Non-Ferrous metals have dropped out of the group of largest sectors due to slow growth and continuously declining share in GDP.

1.28 From the summary results on the structure of investment, i.e. allocation of industrial investment by sector of origin (in table 4 below) it can be seen that, again, quite a large portion is absorbed by a few big sectors: The top four largest sectors in terms of investment allocation account presently for 53.4% of total industrial investment. Three out of these four sectors were also top ranked in their GDP shares. The only exception is Power which has substituted for Textiles. The following five medium size sectors in investment use account currently for another 28.9% of industrial investment. This brings the total investment share for top nine sectors to substantial 82.3%, while the remainder is distributed across 11 small sectors. Sectoral investment shares went through some cyclical movements over the 1955-1987 period and major gains were recorded in Metals and Chemicals (by 5.4% and 4.8% respectively). Overall, investment allocation for the most part remained concentrated in the same sectors and the shares of top four and top nine sectors increased by 6.4% and 5%.

13/ The Yugoslav statistics initially recognized only 19 industrial sectors and have moved to the 32 sector breakdown only in 1976. The old series has been reconstructed according to the new more detailed disaggregation only back to the mid 1960's. In most cases mapping between the new and the old breakdown was simple and straightforward since, as a rule, new industrial sectors were defined by splitting certain old sectors either because they have become too big or because higher homogeneity of sectors was desired.

Table 3: AVERAGE PERCENTAGE SHARES OF SECTORAL NET MATERIAL PRODUCT IN TOTAL INDUSTRIAL NET MATERIAL PRODUCT 1955-87

Period	Power	Coal	Oil	Iron Steel	Non-Ferrs.	Mine-rals	Metals*	Ship Build.	Electr nics	Chemi cals
Average share (per cent) for period										
55-87	6.2	4.5	2.0	4.5	3.6	2.6	19.3	1.2	5.0	6.9
55-65	5.0	7.3	1.3	5.0	4.3	2.6	18.3	1.1	3.8	4.1
66-79	6.6	3.2	2.4	4.3	3.5	2.6	19.2	1.4	5.3	7.4
80-87	7.2	2.9	2.2	4.1	2.7	2.7	20.8	0.9	6.1	9.8
Rank for period										
55-87	6	10	15	9	11	14	1	18	7	5
55-65	6-7	5	16	6-7	9	14	1	18	12	10
66-79	6	11	14	9	10	13	1	18	7	4
80-87	5	10	14	9	12	13	1	19	6	3

Period	Build Mater.	Wood	Paper	Text-iles	Leath-er	Rubber	Food	Print ing	Tobacco	Other
Average share (per cent) for period										
55-87	4.7	7.2	1.6	12.4	3.1	1.2	9.2	1.7	2.8	0.4
55-65	4.9	8.4	1.2	13.2	3.4	1.0	8.8	1.9	4.1	0.2
66-79	4.7	7.0	1.8	12.3	3.0	1.3	9.5	1.7	2.4	0.5
80-87	4.4	6.0	1.8	11.3	2.8	1.4	9.2	1.4	1.8	0.6
Rank for period										
55-87	8	4	17	2	12	19	3	16	13	20
55-65	8	4	17	2	13	19	3	15	11	20
66-79	8	5	16	2	12	19	3	17	15	20
80-87	8	7	15-6	2	11	17	4	18	15-6	20

* Metals sector includes Metal processing, Machine Tools and Transport Equipment.

Source: Statistical Yearbook of Yugoslavia, Various Years.

Table 4: PERCENTAGE SHARES OF SECTORAL INVESTMENT EXPENDITURES IN TOTAL INDUSTRIAL INVESTMENT EXPENDITURES 1955-1987

Period	Power	Coal	Oil	Iron Steel	Non-Ferrs.	Mine-rals	Metals	Ship Build.	Electr nics	Chemi cals
Average share (per cent) for period										
55-87	20.4	6.0	4.1	8.2	6.8	2.4	10.6	0.8	3.3	9.0
55-65	21.9	7.7	3.4	8.8	6.1	2.9	8.5	1.0	2.3	7.7
66-79	20.7	4.2	4.3	8.9	7.8	2.2	10.4	0.9	3.3	7.9
80-87	18.0	6.9	4.7	6.0	5.8	1.9	13.9	0.6	4.5	12.6

Time	Build. Mater.	Wood	Paper	Texti-le	Leather	Rubber	Food	Print-ing	Tobacco	Other
55-87	3.2	3.8	2.9	5.9	1.1	0.8	7.5	0.6	1.2	1.4
55-65	2.5	3.6	4.0	6.3	0.9	0.7	6.8	0.7	1.2	3.0
66-79	4.3	4.4	2.7	5.9	0.9	0.8	7.4	0.7	1.6	0.6
80-87	2.4	3.2	1.6	5.5	1.5	0.9	8.9	0.4	0.7	0.4

Source: Statistical Yearbook of Yugoslavia, Various Years.

1.29 When data on sectoral allocation of investment are analyzed in conjunction with the sectoral structure of GDP and sectoral growth rates (given in table 5 below) it becomes obvious that investment allocation mechanism was slow in responding to changes in the world economy, particularly to the energy crisis, and changing domestic environment. Thus, the Power branch continues to consume a huge proportion of industrial investment, and energy as a whole (with the addition of Coal and Oil branches) uses almost 30% of industrial investment. A widening gap between the GDP share and investment share is observed in three out of nine top ranked sectors according to contribution to GDP, and in all three sectors (Coal, Non-Ferrous metals and Oil) which qualify as the top nine sectors in investment share but not in GDP share. As summarized in the table 5 below, all sectors that receive favorable allotment of investment (positive "Change in Rank" number -column 4) fail to justify it by contributing proportionately or more to GDP (negative "Difference between GDP and Investment Share - column 5). Besides energy, these sectors include traditional priority sectors (Iron & Steel and Non-Ferrous metals) as well as the newly acclaimed priority - Chemicals. In the last column we have indicated some possible reasons for their "below the average performance".

Table 5: TOP RANKED SECTORS IN CONTRIBUTION TO GDP AND USE OF INDUSTRIAL INVESTMENT (IN 1980-87 PERIOD)

TOP 9 Sectors in GDP Share		Rank Indust. Invest. Share	Change Rank Gain + Loss -	Difference between GDP Share & Indust. Inv.Share	Possible reasons for the negative discrepancy
Rank	Sector				
(1)	(2)	(3)	(4)	(5)	(6)
1	Metal,	2	-1	+6.9%	
2	Textiles	8	-6	+5.8%	
3	Chemicals	3	0	-2.8%	P Ctrl, LCU, Prot, Eff
4	Food	4	0	+0.3%	
5	Power	1	+4	-11.8%	NT, P Ctrl, Eff
6	Electronic	10	-4	+1.6%	
7	Wood	11	-4	+2.8%	
8	Build. M.	12	-4	+2.0%	
9	Steel	6	+3	-1.9%	PCtrl, LCU, Inp, Prot, Eff
	New entries for Invest.Share				
10	Coal	5	+5	-4.0%	P Ctrl, Inp, Prot, Eff
12	Non-Ferrs	7	+5	-3.1%	P Ctrl, Inp, Prot, Eff
14	Oil	9	+5	-2.5%	P Ctrl, LCU, Prot, Eff

NT = Non tradeable P Ctrl = Price controls LCU = Low capacity utilization
Inp = Problems with inputs (low quality, unavailability)
Prot = Presence of protection over and above tariffs (quotas, licenses)
Eff = Problems with efficiency in factor use

1.30 In sectors which are effectively non tradeable and subject to biased price and quantity controls (like Power, Coal, and to an extent Oil since it mainly consists of refineries which had rationed inputs for most of the time and required export licenses), poor GDP performance (contribution) does not necessarily imply low efficiency of resource use.[14] Similar type of arguments could be used, and actually was often used to set aside any complaints about the performance of the "strategic" sectors. When low capacity rates are considered, only moderate output and value added growth, and even high wages in some of these sectors, then it becomes quite probable that low GDP contribution and unsatisfactory performance is owed not only to external policy constraints, but also to low efficiency of resource (mostly capital) use.

14/ In other words, these sectors might turn out to be efficient at world or efficiency prices, i.e. after corrections have been made for distorted prices and transfers.

Table 6: GROWTH RATES OF INDUSTRIAL NET MATERIAL PRODUCT 1956-87

Period	Total	Power	Coal	Oil	Iron Steel	Non-Ferrs.	Mine-rals	Metals	Ship Build.	Electr nics
Average rate (per cent) for period										
55-87	7.6	9.4	3.7	11.2	7.0	5.5	8.1	8.6	6.6	11.0
55-65	12.3	14.4	5.5	21.2	11.2	9.4	13.6	14.9	10.1	19.0
66-79	6.9	8.8	1.2	10.1	6.2	5.3	5.9	7.7	4.7	9.3
80-87	2.8	4.3	5.9	0.4	3.2	0.9	5.1	2.1	6.4	3.9

Period	Chemi cals	Build Mater.	Wood	Paper	Texti-les	Leath-er	Rubber	Food	Prin ting	Toba cco	Other
Average rate (per cent) for period											
55-87	11.6	6.7	5.5	9.8	6.9	7.3	9.0	8.2	7.6	4.1	10.0
56-65	18.0	10.6	9.3	18.5	11.3	13.1	15.0	15.0	14.3	7.6	19.7
66-79	11.2	7.6	5.5	7.9	5.7	4.6	9.2	6.9	5.7	3.4	9.5
80-87	4.4	0.2	0.8	2.4	3.6	4.6	1.1	1.8	2.6	1.0	4.7

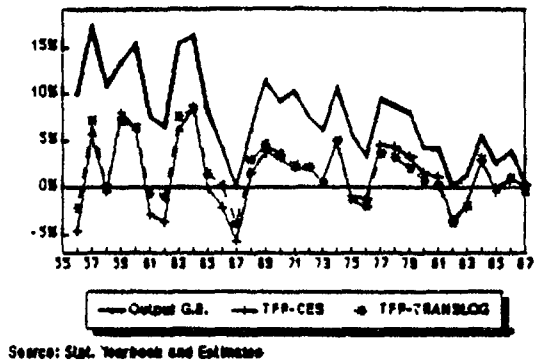
D. Total Factor Productivity - Whole Industry

1.31 As indicated in the previous section, it is clear that as a general trend the capital/labor ratio has constantly been increasing until the third stage and output growth has constantly been declining. A more detailed analysis reveals an acceleration in the capital/labor ratio during the second stage, followed by a significant slowdown in 1980 and 1981. After falling for a couple of years the capital/labor ratio seems to revive slowly after 1985. Output growth rates, on the other hand, fluctuated in very short cycles around the long-term downward sloping trend line during the first stage, then assumed longer cycles with average growth rates generally above the long term trend line in the second stage. Finally, in the third stage, it stayed at or below the trend line. The tail of the series drives the long term output growth trend across the zero line to negative values. This is confirmed by 1988 industrial output growth record (-0.7%) which could not be considered in the analysis because parallel data on labor and capital were not yet available.

1.32 Industrial TFP, either for the whole country or by the region, was estimated using the so called parametric technique or the estimation of parameters of a value added production function. This enabled better handling of the data insufficiency problems in a distorted economy with practically no factor markets. TFP estimates for the total industry at the Yugoslav and republican/provincial level, were based on two well known types of production functions: Constant Elasticity of Substitution (CES) and Translog production functions. The details on the derivation of parametric TFP estimates are found in an annex. The main TFP results at the Yugoslav level are presented in the figures 6-8 below.

Total Yugoslav Industry 1955-1987

Industrial TFP and Output Growth



Source: Stat. Yearbook and Estimates

Figure 6

1.33 As could be seen from the figure, TFP and NMP (GDP) growth rates follow closely the same cyclical pattern on a downward sloping long term trend. Out of 32 observed years TFP rates were negative in 11, and they have always coincided with slower output growth (rates below the trend line) indicating a lack of adjustment in factor use (particularly labor in the short run and capital in the longer run) to varying output growth. It is also apparent that the efficiency of capital use was the main problem in the Yugoslav industry. Marginal productivity of capital was growing slowly during the first stage, and started to decline when the planned allocation of investment was abandoned without ever being replaced with an operational (market or non-market) alternative. The decline in capital marginal productivity only levels off after further capital growth was stopped by the foreign debt crisis in the early 1980's.

Total Yugoslav Industry 1955-1987

CES Marginal Products of Labor & Capital

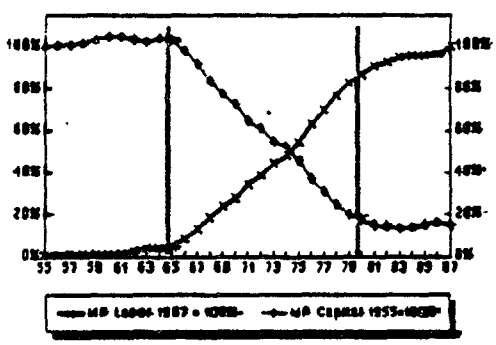
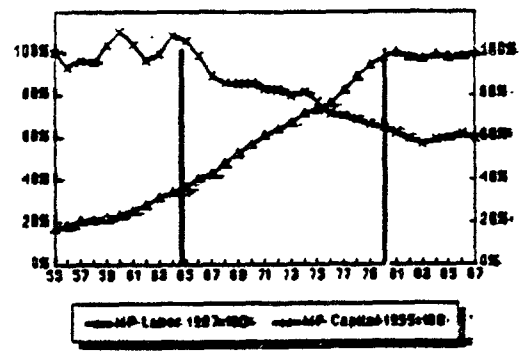


Figure 7

Translog Factor Marginal Products



Source: Translog PP Estimates

Figure 8

1.34 The cyclical movement and large fluctuations in TFP rates needs to be emphasized. The classical socialist investment cycles hypothesis (explained by internal factors of investing more in basic industries via planned allocation of investible resources) largely explains such TFP developments. Although TFP and growth rates continue to move in parallel, the gap between them is narrowing indicating a continuation of extensive growth even at weak growth of both capital formation and employment. In short, TFP analysis indicates both: (i) cyclical movements of the Yugoslav industry resulting either from external causes (recessionary developments or shocks in the world economy), or being induced by own institutional rigidities and/or changes and restrictive economic policy; and (ii) the general downward tendencies in TFP and output growth rates indicating a presence of some quite serious problems in the overall economic performance. The observed tendency towards growing capital-output ratio and slowdown in output growth, is reconciled through the presence of very low elasticities of substitution between labor and capital. The most obvious consequence of the low elasticity of substitution is a falling marginal productivity of capital in response to increasing capital-output ratio. This is the main mechanism which puts an effective constraint on the "extensive growth" since it yields, when combined with a capital bias in investment, the retardation of industrial growth.

1.35 In estimating production functions and decomposing the factors contributing to GDP growth the following results were obtained:

(a) very low elasticities of substitution and a declining marginal value product of capital throughout the second stage. The estimated elasticity of substitution for the entire 1955-1987 period is $\sigma = 0.163$ This indicates that capital bias strongly contributed to the erosion of the marginal product of capital. This is illustrated in figures 7 and 8. It is really peculiar to the Yugoslav circumstances that capital has continued to be used in the same inefficient way (enabled by already mentioned policy measures and institutional characteristics of the self-management firm) for such a long period of time, whereas labor was flooded with too much capital despite growing unemployment and a nominal safety net system;

(b) only a moderate contribution of technical change to the output growth ranging between 22% (second stage) and 5% (third stage) was estimated indicating, again, the presence of extensive growth;[15]

(c) capital contribution falls from exceptionally high 78.48% in the first stage to the low 18.91% in the third stage, while the contribution of labor follows the opposite path growing from only 2.68% to 75.95% during the same time; and

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15/ Sapir [1980] identifies technical progress is an important growth factor which has contributed 38% and 63% to the growth recorded in 1955-65 and 1966-74 periods respectively; This is a surprising result and it might be influenced by the estimation technique and assumptions on the type of technological change, as well as by biases included in the statistical measures of output and inputs. See Sapir, [1980] ,p.300.

(d) the slowdown in output growth (4.9% between first and second and 4.4% between second and third stage) is mostly owed to lower imputed capital share, which, given the analytical assumptions of the parametric TFP estimates, translates to lower marginal product of capital - the main tendency identified in our analysis.[16] Details are presented in table 8 below.

1.36 The analysis indicates that the main problems are in the area of capital and investment. The lack of capital markets or efficient substitutes, the lack of hard budget constraints and financial discipline, and the lack of adequate macroeconomic policies. Since the main points have been already elaborated above, it should be only repeated that failures of the investment allocation system, lack of positive price on capital and of minimal macroeconomic policy measures were so prevalent that gross misallocation of resources and fast accumulation of external debt would have resulted even without any of the self-management firm behavior problems, and regional and national biases being considered. Further microeconomic causes of the slowdown in productivity are outlined in the next chapter.

Table 8: SOURCES OF GROWTH FOR THE YUGOSLAV INDUSTRIAL SECTOR 1955-87

	Stage 1	Stage 2	S2-S1	Stage 3	S3-S2
Output Growth Rate	12.04%	7.18%	-4.86%	2.80%	-4.38%
Percentage	100.00%	100.00%		100.00%	
Capital's Contrbtn	9.45%	4.23%	-5.22%	0.53%	-3.70%
Percentage	78.48%	58.84%		18.91%	
$S_K \cdot \delta G_K$			-1.73%		-2.37%
$G_K \cdot \delta S_K$			-4.27%		-3.02%
$\delta \cdot G_K \cdot \delta S_K$			0.78%		1.69
Labor's Contrbtn	0.32%	1.36%	1.04%	2.13%	0.77%
Percentage	2.68%	18.91%		75.95%	
$S_K \cdot \delta G_K$			-0.18%		-0.16%
$G_K \cdot \delta S_K$			2.67%		1.05%
$\delta \cdot G_K \cdot \delta S_K$			-1.46%		-0.12
Technical Progress	2.27%	1.60%	-0.67%	0.14%	-1.45%
Percentage	18.85%	22.25%		5.15%	

Where K and L stand for Capital and Labor, S denotes factor shares, G factor growth rates, and δ change in factor shares and/or growth rates.

16/ In Sapir's analysis capital contribution to the GDP growth is only half of the labor contribution, while retardation of GDP growth between two institutional periods is owed mostly to the slowdown in employment growth rate and declining imputed capital share, which is by assumption the same as declining marginal productivity of capital.

E. Total Factor Productivity--By Regions

1.37 To capture the regional aspects of TFP, a separate evaluation was done for total industry in each region (republic and province).[17] Regional development policy in Yugoslavia is based on investment (capital) transfers from more developed regions (MDR) to less developed regions (LDR).[18] Previous studies have argued that these transfers were done in such a way, that the capital-labor ratio in LDR was, as a result, growing faster than in MDR's. This contributed to the already present capital bias in investment. The gap between average labor productivity[19] in Slovenia, as the most developed region, and other MDR's and the whole group of LDR's was widening over time, as well as the gap in efficiency measured by TFP performance of Slovenia against other regions. These points are driven to conclusion that regional redistribution of resources (investment) from other regions to Slovenia would improve the performance of the Yugoslav industry.[20]

1.38 Using the CES production function format enables an estimation of the parameters and TFP for all regions.[21] The TFP results for each region are given in eight individual figures on the subsequent two pages, whereas table 9 presents numerical results of the regional TFP performance over three identified sub-periods of industrial development.

17/ See the previous work of Bateman, Nishimizu and Page [1988] and Nishimizu Page [1982].

18/ MDR's include Slovenia, Croatia, Vojvodina, and Serbia. LDR's include Bosnia and Herzegovina, Montenegro, Macedonia and Kosovo.

19/ Defined as output per worker or simply Q/L.

20/ Interestingly enough, in the local political arena one can frequently encounter exactly the opposite claims: Since Slovenia has acquired such a great advantage in terms of income per worker and income per capita the size of redistribution should be increased to yield more equality and faster growth of LDR, rather than decreased to yield more efficiency and industrial growth in Slovenia.

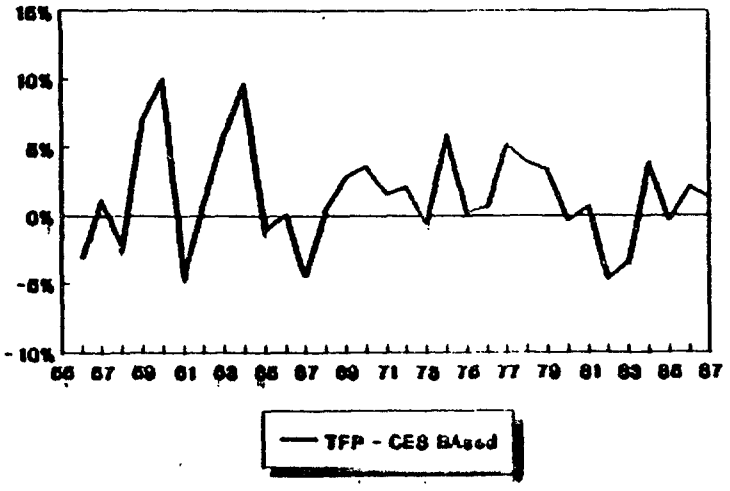
21/ In fact, statistically acceptable parameter estimations were obtained independently for all regions except Montenegro and Kosovo for which TFP estimates were computed using average Yugoslav CES production function parameters.

Table 9: RATES OF TFP FOR MORE AND LESS DEVELOPED REGIONS

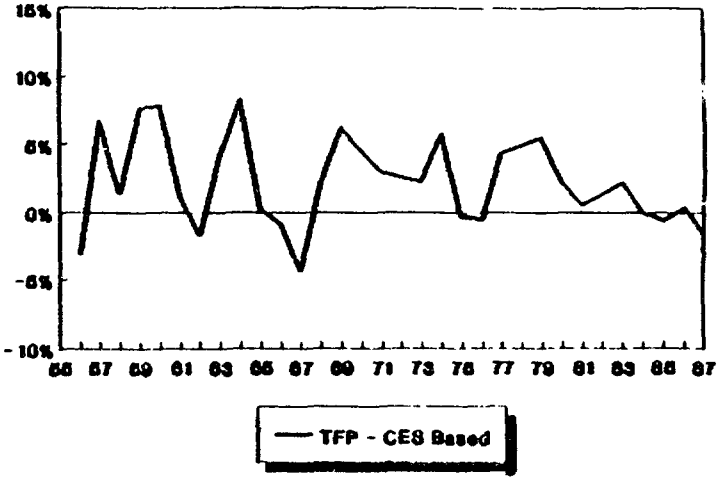
	1955-87	Stage 1 55-65	Stage 2 66-79	Stage 3 80-87
Yugoslavia	1.37%	2.28%	1.43%	0.14%
LDR's				
Bosnia and H.	1.68%	3.32%	1.79%	-0.55%
Montenegro	0.79%	-0.94%	2.57%	-0.16%
Macedonia	0.29%	-1.48%	1.30%	0.72%
Kosovo	-0.90%	-4.30%	0.51%	0.54%
MDR's				
Croatia	1.51%	2.41%	1.79%	-0.09%
Slovenia	2.26%	3.27%	2.52%	0.54%
Serbia	1.64%	3.12%	1.31%	0.37%
Vojvodina	2.12%	2.01%	2.50%	0.45%

1.39 It would appear that the picture of TFP growth and regional growth performance changes when the period reviewed is extended up to 1987. It is clear that the 1965-1974 period is not unique and that it is, at least from the overall industrial performance point of view, a sub-period which was continued until the end of 1970's (year 1979-80). The first performance period seems to be the most successful in terms of TFP performance but even then annual TFP rates greatly fluctuated and average period rates were not spectacular. Impressive output growth performance is owed primarily to extensive capital formation and then to new employment. The role of efficiency gains was only secondary. During the second period average TFP rate declines more than output growth indicating a continuation of the extensive type of industrial growth. Finally, in the third period TFP rates further decline and approach zero (in three out of eight regions average TFP rates have even become negative: Bosnia, Montenegro and Croatia).

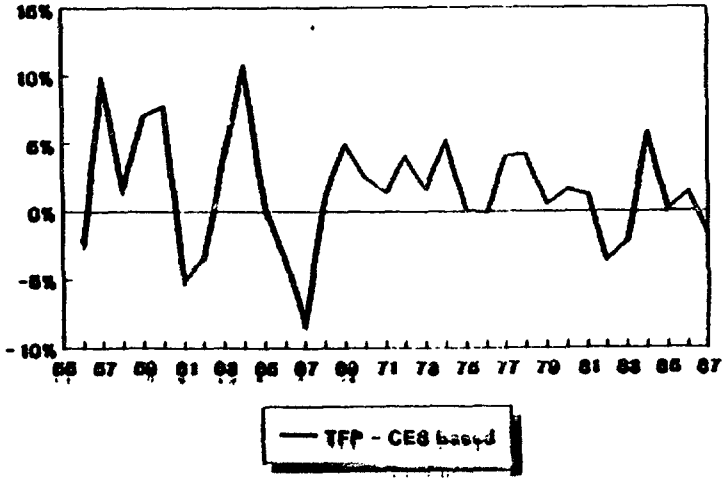
TFP: CES Estimates
Croatia



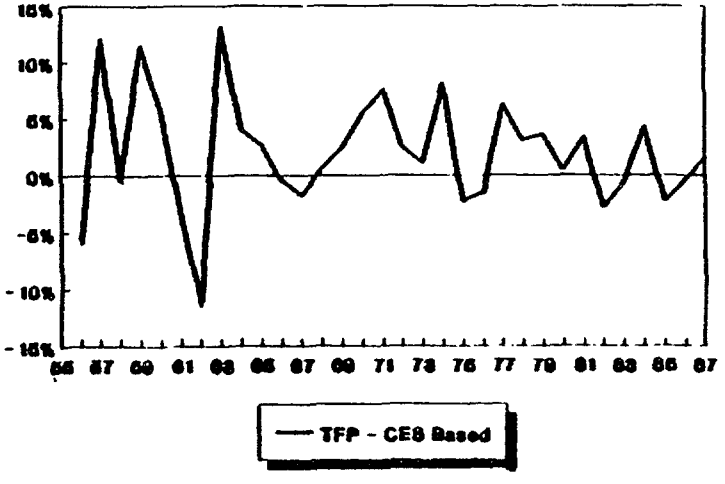
TFP: CES Estimates
Slovenia



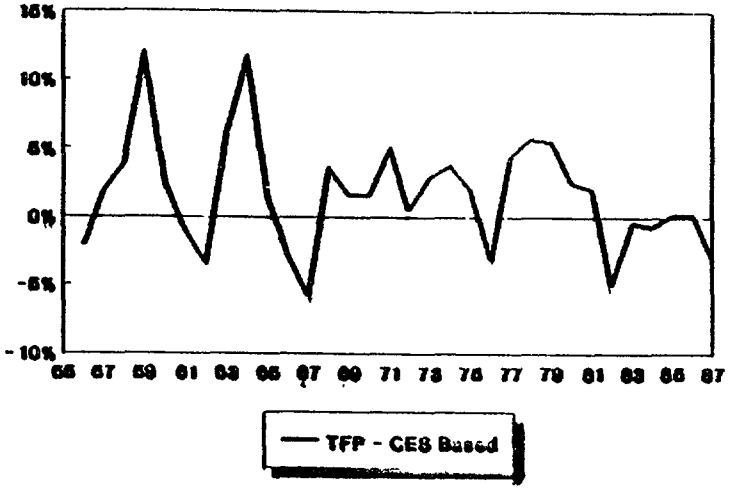
TFP: CES Estimates
Serbia



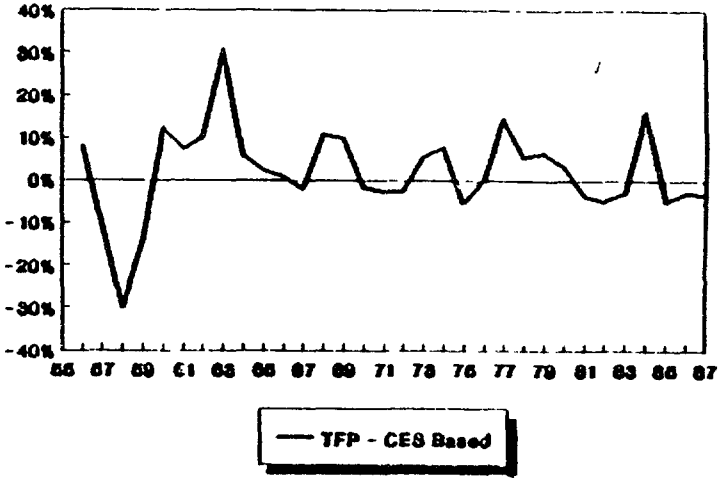
TFP: CES Estimates
Vojvodina



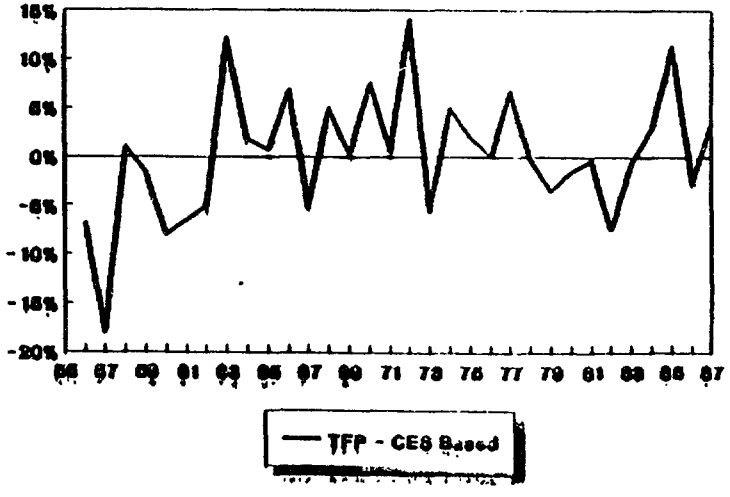
TFP: CES Estimates
Bosnia and Herzegovina



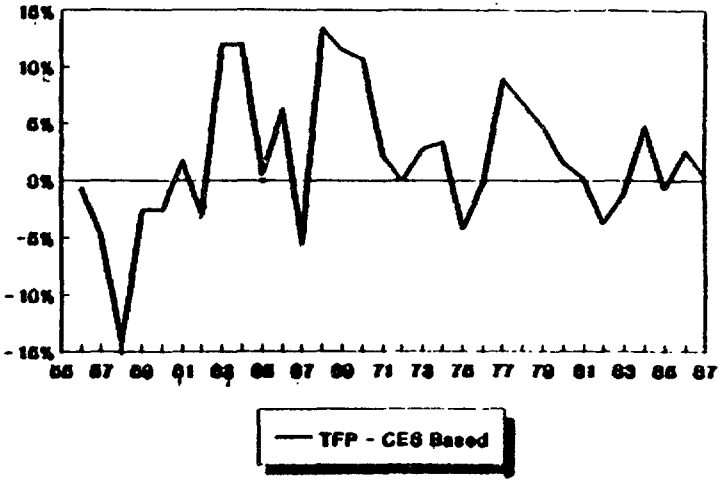
TFP: CES Estimates
Montenegro



TFP: CES Estimates
Kosovo



TFP: CES Estimates
Macedonia



1.40 Within this relatively unsatisfactory overall performance, it appears that Slovenia was doing much better during the first two performance stages which were mostly (up to 1978). The observed growth performance and efficiency of resource use was considerably better than in other regions but acquired TFP efficiency gains, despite being unstable and appearing vulnerable, were on average not impressive in their own right. In the third stage TFP rates in Slovenia assumed a surprisingly steep downward trend and frequently recorded negative values. The conclusion is that all regions now appear to be suffering from the distorted economic environment and being trapped in the same kind of capital bias--low and declining efficiency of capital use is a systemic problem of the Yugoslav economy.

1.41 Results of the analysis of the sources of industrial growth by region are presented in annex table 10.

F. Total Factor Productivity--By Sector

1.42 Analysis of total factor productivity at the sectoral level focused on industrial branches which had the highest level of production weighted quantity (K) quota protection in 1987 and 1988. These are outlined in the following table:

PRODUCTION WEIGHTED K QUOTA COVERAGE
(in per cent)

	1987	1988
1. Iron and Steel	41.7	41.6
2. Non-Ferrous Metals	33.1	33.1
3. Machine Tools	32.1	31.9
4. Transport Equipment	63.2	40.9
5. Chemicals	64.2	52.8
6. Electronics	24.4	20.2
7. Textiles-Fabrics	45.7	45.7
8. Textiles-End Products	87.4	87.4
9. Food	53.6	51.2
10. Beverages	50.4	48.8

At this level of sectoral disaggregation (32 sectors) consistent time series for output, capital and labor (for the whole country and by the region) could be obtained only for the 1976-1987 period, i.e. after the change in the sectoral breakdown of the national accounts. Since the series were too short for individual parameter estimation, a cross section (over regions) production

function parameter estimations were done for the each sector:[22] A number of common production functions were tested and Cobb-Douglas (CD) production function with constant returns yielded the best results.

1.43 TFP by sector and region derived on the basis of these CD parameter estimates are presented in annex graphs labeled: TFP (CD). Couple of general points that apply to majority of sectors and regions could be stressed:

(a) TFP annual rates continue to move in line with output growth rates, but both rates tend to be much more unstable for individual sectors at the regional level.[23]

(b) In most sectors (seven out of ten) a general tendency of worsening TFP performance seems to prevail. But in five out of the seven sectors with declining TFP rates[24] there are regions (between one and three out of eight) which somehow manage to escape the sectoral tendency and have roughly constant or even improving TFP.[25]

(c) Improving TFP performance is found only in Textile end products and in Non-Ferrous metals, whereas Beverages stand midway with roughly constant TFP and with equal number of regions experiencing improving and declining TFP rates. Of course, an opposite example of regional exceptions to the rule can be found in sectors which are generally doing good in terms of TFP.[26]

22/ Due to quite obvious changes in capacity and labor utilization, all series were carefully screened and adjusted for significant shifts in factor utilization. The original output series were first "smoothed" using a constant growth rate line "through the peaks" of the series. The difference between the original and adjusted series was then used to derive the "utilization rate" with which labor and capital were adjusted as appropriate.

23/ More stable TFP rates were observed either for total industry at the regional level or for individual sectors at the national (Yugoslav) level. Instability of sectoral performance data at the regional level has long been recognized in Yugoslavia and mostly attributed to small number of companies per region in some sectors and non-marginal size of new investments (i.e. additions to capital and production).

24/ Machine tools and food are the only sectors in which all the regions seems to follow the same common sectoral pattern.

25/ Thus Macedonia and Bosnia have (mildly) improving TFP in Steel, Croatia in Chemicals and Electronics, Kosovo and Macedonia in Transport equipment, Bosnia and Macedonia in Textile Fabrics.

26/ Thus Vojvodina and Montenegro have declining TFP in Textile end products unlike all other regions and the sectoral average.

(d) More importantly, TFP rates have been negative or close to zero for majority of regions (between four and eight out of eight) in all but one sector (i.e. Textile end products where six regions have positive TFP rates).[27] Machine Tools is the only sector where all regions have negative average TFP rates, followed by Food with one region having positive TFP rates (Slovenia) and Chemicals with two regions averaging above zero (Vojvodina and Croatia).

1.44 Although this analysis provides conclusive evidence both on the prevailing declining tendencies and unsatisfactory low levels of sectoral and regional TFP rates, large annual variance in output and TFP rates and a relatively short sample period suggested that more confidence would be gained if these results were read within a longer and more stable sectoral context. This, of course, could be obtained only from a longer term estimate of sectoral production functions and TFP performance. Given the change in sectoral disaggregation of national accounts in the mid 1970's, longer term series could be established only following the old 19 sector classification. In most cases the mapping between the old and the new sectoral breakdown provided a satisfactory base for a broader sectoral context.[28]

1.45 Again, a number of functional forms have been tested on the seven sector series for the 1955-1987 period and this time the so called Kmenta logarithmic approximation of the well known constant elasticity of substitution (CES) production function yielded best results (details are presented in annex 3). Starting from these parameter estimates TFP rates have been computed for each of the seven sectors. In six sectors TFP rates followed a downward long-term linear trend, with Chemicals being the only sector with constant albeit low positive long term average TFP rates. The trend was steeper in Electronics, Food, and Metal sectors than in Steel, Non-Ferrous Metals, and Textiles. Longer term analysis confirmed also the above result that average TFP rates are becoming negative or staying negative in all analyzed sectors but Chemicals and Electronics, although, given the past trend, TFP rates in Electronics might on average also turn negative before

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27/ Typically, in six out of ten sectors (i.e. in Steel, Non-Ferrous Metals, Electronics, Transport Equipment, Textile Fabrics, and Beverages) approximately four regions would have negative average TFP rates, another two or three regions will have TFP rates close to zero, with only one or two regions having positive average TFP rates.

28/ As already mentioned above: (1) The old Iron and Steel sector also includes Iron ore mining; (2) The old Non-Ferrous Metals sector also included Non-Ferrous Metal Ore Mining and Non-Ferrous Metal Processing; (3) The old Metal industry sector consisted of two sectors from our sample (Machine Tools and Transport Equipment), but also included Metal Processing; (4) The old Chemicals sector also included Chemical Processing; (5) The old Textile sector consisted of Textile Fabrics and Textile End Products; and (6) The old Food sector consisted from two sectors currently analyzed (Food sector and Beverages), but also included Animal Feed sector. Electronics is the only sector where old definition coincides with the new one.

long. To complement the TFP results regional structure (i.e. regional distribution of value added) for each of the analyzed sectors is also provided and a brief account of the sectoral developments is given in the following paragraphs.

1.46 Iron and Steel: It was a top priority sector in investment allocation (second to power) during the first period (1955-65), but it gradually lost that position to Metal industries in the second period and it slid further down to the sixth position in the 1980's. If it wasn't for a major investment effort Serbia is still putting in Smederevo, Steel would be even lower ranked in terms of investment use. Regional allocation of investment in Iron and Steel has been heavily disputed in Yugoslavia even at times when other open debates were simply inconceivable. Since investment in general was heavily subsidized, large steel projects entailed not only sizeable capital gain, but also carried significant political prestige and regional appeal. Regional political groups thus lobbied strongly to get new steel projects, largely ignoring technical, economic and cost considerations in favor of pure political and strategic "concerns". Rules of the game were such that the "lack of any previous steel production" and "lack of comparative advantage" could have been and was used as a crucial argument in getting new steel projects. This lead to notable shifts in the regional distribution of value added over time as can be observed from figure 9.

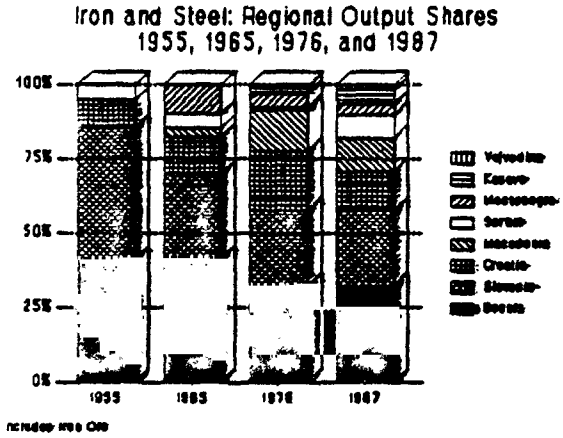


Figure 9

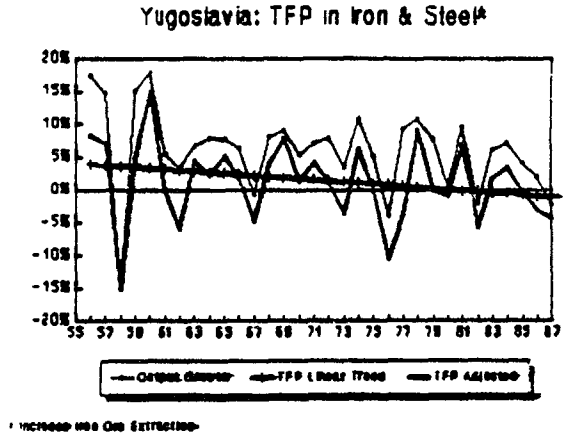


Figure 10

Steel provides a strong support to the contention that regions in Yugoslavia have had a tendency towards autarky, both with respect to the rest of the world and with respect to other regions in the country. Tendency towards autarky is best manifested in declining regional market share differentials (particularly when adjusted for regional size). Another consequence of such investment in steel was a declining efficiency as measured by the TFP rates in figure 10. In the 1950s steel production was dominated by Slovenia and Bosnia (86% of output). Large steel projects done in Bosnia, Montenegro, and Macedonia until 1965 contributed to significant shift in regional structure of output.

1.47 Similar tendencies towards declining market share differentials could be observed in Non-Ferrous Metals despite the fact that location in this industry is very dependent on availability of ore (figure 11). TFP in Non-Ferrous metals has on average been negative and slowly worsening, but apparently more stable than in other sectors. Prices in this sector have long been set with direct reference to the world prices so that negative and declining TFP rates indicate low efficiency of capital and labor use (figure 12). In this sector it is possible that exogenous natural reasons, like poor metal content, play an important role.

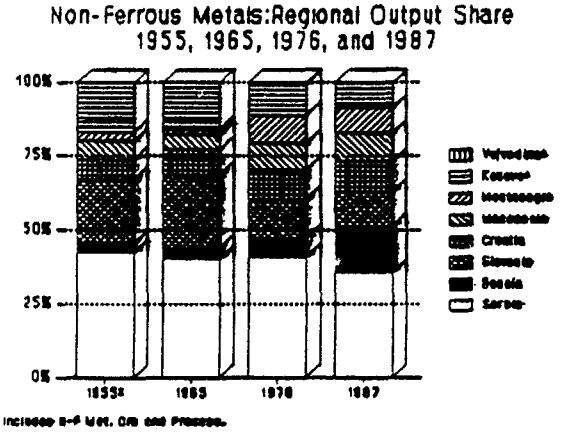


Figure 11

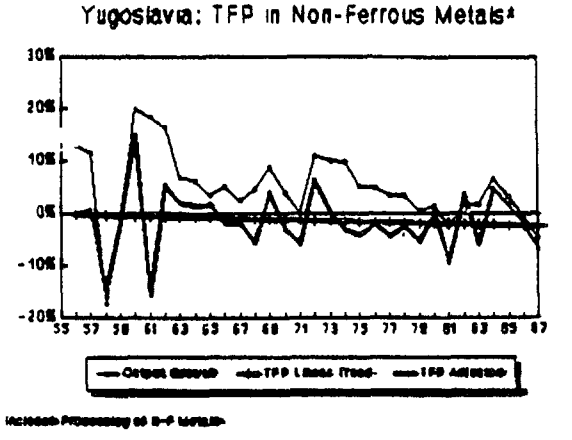


Figure 12

1.48 Metal industry recorded less change in regional value added shares but a tendency towards autarky can nevertheless be empirically detected through declining shares of three major producers (Serbia, Slovenia, and Croatia) as could be seen from figure 13. Strong and on average quite positive TFP performance lasted throughout the first and second phase, but suddenly disappeared in the third period (figure 14).

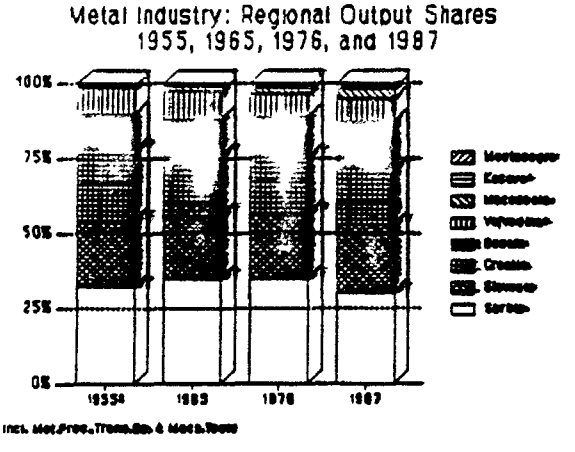


Figure 13

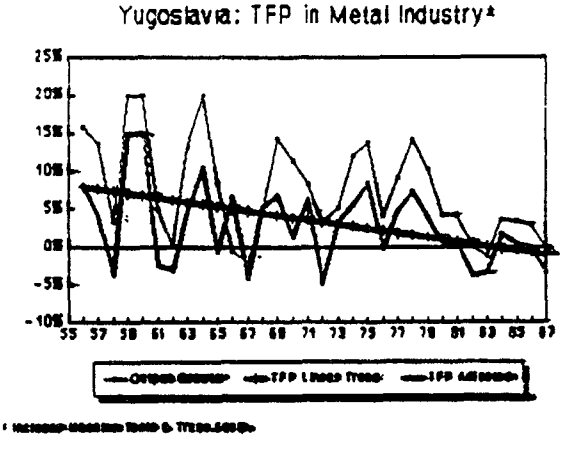
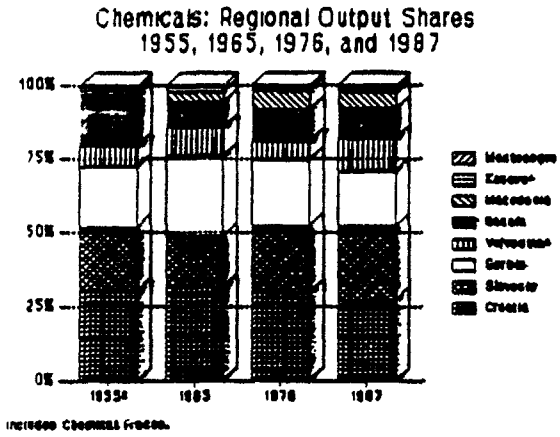


Figure 14

1.49 Unlike most other sectors chemicals have on average experienced less pressure towards uniform regional distribution (figure 15) and have managed to retain average TFP rates positive (although low) with minimal fluctuations which seems to be quite an achievement (figure 16).



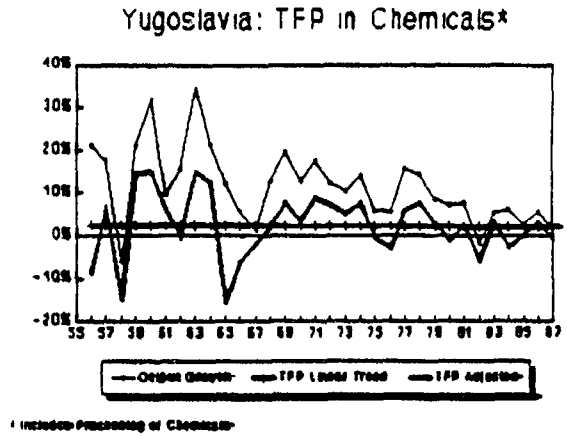
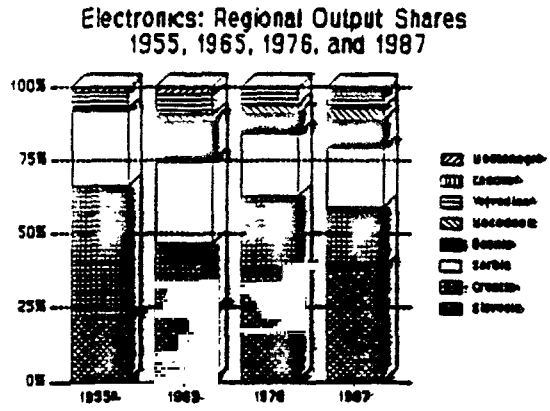


Figure 15

Figure 16

1.50 Electronics have been performing differently from other previously reviewed basic sectors. There, a tendency towards autarky did not prevail and some specialization (judging by the regional output shares data) has occurred (figure 17). TFP rates have, however, been very unstable and on a declining trend line. The industry has suffered a major setback at the beginning of the third period with four subsequent years of negative TFP's followed only by a mild recovery in 1984-85 period (figure 18).



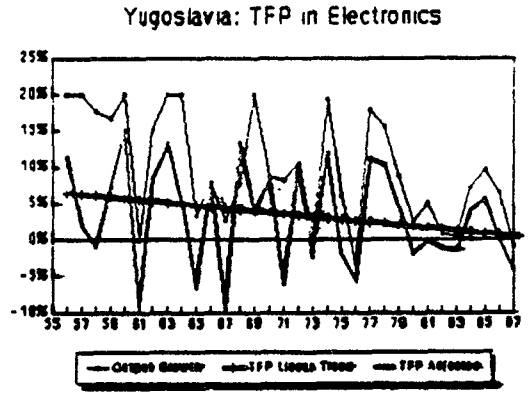


Figure 17

Figure 18

1.51 Textiles were very typical of general regional tendencies towards autarky since the regional distribution of output consistently became more even (figure 19). Of course, in that one needs to account for empirically verified movements of textile industries from developed to less developed regions observed in other countries. TFP performance of the textile sector has always been weak, but it on average remained positive. Recently, however, it has approached zero (figure 20).

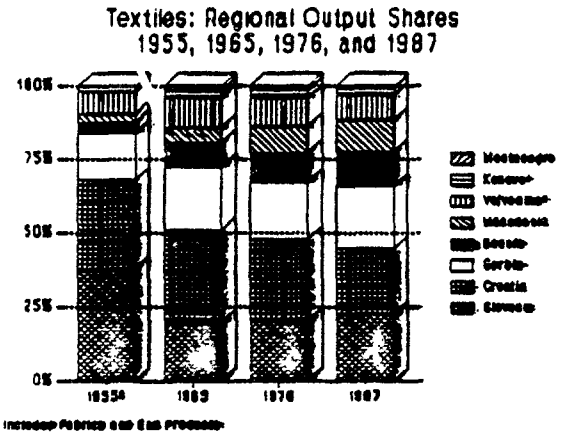


Figure 19

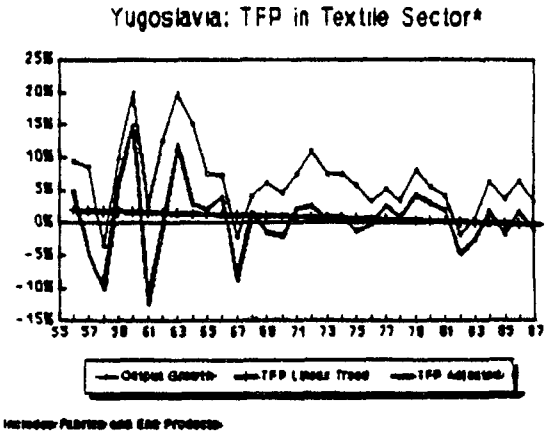


Figure 20

1.52 Food sector, perhaps expectedly, follows the same regional output distribution route set as a tendency by other industries. Despite their immense comparative advantage in producing food Croatia (actually Slavonia region), Vojvodina, and Serbia have been constantly experiencing declining market shares (figure 21). TFP rates which used to be reasonably high, albeit unstable, have consistently declined and are on average negative in the third period (figure 22).

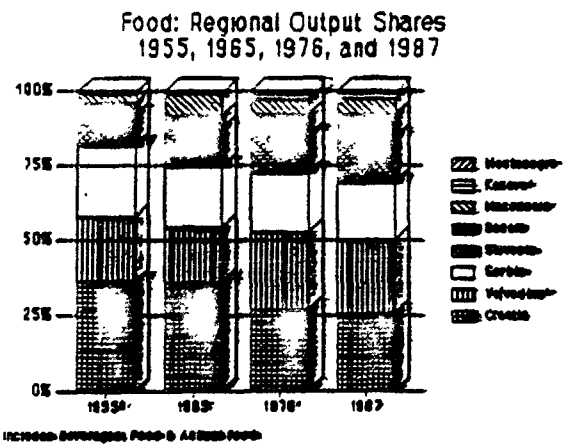


Figure 21

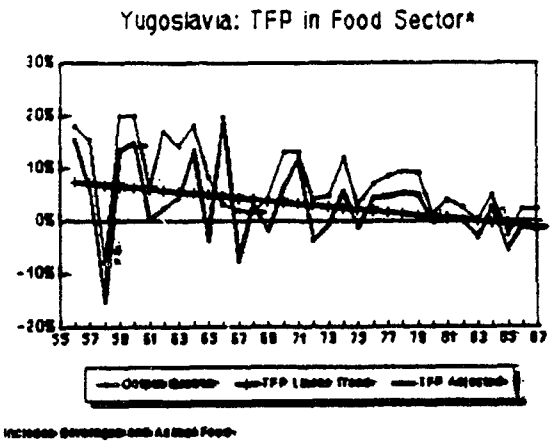


Figure 22

CHAPTER 2

ENTERPRISE PERFORMANCE: THE MICRO-ECONOMIC VIEW

A. Introduction

2.01 The previous chapter outlined the continuous decline in Yugoslavia's economic performance over the past thirty years. The decline in rates of economic growth largely is attributable to the declining efficiency in the use of capital. Moreover, the economic system has fared poorly in terms of providing employment and there has been a net migration out of the country. The result has been low and declining levels of total factor productivity, shared by all republics and most industries in Yugoslavia. Thus the conclusion is tnat there are system wide problems in Yugoslavia.

2.02 In this chapter the micro-economic causes of this decline in productivity are explored from an industrial organization viewpoint. The focus is two-fold. First there are issues relating to the flexibility of the economy to changes occurring on both the supply (such as technology and terms of trade) and demand sides (such as tastes and income). The flexibility and adaptability of an economy will be seen as a function of the mobility of factors of production (namely capital and labor) and competition in the goods market. Second there is the issue of redistribution, which takes place on a large scale in Yugoslavia. Redistribution of income is an important determinant of work incentives and the mobility of resources. In particular, the continued support of loss makers has severely constrained the dynamism of the industrial sector.

2.03 Up to the present time, Yugoslavia has provided the only example of a country which has based its economic system on self-management. However, recent amendments to the constitution and key laws have re-established a legal structure where it may be possible for enterprises to be based on equity ownership rather than labor input. There is still some question as to whether the vast bulk of socially owned enterprises will be subject to direct competition from new forms of enterprises under the revamped economic system. As of now the complete legal system has not been changed and there are still unresolved questions relating to the role of labor in the management of enterprises. Nevertheless the changes being discussed potentially have far reaching implications for the economic system. The analysis in the chapter will provide a framework for assessing the potential effectiveness or shortcomings of recently proposed legislative and policy changes. Important issues in this regard include the delineation of property rights for state owned enterprises and measures which might constrain soft budgets.

2.04 The sections that follow begin with a brief outline of the self-management and accounting systems in Yugoslavia. Understanding the unique features of these systems helps explain some of the observed behavior of firms in regard to labor and capital allocation. In section C the issue of wage formation and labor allocation is outlined. The issue of wage formation is central to understanding the mechanisms of redistribution which are covered in section D. Section E outlines investment and capital mobility and highlights, in particular, the response of firms to the increase in capital charges in 1987. In section F the degree of competition in the goods market is assessed, with reference to forces of domestic and external competition.

B. The Self-management and Accounting Systems

(i) The System of Self-management

2.05 As outlined in chapter 1, from the mid 1970s to mid 1989 the economic experience of Yugoslavia has revolved around experimentation with institutional forms designed to further workers' self management and what is referred to as market socialism.1/ Institutional policy was designed to weaken central administrative control and centered upon basic organizations of associated labor (BOALs) which were established for any group of workers whose output could be measured as an independent unit. Thus, an enterprise in the Western sense could comprise many BOALs. They had their own worker's council, assets and income--in fact the BOAL was the basic unit for accounting purposes. Precisely what powers were delegated to higher levels of authority were dependent upon a formidable process of bargaining and self management agreements (SMAs).

2.06 Complementing the increased fragmentation of firms was the introduction of social compacts (SCs) which served as a vehicle for co-ordination of policy in the areas of planning, prices, income distribution, trade and employment. Whilst not legally binding these compacts and agreements were arrived at by way of a convergent harmonization of republican plans. In effect they substituted for the direct control of economic policy.

2.07 But the linchpin of the system was workers' control at the level of the BOAL (in this report referred to as a firm). The essential characteristic of self-managed firms is that workers are ultimately responsible for decision making. The income of a self-managed firm in Yugoslavia is defined as the residual of revenue after all non-labor costs are deducted. Non-labor costs include materials, depreciation and interest but not any profits. Thus each worker receives a wage and a share in surplus for his entrepreneurship. Maximizing income per worker became the key objective of firms and the main signalling mechanism for the allocation of resources. This may be contrasted to capitalist firms where differences in returns to capital are supposed to result in resource flows to more profitable activities.

2.08 In practice a major cause of distortions in the economic system in Yugoslavia is the lack of well defined responsibility for any action relating to the capital stock. The business entity in Yugoslavia is endowed with capital that is owned by society at large. However, this social ownership is not vested in the government or any other legal body. The social sector enterprises in Yugoslavia are entitled to use this capital and are obliged to

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1/ Further details on self management may be found in Schrenk, Martin, 1987, "The Self-Managed Firm in Yugoslavia", in China's Industrial Reform, edited by Tidrick G. and Jiyuan Chen, Oxford, pp. 339-369. Also refer to Prasnikar, J. and Svejnar, J.,1988, Economic Behavior of Yugoslav Enterprises, in Jones, D.C. and Svejnar, J., eds., Advances in the Economic Analysis of Participatory and Labor Managed Firms, Volume 3, pp 237-311, JAI Press.

maintain its value. The adverse implications of this arrangement provides the rationale for all manner of government interventions in the operation of firms. Together these factors have led to various rigidities in the factor and goods markets. As discussed in the next chapter this problem of property rights has not been addressed in the recent constitutional amendments. The expected implications of self management at the firm level on factor markets and competition in the goods market may be summarized as follows:

- inadequate and short-term investment

2.09 Yugoslav workers do not retain any right to a firm's surplus once they leave or retire. Moreover they cannot diversify their risk by investing in other firms. Yugoslav workers indirectly provide funds for their enterprise through decisions on levels of investment--but the only way they can recover this investment is through participation in any financial surplus while they are employed in the firm. For these reasons (and in the absence of investment controls) self-management in Yugoslavia would tend to result in underinvestment. Thus workers have a diminished motivation for retaining earnings in the firm as any invested funds become a kind of undefined social property.

2.10 At the same time, the possibility of transferring the burden of interest to future generations is an incentive for long term borrowing. Ideally (from their point of view), workers would undertake long-term borrowing, and use the funds to pay themselves high wages. If a condition for borrowing is that the funds be utilized for investment purposes, workers would still borrow, but choose investment projects that produce most of their returns in the short run. This could, for example, include speculation on inventories. Thus, the self-managed firm in Yugoslavia will have an underlying tendency towards underinvestment and a bias towards short term projects.

2.11 In reality economic development in Yugoslavia has been driven by investment and until recent times underinvestment has not been a problem. As discussed below the government has encouraged investment through negative real interest rates. However, the tendency of self management towards under investment is of more than academic interest. It could be expected that a shift towards positive real interest rates and a hardened budget constraint in a self managed system would result in a significant decline in the demand for capital. This decline would be greater than that expected from a capitalist firm. As argued later in this chapter the increase in interest rates in recent years has not provided a test of this hypothesis because the soft budget constraint facilitated significant transfers to capital intensive and loss making firms which enabled them to postpone adjustment.

- excessive wages and inefficient labor allocation

2.12 Under self-management, if left to themselves, workers would increase wages by running down the capital stock and not hire new workers wishing to join the enterprise. Incumbent workers in a self-managed firm are reluctant to hire new workers, as these are freely granted access to the rents generated by the firm's capital stock. Thus new workers would lower the average rents received by each workers. A self-managed firm thus becomes

analogous to an exclusive club that is prevented (by law) from charging admission fees, but is nevertheless allowed to refuse admission. The expected result would be high levels of unemployment and restricted labor mobility. A worker will not quit to search for jobs more appropriate to his/her skills or tastes due to the small probability of being accepted as a member in other firms. Thus, the best match between jobs and skills is not achieved.

2.13 Since new workers lower average wages this is perceived as a negative externality (in economic jargon) by incumbent workers. The obvious solution would to charge new workers an "entrance fee" as is done in the case of Mandragon co-operatives in Spain.[2/] This may make sense for co-operatives that operate within a more conventional economic system. However, it has not been acceptable in Yugoslavia where the whole system is based upon self-management. The distortion in the inter-temporal distribution of surplus in Yugoslavia has led to worker preference for capital intensive production techniques as it results in less rent dilution.

- lack of factor mobility and reduced competition

2.14 Both entry and exit is constrained in a self-managed system, which leads to an inflexible industrial structure. Firm entry into new product ranges or geographic markets is made difficult by the co-ordination problems involved. Workers have to agree on new investments through referenda or workers' councils. Whilst some decisions are delegated to professional managers they are constrained in their actions. In turn, the reduced pressure for firm entry becomes a source of market power. Existing large firms become entrenched in a market and are able to increase prices without fear of competition from new entrants.

2.15 Also firm closure means that workers lose both their jobs and their investment stake. Understandably resistance to firm exit is much stronger than it would be if workers could separate their rents from their wages. Moreover due to ill defined social capital there is no mechanism for loss absorption by equity capital and consequently liquidation of a firm becomes a troublesome concept. Capital and labor do not flow smoothly to more productive uses, hence the capital stock is not allocated optimally.

- inequality in income distribution

2.16 A self-managed economy would tend to result in unequal income distribution across the economy. Most importantly it could be expected that workers in capital intensive industries would tend to receive higher wages due to the variable content of capital rents. Also income distribution would be adversely affected by the systemic unemployment of labor. The unemployment

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2/ For a further discussion of these issues see Nagaoka, S., "Reform of Ownership and Control Mechanisms in Hungary and China," Industry and Energy Department Working Paper, Industry Series Paper No. 7, April, 1989, pp. 39-45.

rate has remained high, despite the steady emigration to Europe, and is currently 16 percent of the domestic labor force.

2.17 In practice, the outcome of self management is also influenced by the particular institutional framework of socialism in Yugoslavia. Like most socialist economies, Yugoslavia has favored high growth through investment and stressed fairness in income distribution. In this light many of the implications of self management outlined above are unacceptable to policy makers which has led to considerable intervention in enterprise management. Specifically various regulations are directed to the maintenance of social capital so that it is not dissipated through high wages. Likewise, the government has attempted to control for slow growth in employment by requiring firms to employ surplus labor and differences in worker incomes are addressed through the wage formation process and the extensive system of redistribution.

2.18 These various regulations and interventions from above inhibit enterprise autonomy and worsen the efficiency of resource allocation. In particular, until recently the drive for modern technology and growth through investment was supported by negative interest rates charged by banking institutions on borrowed funds. This further worsened the allocation of capital in the economy as the effective costs of capital differed across firms depending on their initial endowment of cheap socially owned capital. The lack of appropriate capital costs encouraged firms to deepen their capital base. Thus the larger the capital stock, the larger the surplus which in turn encouraged firms to introduce labor saving production techniques. These developments also worsen the disparity in incomes.

2.19 Another important aspect of the institutional framework in Yugoslavia is the linkage between enterprises and banks. In practice, banks have been structured as non-profit institutions, indirectly controlled by workers and local authorities. These founding enterprises are usually the largest borrowers and use the cheap credit to their own advantage. Importantly, without sources of external financing there is diminished entry and formation of new firms in such a system.[3]

2.20 Socialism as practiced in Yugoslavia - and the rest of Eastern Europe - is also characterized by a pervasive redistribution of income. Redistribution is directed towards ensuring an egalitarian distribution of income and wealth. To this end certain types of commodities (basic food items, housing) are subsidized. Also wage differentials are suppressed--this is achieved by way of controls on wages and taxation of profitable firms in order to subsidize loss making firms.

2.21 Income is redistributed by way of: (i) selective and discretionary taxation, and (ii) forced financial investments by profitable firms. The latter channel of redistribution is directed towards bailing out firms on the edge of (or even beyond) business viability, and thus blocking their exit.

3/ The financial system is outlined in World Bank report, "Yugoslavia, Financial Restructuring: Policies and Priorities," Report No. 7869-YU, August 3, 1989.

More generally redistribution weakens incentives for firms to expand or contract and thereby leads to inflexibility and loss in productivity.

(ii) Accounting Definitions

2.22 The following sections highlight certain features of the factor markets with reference to consolidated income statements over the period 1985-87. This financial data is compiled by the national accounting office (SDR). To appreciate the context and limitations of analysis based upon this data, it will be necessary briefly to outline some of the unique features of the Yugoslav accounts and changes that recently have been implemented. Until the most recent reform during 1989, the key features of the accounts were the exclusion of wages from costs and the imperfect statement of costs in the presence of rapidly escalating inflation.

2.23 A simplified structure of the income statement (as it applied in 1987) may be outlined as follows:

		Revenue	(Rev)
Minus			
		Materials	(Mat)
	+	Depreciation	(Dep)
Equals		Income	(Inc)
Minus		Taxes	(Tax)
	+	Interest	(Int)
Equals		Net Income	(NInc)

2.24 Put another way, the income statement may be defined as follows:

Rev - Mat - Dep = Inc
Inc - Tax - Int = NInc

In turn, net income may be distributed among the following main categories:

(i) Personal Income (Wage)
(ii) Collective Consumption
(iii) Retained Earnings (Ret Earnings) -----> Business Fund
(iv) Contribution for the investment of communities of interest in materials production
(v) Covering of losses of sister BOALs
(vi) Reserve Fund
(vii) Other Funds

2.25 As noted above wages did not appear as a cost of production in the income statement. Wages were fixed in advance and paid throughout the year, regardless of changes in the financial profitability of the enterprise. In practice, Yugoslav enterprises have targeted net income instead of profit. This is because the personal income fund has been tied to net income in the wage determination process (described in the following section). The accounting system itself has been geared towards the need for generating as

high a net income as possible, which is another manifestation of the soft budget constraint. Also items (iv) to (vii) may be considered as quasi taxes - their incidence was determined by legislation and usually expressed in terms of income. In effect, retained earnings (or accumulation in Yugoslav parlance) was the residual in the income statement and corresponded to undistributed profits under commonly accepted accounting conventions. Retained earnings were usually channeled to the business fund (fixed assets).

2.26 Any analysis comparing the financial performance of enterprises over the period 1985-87 has to be qualified because comparability is compromised by the shift from basically historic to current cost accounting in 1987. In addition, the consolidated income statements are flawed by the common practice of overstating closing inventory stocks. Enterprises have been able to maintain fictitious assets in their books in order to maximize net income and thereby wages. It is believed that this practice has significantly distorted financial results.

2.27 A further problem for financial analysis is the treatment of loans denominated in foreign exchange. Under historic cost accounting, enterprises were allowed to maintain in their books the dinar equivalent of their loan--at the time the loan became effective. In effect, firms in Yugoslavia have been allowed to defer the repayment of that portion of loans in foreign exchange which have been revalued on account of the depreciation of the currency. The difference, often many times the base nominal dinar value, was so called "foreign exchange losses." Thus, on the cost side of the incomes statement, firms simply indicate the original loan valuation - this has the effect of significantly overstating income. Essentially, the extent of loss-making would be significantly higher if foreign exchange loans were treated more in line with commonly accepted accounting practices.[4/] It is possible to determine the extent and distribution of foreign exchange loans of a short term nature since they appear as a separate category in the balance sheet. However, deferrals of long-term loans in foreign exchange do not appear separately in the accounts. It is believed that most of the loans are in this latter category.

2.28 These qualifications should be borne in mind in reading the following sections. Unfortunately, there are no reliable estimates of the effects on financial results of these short comings in financial reporting. Certainly in the case of foreign exchange loans, they are likely to be significant as Yugoslavia's outstanding debt of $20B largely may be attributable to enterprise borrowing. If these loans were properly accounted for, the losses of enterprises would be significantly higher. The National Bank has absorbed most of the foreign exchange losses and it is not possible to apportion formally the responsibility of the loans to various industrial branches. Consequently, the discussion on the distribution of losses is compromised. Nevertheless, it is widely believed that most of the foreign exchange losses were incurred by capital intensive industries, which as shown shortly, performed poorly anyway.

4/ See the World Bank report on the financial system, op. cit.

2.29 The main changes that have taken place since 1987 have been designed to bring Yugoslav accounts further in line with generally accepted accounting principles. In 1987 the main thrust of accounting changes was to provide a more realistic measure of capital by way of a revaluation of fixed assets and accelerated annual depreciation (by initiating depreciation from the inception of production and not one year later as had been the case).[5] Changes were also made in the recording of interest rates and a current-cost accounting base was introduced in the calculation of the "cost of goods sold".

2.30 The accounting revisions were aimed at curbing the distribution of surplus that had been loosely measured in the past. They essentially resulted in a steep increase in capital charges--and the firms response in terms of adjustment is outlined in Section E. Further changes have been enacted during 1989. Most importantly, income statements will now include labor and interest as costs. This is the first step in having firms target profit instead of income. In addition, the new law on accounting requires that the Work Organization (WO) become the nucleus business unit in Yugoslavia instead of the BOAL. This effectively reverts to the situation prior to the 1976 reform which resulted in a major fragmentation of enterprises. It is likely that there will now be a significant reduction in the number of operational units in Yugoslavia, which is a change for the better.

2.31 Despite the revisions there is still considerable room for discretion in financial reporting. Most notable is the choice available to enterprises as to whether or not to revalue inventories. Allowing enterprises to choose whether to revalue their inventory goes against uniformity, consistency and comparability of accounting practice. Of course the test of the newly revised accounting framework will come when enterprises record large losses--in the past the soft budget constraint dominated and enterprises were allowed to exploit loopholes in order to present more profitable accounts. Ultimately, whether the new law is effective depends on institutional changes which can ensure a hardened budget constraint. The manifestation and causes of the soft budget constraint is a central theme of the following sections.

C. Wages Determination and Labor Allocation

(a) Wage Determination

2.32 Understanding the wage determination process in Yugoslavia is the key to disentangling the redistributive mechanisms of the taxation system. Also the following discussion will focus on wage determination over the period 1985-87 (for which there as the most recent available data) as this corresponds to a period of rapidly increasing inflation. The increase in prices is largely a result of the adjustment to a more realistic price of capital in 1987-the response of the economy in terms of wages and structural change is an important part of the story on the flexibility and adaptability of an economy based on self management.

5/ This section draws on a note prepared by Jacob Yaron within the World Bank.

2.33 In Yugoslavia workers have a dual role--they are both the owners of capital (the role of capitalist - entrepreneur in capitalism) and providers of labor.[6] They are in charge of the division of net income into the part representing the compensation of capital or retained earnings (accumulation, as it is called in the Yugoslav parlance) and the part representing compensation of their own labor input (personal incomes fund and fund for collective consumption).

2.34 Until recently the key law on distribution of income was the Law of Associated Labor (LAL)--it stipulated that workers in a BOAL determine the share of personal incomes and collective consumption "...in proportion to their contribution to the generation of income with their live labor and management of the social means of production ... depending on the productivity of their work ... and their success in managing the business assets of the BOAL ... in accordance with the BOAL's internal criteria on the distribution of income, as well as in compliance with the criteria set in SCs and SMAs on the distribution of income."[7] A decision on the distribution of incomes was undertaken by way of worker referenda over the annual income statements of BOALs (the accounting scheme of the income statement of a BOAL and the explanation of its items is given in Appendix A).

2.35 Although this law has been revised, it is still operational. The specific regulations that will provide a framework for the labor market in the future have not yet been agreed. The LAL is to some extent superceded by the new law on enterprises. However, the treatment of the rights of managers to hire/fire and the mechanism of compensating labor in socialist enterprises are still to be clarified. The point remains that, for the time being, income distribution continues to be influenced by the principles outlined in the LAL.

2.36 Two important implications follow from the principles outlined in the LAL. First, the remuneration of Yugoslav workers is of an income-sharing nature. The worker's personal income is not based on a fixed price of labor input set in advance, but rather consists of a claim to a share of the firm's net income. Second, the sovereignty of workers over income distribution is legally limited by the mandatory compliance with social guidelines outlined by SCs (general guidelines) and SMAs (detailed criteria and methodology).

2.37 The key principle that has underpinned society's intervention in income distribution is the rule that above average personal incomes per worker should only be found in firms with above average income per worker (where the rate of retained earning should be above average), and that below average income per worker should only yield below average personal incomes, allowing for below average accumulation.

6/ The latter input - the provision of the "conventional" labor input - is called, in Yugoslav parlance, the provision of "live" labor.

7/ LAL, Article 116.

2.38 The implementation of this guideline is left to the republics. The operational rules change frequently and there have been some variations across republics--nevertheless the procedures for the computation of firm personal income is basically the same. The following example of income determination from Slovenia for 1987 is typical and comprises the following three steps:

(i) Determine an Index of Relative Business Success

2.39 The authorities first categorize a firms performance in generating net income against pre-determined norms (called relative business success). These norms are determined by a "Committee of Participants of the Social Compact on Income Distribution" which comprises politicians and representatives of firms. These norms are the results for the average values of personal income per worker and rates of accumulation of the business fund across the republican economy. Included amongst the norms is a variable for the firms relative performance in the past six years. The success index takes the form: $m = NY/(aL + bB)$, where a and b are two positive constants that differ across branches, NY the actual net operations income of the enterprise, L is size of the labor force, and B is the business fund. In other words, NY represents the enterprises' actual performance for net income whilst $aL + bB$ represents branch average performance for net income. If a firms' performance happens to be at the average for a branch both in terms of the personal income fund and accumulation then this index is 1.

(ii) Apply a Correction Factor

2.40 The next step involves adjusting the business success index for the purposes of influencing income distribution. The adjusted index is then used to determine the "socially appropriate" amount for the personal income fund. In effect the success index, determined above, is compressed by way of a correction factor. This adjustment effectively improves the apparent performance of poorly performing firms and reduces the results for profitable firms. The extent of the adjustment for Slovenia in 1987 is outlined in Figure 1. The diagonal line from the origin represents the unadjusted result--deviations from t represent the extent of the correction made. In other words a firm with an actual business success index of 0.6 has a corrected result of 0.8 or about 35 per cent higher. Likewise a firm with a business success index of 1.8 finishes up with a corrected index of 1.3 or some 28 percent lower.

(iii) Determine the Fund for Personal Income

2.41 Finally the corrected business success index is then used to determine the "socially appropriate" amount for the fund for personal income, shown by way of the following simplified formula:

$W = (Wn \times r \times u(m))\ L$ where:

- Wn = norm for gross personal income
- r = rent coefficient
- u(m) = corrected business success index
- L = number of workers

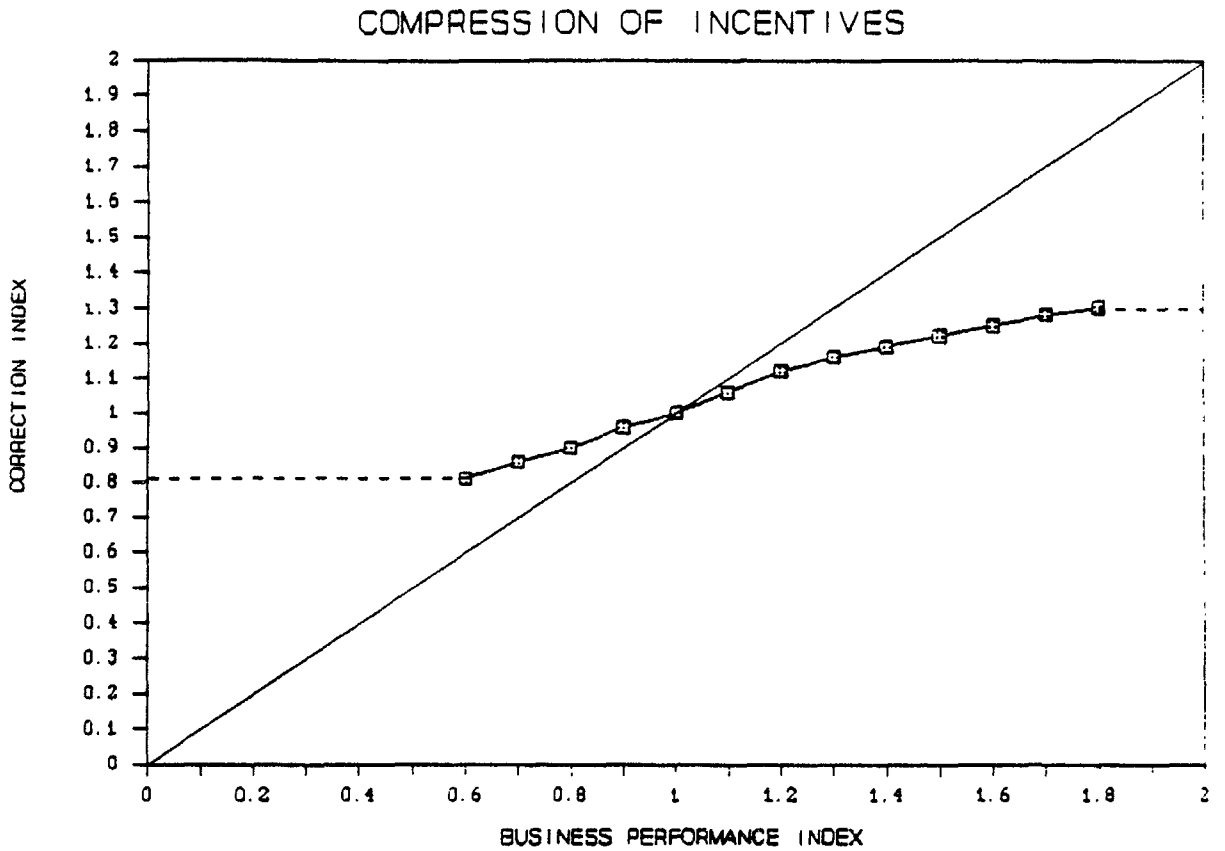

Figure 1

2.42 The rent coefficient is an index comprising two variables--the first is the ratio of gross personal incomes of the firm and the average for industry for the past six years and the second is an allowance for systematic differences in wages across industries due to differences in factors such as capital-labor ratios, education and technology. In effect higher wages are allowed for firms that have above average performance in the recent past and if they have higher levels of human capital.

2.43 The objective of the system of wage determination is to ensure a relatively egalitarian income distribution. Although workers in better performing enterprises are allowed to retain some of the benefits of their labor, this is at a sharply digressive rate. The compression of incentives is achieved by way of interfirm income distribution. In effect, the compression of the personal income fund of profitable firms increases residual net income. As discussed later this residual is drawn away from those firms through various taxes and quasi taxes. Moreover, success makes it more difficult for firms to receive various grants and subsidies (mostly in the form of concessionary loans and write-offs). The opposite applies to firms with below average performance, which are relieved from tax and quasi tax burdens. Moreover, their poorer performance qualifies them for grants and subsidies.

2.44 Rearranging the formulas for the business success index and the fund for personal income outlined above gives:

$$w = cu \times ninc/(a + bB')$$

where the variables are expressed in terms of per worker values. In particular, w is wage per worker, ninc is net income per worker and B' is business fund per worker. Also c encompasses the fund for the various norms in determining the fund for personal income show above (Wn x r x u(m)). Thus wages vary directly with operating income per worker and inversely with business fund per worker.

2.45 This formulation helps in disentangling the relationship between wages and the business fund. Earlier it was suggested that socialist self-managed firms in Yugoslavia would opt for capital-intensive production techniques in order to maximize the rent and thereby wages per worker. However, variations in the size of the business fund have two effects on wages. First, revenue tends to increase with the business fund, and this is reflected in higher net income and wages. Second, the larger the business fund the smaller the ratio for wages per worker outlined above, hence the smaller the wages. Cross-section regressions of wages per worker on business fund per worker in the 33 branches of the manufacturing sector for the years 1985 to 1987 yield positive and significant coefficients suggesting that higher wages are, in fact, paid in enterprises with a larger capital base. However, the relatively low values for the coefficients of business fund per worker in these regressions is due to the mixing up of the two effects.[8]

2.46 As mentioned earlier one of the key principles underlying wage formation in Yugoslavia has been the rule that wages be related to net income performance at the enterprise level. However, when economy-wide data is used it is difficult to find a relationship between wage rates and net income. It is only when revenue per worker (or alternatively material costs per worker) are introduced that the wage formation process becomes clearer. The following regressions indicate the relationship between wage rates on the one hand and net income on the other:

8/ The regression are as follows:

$$W_{85} = \underset{(0.23)}{0.80} + \underset{(0.003)}{0.014}\, b_{85} \qquad (R^2 = 0.383)$$

$$W_{86} = \underset{(0.34)}{1.41} + \underset{(0.003)}{0.030}\, b_{86} \qquad (R^2 = 0.700)$$

$$W_{87} = \underset{(3.42)}{3.32} + \underset{(0.017)}{0.043}\, b_{87} \qquad (R^2 = 0.164)$$

where the terms in brackets are standard errors. (This applies to all the terms in the regression equations in this chapter.)

$$w_{85} = \underset{(0.24)}{0.77} + \underset{(0.00)}{0.01}\, r_{85} + \underset{(0.03)}{0.06}\, ninc_{85} \qquad (R^2 = 0.33)$$

$$w_{86} = \underset{(0.35)}{1.06} + \underset{(0.00)}{0.02}\, r_{86} + \underset{(0.09)}{0.20}\, ninc_{86} \qquad (R^2 = 0.70)$$

$$w_{87} = \underset{(1.37)}{1.32} + \underset{(0.01)}{0.11}\, r_{87} - \underset{(0.22)}{0.14}\, ninc_{87} \qquad (R^2 = 0.87)$$

2.47 The key factors are the barely significant coefficient for net income in 1985 and 1986. This suggests that the wage formation system worked, after a fashion, during these years. However, the expected relationship breaks down during 1987--during that year wages are much more closely related to revenue per worker. One possible explanation for these results is a movement towards a cost plus method of wage determination during the period. One way to implement cost plus wage determination in inflationary conditions is to index wages on output prices, which in turn reflect costs. The deleterious effects of a cost-plus system cannot be overemphasized. Under such a system workers have an incentive to maximize costs which leads to all manner of inefficiencies and provides an impetus to inflationary pressures.

2.48 Also the increase in the variability of wages and the parallel decrease in the variability of net income per worker observed in the period 1985-87 suggests that the system of income equalization was breaking down, as economic conditions deteriorated. The average real wage rate in manufacturing stayed approximately constant during the period. If 1985 is represented by a base index of 100 for the average real wage, then the index is 106 in 1986 and 99 in 1987. At the same time, the average real net income per worker in manufacturing fell in index terms from 100 in 1985 to 97 in 1986 and finally to 71 in 1987. In the latter year the manufacturing system as a whole had losses, as the wage bill exceeded net income--this is discussed further in chapter 3.

2.49 Further evidence of the breakdown in the wage formation process is seen in the evolution of wage differentials in Yugoslavia. These are generally high and workers with the same qualification earn widely divergent wages depending on the firm, industry, or republic where they are employed. These differences do not seem to be decreasing. In fact, the deepening of the current crisis may be eroding the government's ability to keep them within bounds. The coefficient of variation (standard deviation divided by mean) of wage rates in the 33 branches studied went from 0.30 in 1985 to 0.32 in 1986, to 0.81 in 1987. The large increase in wage variability observed in 1987 coincides with a deterioration of the financial results of enterprises, and was not due to a parallel increase in the variability of net income. On the contrary, the coefficient of variation of net income per worker fell from 1.14 in 1985 to 0.41 in 1986 and 0.39 in 1987.

2.50 The breakdown in the wage formation process makes it difficult to analyze the incentive structure of the economic system. However, to some extent the corrections made to wages as outlined in Figure 1 continue to hold. This is because loss makers continue to be subsidized and implicitly the wages of poorly performing enterprises are supported--this issue is taken up in further detail later. This in turn requires better performing enterprises to

be taxed , which results in a compression of their wages. Such redistribution aggravates the disincentive to work effort in self-managed economic systems.

2.51 In effect the redistribution places effective upper and lower bounds to workers' wages, which generates distortions and efficiency losses related to workers' choices of effort levels. Workers in very successful or very unsuccessful enterprises cannot expect to gain much from additional efforts. All marginal gains from effort of the former are taxed, while the latter have to allocate all marginal gains of effort to loss reduction. High rates of net income taxation mean that the greater part of the rents of capital are appropriated by the state. Net income is negative or very small in many enterprises. Workers in such enterprises are likely to earn the minimum allowable wage rate. Their marginal gains from effort are zero or very small, since additional income would probably be allocated to reduce losses or increase meager profits.

(b) Labor Allocation

2.52 As far as labor allocation is concerned, employment in manufacturing increased by 4.5 percent in 1986 and 1.3 percent in 1987. Nevertheless, the unemployment rate stayed high during the period, and is currently at 16 percent. Moreover, high unemployment rates have been a problem in Yugoslavia for many years. The unimpeded operation of the self-management system would most likely generate even higher high unemployment. However, the state has stepped in, trying to minimize the problem by requiring enterprises to hire new workers. Also legislation and pressure from the government ensures that workers cannot be laid off. As a consequence, in many enterprises there is a labor overhang. Absenteeism and sick leave rates are very high and workers spend a disproportionate amount of time in assemblies where the problems of their firms are discussed. Labor mobility is reduced as workers will not voluntarily quit given that there are no jobs available elsewhere. The mobility of labor may be tested by taking the regression of employment growth rate on the ratio of net income over business fund and on the size of the business fund. These regressions, shown below, indicate that there is no relationship between these variables. The results also hold if the wage rate is substituted for the ratio net income over business fund as the explanatory variable.

$$DE_{86} = \underset{(0.11)}{-0.01} + \underset{(0.16)}{0.23}\ Ninc/B_{86} + \underset{(0.03)}{0.00}\ B_{86} \qquad (R^2 = 0.07)$$

$$DE_{87} = \underset{(0.04)}{0.00} + \underset{(0.01)}{0.01}\ Ninc/B_{87} + \underset{(0.05)}{0.00}\ B_{87} \qquad (R^2 = 0.06)$$

$$DE_{86} = \underset{(0.11)}{0.07} - \underset{(0.03)}{0.01}\ w6 - \underset{(0.03)}{0.01}\ B_{86} \qquad (R^2 = 0.01)$$

$$DE_{87} = \underset{(0.04)}{0.01} + \underset{(0.00)}{0.00}\ w7 + \underset{(0.00)}{0.00}\ B_{87} \qquad (R^2 = 0.08)$$

In the regressions DE is the percentage change in employment, Ninc/B is the ratio of net operating income over business fund, w is the wage rate, and B is the business fund. The ratio Ninc/B is taken as a proxy for financial performance. The conclusion that emerges is that in Yugoslavia labor does not flow from less to more profitable activities, or from low to high wage branches. Also labor turnover in Yugoslavia is very low, particularly in the less developed regions. In general turnover reflects the need to replace retiring workers rather than new additions to employment. Some information for the mid 1970s provides an indication of the problem - monthly labor turnover was 1 percent in Yugoslavia which was about six times less than that observed in the USA.[9]

D. Redistributive Impact of the Taxation System

2.53 The division of net income between wages and residual income has great importance as a determinant of workers' incomes. At first sight, restrictions on wage payments simply force workers to save and firms to invest, and are thus mainly transferring workers' income to the future. In reality, a firm's residual net income is subject to all kinds of formal and informal taxes, including negative interest rates on deposits and forced investments in other firms. It is reasonable to assume that only a small fraction of the residual income of a firm will be effectively invested so as to provide additional future earnings to workers in that firm. The division of net operating income between wages and the residual should then be viewed as a form of taxation.[10]

2.54 Formal taxes are earmarked for the operating expenses of republican governments and contributions to various social services such as schools and health facilities. They may be levied on either income or personal income. The incidence of the formal tax system may be seen with reference to Table 1, where the ratio of taxes over net income is outlined for the years 1985 to 1987. This table shows that there was significant variability in tax burdens across manufacturing branches--these range from 13 percent for basic non-ferrous metals to 63 per cent for petrol/gas extraction. For both 1986 and 1987 taxes appear to be closely related to net income. In other words branches with high net income tended to pay the highest formal tax.

2.55 The extent of the distortion in the formal tax system is better seen by expressing taxes as a proportion of retained earnings (as a proxy for

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9/ See Estrin, S. and Bartlett, W., 1982, "The Effects of Enterprise Self-Management in Yugoslavia - An Empirical Survey" in Participatory and Self-Management Firms, op. cit.

10/ In terms of the accounting definitions outlined in Section B, the concern or workers is primarily for personal income and collective consumption (items (i) and (ii) in paragraph 2.24). Secondarily, their concern is with retained earnings which go to the business fund (item iii). In this section residual net income is defined as items (iii) to (vii) i.e., that part of net income which is not wages or collective consumption.

profits) as outlined in the same Table. In most countries profit is usually taken as the base for taxes as it excludes costs such as wages and interest payments. The variation in this measure of tax burden is enormous in Yugoslavia and where net income has been positive over the period 1985-87 it has generally exceeded 100 per cent. Moreover, taxes have been applied to branches which have made losses over this period.

2.56 With the introduction of a new accounting system in 1989, the tax base became operating income reduced by nominal wages. In other words, the tax base included profits plus that portion of wages which exceeds inflation. This move towards profits as an indicator of business efficiency is a notable break with past procedure. Policy makers will now need to focus upon indicators such as tax/profit ratios and the extreme variability in the formal tax system should become a pressing issue for reform.

2.57 However, formal taxes are only the first tier in a two-tiered taxation scheme. Residual income is heavily taxed by informal mechanisms which reinforces the effects of the formal tax system. Information about quasi-taxes and subsidies is difficult to obtain at the economy-wide level. Enterprises having above average performance being forced to invest in loss-makers is one of the most common forms of quasi-taxation/subsidization. Firms have also received loans at negative real interest rates from the banking system for many years.

2.58 Recently, real interest rates have become positive. There are indications that the cash flow from the banking system to enterprises has taken the form of credit expansion, with a complementary upsurge in inter-enterprise credit. The data on the manufacturing sector does not show any significant correlation between interest rate paid and performance indicators such as net income per worker and income per worker. In an efficient market, the correlation should be negative, as better performing firms present lower risks as borrowers. The two performance indicators are also uncorrelated with credit growth. This is not surprising, given that, as shown in the next subsection, there is also no correlation between investment and performance. A positive correlation would indicate that credit was being appropriately directed to the better performing branches in the economy. On the other hand, a negative correlation would suggest the existence of distress borrowing. In fact, it is widely believed that distress borrowing is pervasive in Yugoslavia.

2.59 From the Yugoslav accounts it is possible to determine interest paid and debt outstanding. This data indicates that the real average interest paid for Yugoslav industry was about 4.95 per cent in 1987 and that the range was from about 2 to 9 per cent. Considered by individual industries, above average interest rates were paid by processing industries such as leather and fur , footwear , and yarns and fabrics. Also included in this category was the oil and gas industry. Below average repayments were recorded by the animal food industry, coal production, shipbuilding and ferrous metallurgy. As shown later, the latter industries figured prominently amongst the largest loss makers during 1987. This data provides some evidence that the system of redistribution encompassed preferential treatment for poorly performing enterprises through the tax system.

Table 1

	TAXES OVER NET OPERATING INCOME			TAXES OVER RETAINED EARNING		
	1985	1986	1987	1985	1986	1987
MANUFACTURING	(0.15)	0.36	0.36	(0.90)	4.38	(2.12)
Electricity	0.11	0.47	0.57	(3.51)	(16.11)	3.43
Coal Mining	0.23	0.47	0.46	1.11	(10.22)	9.71
Coal Processing	(0.25)	0.28	0.39	(0.47)	0.56	(0.19)
Petrol/Gas Extraction	0.35	0.54	0.63	0.40	1.39	4.29
Petrol Refining	(0.68)	0.60	0.18	(1.41)	(4.98)	(0.07)
Iron Ore Mining	0.08	0.32	0.33	0.73	3.20	(1.09)
Iron & Steel	(0.25)	0.37	(0.02)	(1.44)	(10.06)	0.01
Non-ferrous ore mining	0.02	0.42	0.31	0.32	(1.98)	(0.69)
Non-ferrous metals, basic	(0.65)	0.35	0.13	28.65	(0.88)	(0.17)
Non-ferrous metals, proc.	0.02	0.44	0.48	0.06	3.09	(0.70)
Non-metallic minerals, extr.	0.11	0.31	0.34	0.98	4.10	(5.31)
Fabricated metal products	(0.06)	0.35	0.36	(0.32)	3.73	(4.56)
Machinery	(0.09)	0.37	0.35	(0.41)	2.01	(3.03)
Shipbuilding	0.03	0.38	0.44	0.08	1.34	(1.55)
Electrical machinery	(0.16)	0.36	0.37	(0.73)	2.71	(2.23)
Basic chemicals	(0.87)	0.26	0.14	1.63	(0.39)	(0.13)
Processed chemicals	(0.03)	0.44	0.46	(0.11)	2.25	5.47
Stone quarrying	0.16	0.31	0.33	1.68	2.21	14.14
Building materials	0.02	0.35	0.39	0.28	2.98	(2.82)
Sawmilling & wood boards	0.01	0.33	0.34	0.06	4.28	(2.82)
Furniture & wood products	(0.27)	0.34	0.37	(20.41)	(24.79)	(7.66)
Textile yarns & fabrics	(0.05)	0.35	0.37	(0.28)	2.32	(18.98)
Textiles, finished goods	(0.01)	0.28	0.30	(0.06)	2.04	4.63
Leather & fur goods	(0.21)	0.31	0.36	(0.53)	1.15	4.82
Footwear	(0.05)	0.27	0.30	(0.24)	3.18	(9.94)
Rubber products	0.06	0.37	0.39	0.25	2.22	16.35
Food Products	(0.84)	0.32	0.34	5.87	23.54	(2.00)
Beverages	(0.28)	0.35	0.37	(1.29)	1.36	6.62
Animal food	(1.88)	0.37	0.22	(19.09)	(1.47)	(0.13)
Tobacco	(0.36)	0.33	0.31	(0.85)	0.93	1.55
Printing	0.13	0.33	0.36	0.70	2.20	7.20
Recycling	0.03	0.34	0.37	0.07	1.43	4.86
Other	(0.16)	0.27	0.28	(0.53)	0.88	1.06

2.60 The mechanism of inter-firm redistribution of income in Yugoslavia and an indication of the size and patterns of transfers involved may be seen with reference to an analysis of the income and balance sheets of a sample of Slovenian firms for 1986.[11] The analysis takes into account not only formal taxes/grants but also quasi taxes/grants and gains and losses on holding money from concessionary financing and the inflation tax. The two main forms of indirect taxes are as follows:

(i) Quasi taxes are basically involuntary transfers between enterprises usually in the form of better performing enterprises being required to undertake investments in loss making concerns. Although the transfers are undertaken within the framework of self management agreements these really act as a veil preserving the legality of the system despite the involuntary and discretionary nature of the transfers. On the surface, the transfer appears on the asset side of the source enterprise as an investment. Moreover, these investments are repaid, but only at their face value or at a small positive nominal interest rate (often with a grace period of several years). It is common for these forced investments to be written off after several years. Thus, in the inflationary environment in Yugoslavia these transfers involve a significantly negative real interest rate.

2.61 More specifically transfers have taken the following form:

- credits for covering the loss of an associated BOAL;
- rehabilitation credits, designed as the first stage of the recovery of a loss making firm;
- pooling of resources, typically under the framework of a joint venture;
- investments in development funds, communities of interest for material production,[12] special government funds, and securities;

11/ The 416 firms in the sample represent about 20 per cent of all Slovenian firms and 19 out of the 36 industrial branches. The industries represented account for about 10 per cent of total Slovenian industrial production. The sample is biased towards activities in the processing end of manufacturing although some steel products are included. Although not representative, the sample is large enough to provide some insight into the significance of less transparent forms of taxation/subsidy in the channels of redistribution.

12/ Natural monopolies (electricity, coal mining, oil and gas), infrastructure (rail roads, roads, ports, airports), and some utilities (broadcasting, telephone, mail) finance their investment by direct "contributions" of all firms in the economy (except of those who are granted a waiver of payment). For all practical purposes, these contributions are equivalent to taxes. The inclusion of these contributions as investments in balance sheets significantly distorts the picture of the structure of assets of firms.

- investment in solidarity and reserve funds of a WOAL, earmarked for the ultimate use by loss-makers within a WOAL;

- waivers of taxes and contributions; and

- "borrowing" from a firm's own business fund to cover a loss (lossmakers are entitled to do so).[13]

2.62 The essential point is that quasi-taxes are applied selectively. Any of the obligations listed above may be selectively reduced or waived if they would cause a firm to record a loss. This is because in Yugoslavia priority is given to incomes, whilst other obligations and retained earnings have been treated as a residual. In other words it is the quasi-fixed nature of personal income payments that determines the size of the residual net income and thus the firm "ability to pay" its obligations. This leads to the disproportionate shouldering of the tax burden by profitable firms.

(ii) Gains or losses on holding money stem from concessionary financing and the inflation tax. There have been substantial gains to firms on holding debt due to negative real interest rates. There have also been several general write-offs of the debt of the worst standing firms during the 1970s and 1980s. The banking system has thus been a source of significant redistribution from net creditors to net debtors. Furthermore, the lack of financial discipline allowed firms to default on their debts (commonly referred to as "keeping bills in the drawer"). In an inflationary environment even short delays in payments may bring about substantial real gains.

2.63 The level of implicit taxes/subsidies may be estimated by multiplying difference between the nominal interest rate (received or paid) and the inflation rate and the average value of the transfer through a given year. This assumes that the benchmark is a zero real interest rate. Applying this approach to the sample of Slovenian firms for 1986 provides the following main results (Table 2 and Figure 2).[14] It should be noted that the results are in the form of ratios to firm income.

13/ The firm were obliged to repay these funds but given the inflationary environment this was at a reduced real level.

14/ Further details may be found in Vodopivec, M., Inter-Firm Redistribution of Income in the Yugoslav Economy, unpublished monogrdaphe, IENIN, September 1989. The most complicated part of this analysis relates to loans and holdings denominated in foreign currency. The analysis reflects gains and losses due to the overvaluation of the exchange rate in 1986 and the avoidance of bearing risk on short-term loans in foreign currency. However, it does not include the more important deferrals of repayments of long term foreign loans as these do not appear separately in the accounts.

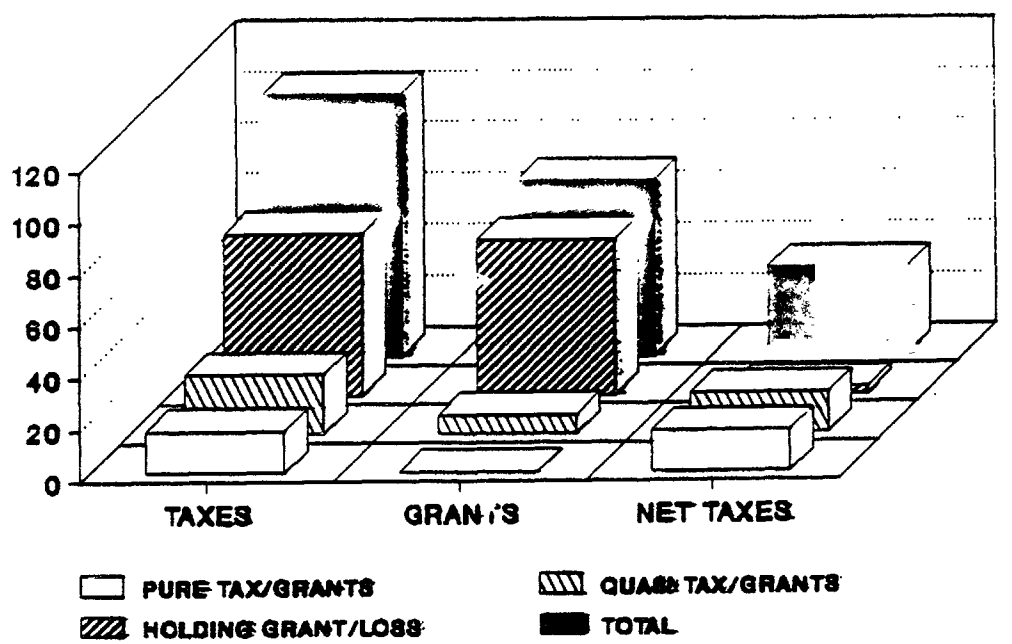
Table 2: INTERFIRM INCOME REDISTRIBUTION SAMPLE OF SLOVENIAN FIRMS

TAX/SUBSIDY a/	MEAN	COEFFICIENT OF VARIATION	MINIMUM VALUE	MAXIMUM VALUE
TAXES				
FTAX	16.4	24.9	0.2	134.1
QTAX	23.1	93.7	0.0	201.7
LM	63.1	66.8	1.2	611.8
TAXES SUBTOTAL	102.5	51.5	30.6	900.9
SUBSIDY				
FGRANT	0.4	821.3	0.0	63.8
QGRANT	7.4	200.7	0.6	377.3
GM	60.5	89.3	-45.9	852.5
SUBSIDY SUBTOTAL	68.3	91.7	3.6	1,055.5
NET POSITION	-34.2			

a/ where FTAX = format tax; QTAX = quasi tax; and LM = loss on holding money. On the subsidy side: FGRANT = formal grant; QGRANT = quasi grant; and GM = gain on holding money.

Figure 2

THE TAX AND SUBSIDY SYSTEM IN SLOVENIA



2.64 The key points that emerge are as follows:

- proper taxes amount to 16.4 per cent of income and are relatively uniform. An assessment of the tax system which only dealt with proper taxes would come to the mistaken conclusion that it was not so distorted. However, the less transparent forms of quasi-taxation are 50 per cent higher than proper taxes. Moreover their variability is much higher--in effect this indicates that quasi-taxes are more selective and less uniform in their incidence;

- the losses on holding money (being a creditor) far outweigh the taxing effect of both proper and quasi-taxes. Also their variability is relatively high, stemming from the different liquidity positions of firms;

- proper grants (non-reimbursable resources) are very low since they are distributed only to a sub-set of loss makers. But since these recipients receive quite large amounts, the variability of grants is extremely high;

- quasi-grants are much larger than proper grants and are also highly variable. However, they are not of the same order as quasi-taxes. This is due to the unrepresentative sample--most recipients of quasi-grants would be in basic industries which are not included;

- gains on holding money (being a debtor) are the most significant implicit subsidy. For this sample they almost cancel out the implicit tax on holding money in the form of credits; and

- the net position (the sum of taxes minus the sum of subsidies) is that the sample firms are taxed to the extent of 34.3 per cent of income. As mentioned earlier, these taxes would flow partly to loss making industries. But they would also contribute to the financing of social services. Significant intra-industry differences in net tax obligations confirm the general finding that redistribution is highly selective and discretionary.[15]

2.65 The essential point is that overall taxes (the sum of taxes, quasi-taxes, and losses on money) for the firms in question are very large, exceeding overall income by 2.5 per cent. Total subsidies are significantly

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15/ Although not shown, the extent of redistribution in the sample firms is only marginally influenced by gains and losses in foreign exchange. Gains on money on the basis of holdings denominated in foreign exchange are more than twice as large as losses with a gain of 4.6 per cent. Also the results from the sample show that deferrals of short-term foreign debt arising from dinar devaluations decreased between the end of 1985 and 1986. Thus the sample firms did not gain on the basis of avoidance of the foreign exchange risk from their short-term loans. The firms in the sample are not representative in terms of foreign exchange loans.

lower, but they still amount to 68.3 per cent of income. Both provide clear evidence of the large proportions of the flow of resources within the economy. Viewed from this perspective, the low share of grants in income is deceptive. Enterprises performing poorly enough can count on grants that are significant proportions of income--the highest value in the sample reaches about 64 percent, with quite a number of others above 30 per cent. Thus poorly performing enterprises can count on substantial transfers from other firms and government.

2.66 At least for 1986 the evidence on redistribution at the enterprise level for the sample of Slovenian firms confirms the discussion earlier on the wage formation process at that time. In particular, for the sample, high incomes are associated with lower net subsidies and moreover, subsidies have a positive influence on personal incomes. Thus wages in successful firms were compressed and the resulting increase in retained earnings was taxed away through both formal and informal means. The taxes raised were then used to subsidize poorly performing enterprises.

E. Investment and Capital Mobility

2.67 Governments in Yugoslavia have pursued an industrialization policy that has required high levels of investment, and accordingly it has encouraged managers to invest. In many respects the emphasis on investment accords with the objectives of managers--their power, influence and wage depends on the size of firms they manage, hence they favor large investment projects. However, there is a conflict between managers and workers on this point as workers prefer to have most of net operating income distributed in the form of wages. That is, they show a preference for consuming a firm's capital, while managers and the government prefer to see a larger proportion of the net income allocated to investment.

2.68 The government and managers have asserted their preference as investment levels have generally been very high through Yugoslavia's recent development--although more recently this investment has slumped as a proportion of GMP as economic growth and access to foreign borrowing declined. The developments in investment since 1977 are outlined in Figure 3.

2.69 In Figure 3 it is clear that investment as a proportion of total GMP has declined by about 36 per cent over the nine year period to 1986 and the decline for industrial investment is even more at 44 per cent. Despite this decline investment levels are still not low by developing country standards bring about 20 percent of GMP in 1986. The investment strategy largely has been supported by the provision of cheap capital. More recently interest and depreciation charges have been significantly increased in order to lessen distortions in the economic system. Given the framework of self-management in Yugoslavia, it could be expected that the resulting decline in demand for capital would have two components--a price and systemic effect. Under socialist self management even firms that are economically efficient would not necessarily expand their operations in the face of a greater availability of capital. Their demand for capital continues to be constrained by an underlying drive for higher wages out of net income. But any investment

that does take place is likely to involve overly capital-intensive technology as this suits incumbent workers and is in harmony with the overall government policy of emphasis on heavy industry.

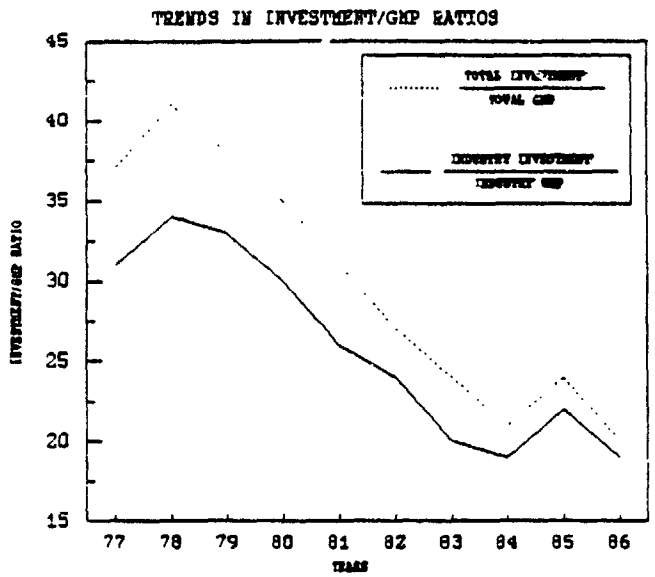

Figure 3

2.70 As far as capital charges are concerned, as inflation accelerated in the 1980s, "nominalist" accounting rules became increasingly inappropriate for producing reliable financial statements. Coupled with persistent negative real interest rates on long term loans, which financed the vast bulk of social sector fixed assets, these rules led to a systematic undrevaluation of capital charges. In turn, net income was overvalued in firms with a high proportion of subsidized domestic debt.[16]

2.71 In addition, "nominalist" accounting rules for permanent working capital contributed to the overvaluation of both income and net income which

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16/ Foreign loans were the second most important source of financing fixed asset investment. Foreign loans, however, carried positive real interest rates and did not contribute to the capital charge under-valuation observed with dinar loans. But as referred to earlier they introduced another type of distortion. Existing nominalist accounting rules allowed firms to maintain in their books only the dinar equivalent of their loan at the time of the loan became effective. The difference, often manyfold the base nominal dinar value, was so called "foreign exchange losses". With the change in accounting rules large firms (often in lesser developed regions) were exposed to a significant increase in their operating costs. Eventually most of them managed to refinance at favorable terms or simply transferred their "foreign exchange losses" to their commercial banks or to the National bank of Yugoslavia.

permitted firms to pay high wages. Under these rules depreciation was too low and given that net income was dissipated on wages this eroded the real value of working capital and necessitated excessive short term borrowing to cover the difference. For an extended period of time this process continued unchallenged and was, actually supported by both: (a) the Government and social service institutions (health and education) which benefitted from the increased tax contribution base; and (b) the workers and managers who enjoyed the privilege of overvalued net operating income as a base for their wages and fringe benefits. The increased borrowing and subsidies were intermediated by the financial system and ultimately borne by the community by way of an inflation tax. In effect there was a vicious circle between higher wages and higher inflation tax. One symptom of the problem was a burgeoning foreign debt, which ultimately reached $20 billion held in terms of foreign exchange losses by the National Bank of Yugoslavia.

2.72 An austerity program introduced in 1987 included the mandatory revaluation and indexation of assets in all social sector firms. The revaluation relied on a prescribed list of asset/sector specific depreciation rates based on past inflation rates. Although the intention of this reform was to approximate the market value of assets in social sector firms, and thus preserve the value of social capital, the revaluation procedure was most often applied mechanically to the inherited book value of assets. At the same time a formula which secured positive real interest rates was introduced by the National Bank of Yugoslavia and made mandatory for both deposit and lending rates. All loan and deposit contracts made with a variable interest rate clause were subject to this policy change.

2.73 As a result of these changes there was an increase in the depreciation charge in all social sector firms. On average, the share of depreciation charges in total revenues increased for the whole manufacturing sector by almost 40 per cent between 1986 and 1987. The increase in effective depreciation rates varied across different branches from as low as 5 per cent in iron ore mining activities, to as high as 95 per cent in coal processing. The variability partly was due to sector specific depreciation rates, grossly inaccurate valuation of natural resources in Yugoslav accounting and varying composition of fixed assets. These new depreciation charges were combined with increased real interest rate payments to obtain a change in the total capital charge. The response of industry may be assessed by reference to the following accounting identity (where d refers to changes from 1986 to 1987):[17]

$$d\,REV - d\,MAT - d\,DEP - d\,TAX - d\,INT - d\,WAGE - d\,CONT = d\,RET\ EARNINGS$$

17/ Mere d CONT refers to various contributions out of net income. Thus it encompasses all the items in net income after subtracting wages and retained earnings.

This identity indicates the various items that are subtracted from revenue in order to obtain retained earnings. From this an adjustment ratio may be defined as:

d RET EARNINGS/ (d INT + d DEP)

This ratio indicates the extent to which higher capital charges were reflected in the decline in profits or increase in losses during 1987 and is outlined in Table 3. It should be noted that the variables in this ratio are all expressed in terms of revenue, which overcomes the problem of inflation between 1986 and 1987. Where this ratio is less than one an industry can be considered as having absorbed fully the adjustment in capital charges. In other words profits declined by less than the increase in capital charges. Conversely industries where this ratio is greater than one have not adjusted to the capital charge increase. In those industries retained earnings declined for reasons in addition to the capital charge increase.

2.74 When compared to the decline in profits, higher capital charges were the major cause of the sharply worsened financial performance in 1987 (discussed in greater detail in the next chapter). However, on average the whole manufacturing sector adjusted reasonably well to the increased capital charges. The average adjustment ratio was 0.6 indicating that 40 per cent of the shock was absorbed within enterprises. However, there was considerable variation in adjustment performance with a number of branches with ratios well over one. This can be seen more clearly with reference to Table 4. The poorly adjusting branches are as follows (in descending order):

- Petrol refining
- Iron and steel
- Coal processing
- Animal food
- Shipbuilding
- Non-ferrous metals processing

Moreover, as shown in Figure 3 there is a close correlation between capital intensity and poor adjustment performance. In this figure, firms appearing in the upper quadrant experienced a decline in retained earnings which exceeds the increased capital charge (are poorly adjusting) and are capital intensive. The poorly adjusting branches also appear in the group of largest loss making branches in 1987.

2.75 **The important lesson to draw from this is that changed relative factor prices in the absence of capital mobility or firm adjustment simply will lead to increased losses.** In the Yugoslav system these losses covered by the creation of money which leads directly to increased inflationary pressure. The same industries appear throughout any analysis of problem activities--and capital intensive industries in general have been responsible for low productivity of the economy at least since the early 1970s. In turn the absence of exit pressure to complement adjustment pressures is largely due to the ill defined nature of property rights over capital in Yugoslavia. This problem of capital ownership has to be resolved in order for adjustment to proceed with any chance of success.

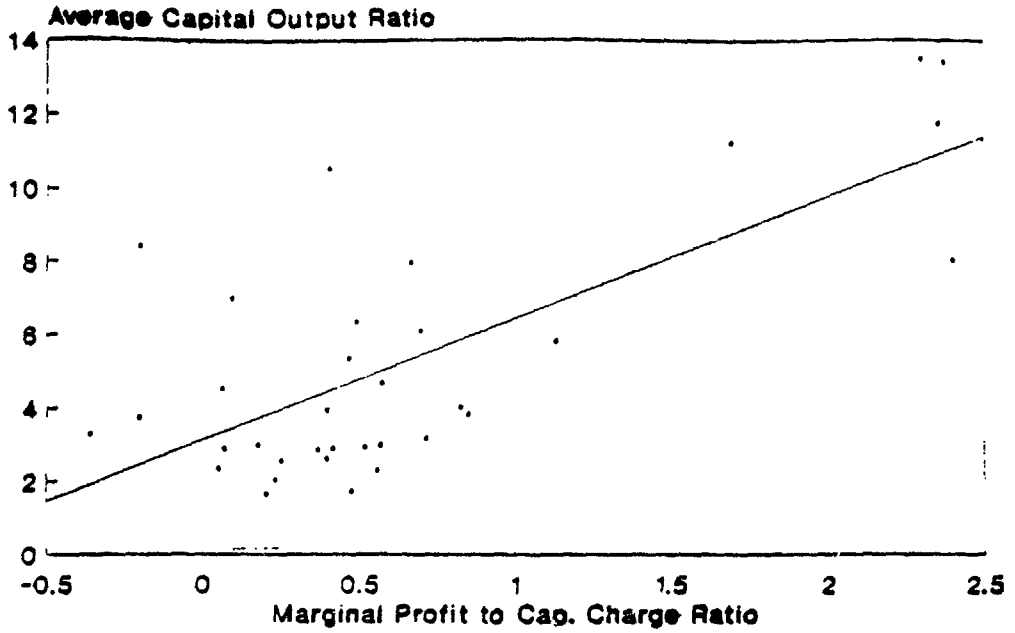
Table : Implications of Depreciation and Interest Rate Increases in 1987

	Share of Deprec. in Revenue 1985	Share of Deprec. in Revenue 1986	Share of Deprec. in Revenue 1987	Growth in Dep/Rev 1986/85	Growth in Dep/Rev 1987/86	ADJUSTMENT RATIOS: Decl.Prof./Incr.Dep. 1987/86	Decl.Prof./Incr.Int. 1987/86	Decl.Prof./Incr.D+Int 1987/86	Average Capital/Out. Ratio 1987
01 MANUFACTURING	4.0%	4.1%	5.7%	0.7%	39.3%	0.8	1.8	0.6	4.65
0101 Electricity	11.0%	10.9%	13.5%	-0.8%	23.9%	-0.2	-1.6	-0.2	8.36
0102 Coal Mining	9.2%	11.0%	12.8%	19.8%	15.8%	-0.3	-1.1	-0.2	3.72
0103 Coal Processing	2.6%	2.8%	5.5%	7.8%	95.8%	2.8	15.2	2.4	11.73
0104 Petrol/Gas Extraction	13.5%	18.0%	19.[illegible]%	36.0%	6.2%	0.1	0.7	0.1	6.93
0105 Petrol Refining	1.9%	2.5%	3.8%	34.8%	51.5%	4.1	5.7	2.4	8.01
0106 Iron Ore Mining	16.9%	16.3%	17.1%	-3.3%	4.7%	0.9	2.9	0.7	6.06
0107 Iron & steel	3.8%	4.0%	5.6%	6.8%	39.2%	3.4	7.6	2.4	13.37
0108 Non-ferrous ore mining	8.8%	7.5%	11.6%	-14.3%	55.1%	0.7	1.9	0.5	6.30
0109 Non-ferrous metals, basic	5.9%	5.3%	6.6%	-10.7%	23.7%	0.6	1.1	0.4	10.46
0110 Non-ferrous metals, proc.	3.9%	4.3%	5.7%	12.3%	30.3%	1.7	3.5	1.1	5.80
0111 Non-metallic minerals, extr.	6.7%	6.3%	9.5%	-5.3%	50.6%	0.5	2.5	0.4	2.58
0113 Fabricated metal products	3.4%	3.6%	4.9%	5.2%	35.8%	0.9	1.6	0.6	2.98
0114 Machinery	3.2%	3.1%	4.8%	-1.4%	54.0%	1.4	2.1	0.8	3.80
0116 Shipbuilding	3.1%	1.9%	2.8%	-38.0%	45.6%	5.5	2.4	1.7	11.19
0117 Electrical machinery	2.8%	2.9%	3.9%	3.9%	35.9%	1.5	1.9	0.8	3.99
0118 Basic chemicals	6.5%	5.5%	8.4%	-15.0%	53.7%	1.0	1.8	0.7	7.92
0119 Processed chemicals	2.8%	2.7%	3.6%	-4.9%	33.7%	0.1	0.2	0.1	2.85
0120 Stone quarrying	6.5%	5.9%	7.7%	-9.3%	31.4%	0.3	1.8	0.2	2.02
0121 Building materials	5.0%	4.7%	6.8%	-5.9%	46.2%	0.9	4.2	0.7	3.14
0122 Sawmilling & wood boards	4.2%	4.1%	6.2%	-0.3%	48.5%	0.7	1.9	0.5	2.91
0123 Furniture & wood products	3.1%	2.7%	3.9%	-11.9%	44.9%	0.3	0.4	0.2	2.95
0125 Textile yarns & fabrics	4.0%	4.1%	5.6%	1.7%	35.5%	0.6	1.0	0.4	2.83
0126 Textiles, finished goods	2.7%	2.6%	3.4%	-3.4%	30.3%	0.1	0.1	0.0	2.30
0127 Leather & fur goods	1.7%	1.8%	2.6%	8.5%	43.0%	0.9	0.8	0.4	2.86
0128 Footwear	1.2%	1.3%	1.9%	14.9%	47.2%	1.2	1.0	0.6	2.29
0129 Rubber products	3.7%	4.8%	5.5%	29.7%	14.9%	0.3	0.9	0.2	2.54
0130 Food products	2.5%	2.6%	4.0%	4.7%	56.9%	0.6	1.7	0.5	5.31
0131 Beverages	3.5%	3.5%	5.1%	0.4%	44.7%	0.5	2.0	0.4	3.92
0132 Animal food	1.2%	1.5%	2.3%	25.0%	50.0%	4.4	4.8	2.3	13.45
0133 Tobacco	2.7%	2.5%	3.3%	-9.0%	33.5%	0.1	0.1	0.1	4.48
0134 Printing	3.6%	3.7%	4.5%	4.0%	21.8%	0.3	1.0	0.2	1.62
0135 Recycling	1.2%	1.6%	2.5%	28.5%	53.5%	0.7	1.4	0.5	1.72
0139 Other	3.4%	3.8%	7.6%	14.3%	97.1%	-0.5	-1.6	-0.4	3.29

Table : Response to the Depreciation and Interest Rate Increases in 1987

	Branches Fully Adjusting		Branches Partially Adjusting	Rank	Branches Moderately Non-adjusting	Rank	Branches Completely Non-adjusting	Rank
01 MANUFACTURING			**	23				
0101 Electricity	*	3						
0102 Coal Mining	*	2						
0103 Coal Processing							****	32
0104 Petrol/Gas Extraction			**	7				
0105 Petrol Refining							****	34
0106 Iron Ore Mining			**	25				
0107 Iron & steel							****	33
0108 Non-ferrous ore mining			**	19				
0109 Non-ferrous metals, basic			**	15				
0110 Non-ferrous metals, proc.					***	29		
0111 Non-metallic minerals, extr.			**	14				
0113 Fabricated metal products			**	22				
0114 Machinery			**	28				
0116 Shipbuilding					***	30		
0117 Electrical machinery			**	27				
0118 Basic chemicals			**	24				
0119 Processed chemicals			**	6				
0120 Stone quarrying			**	10				
0121 Building materials			**	26				
0122 Sawmilling & wood boards			**	20				
0123 Furniture & wood products			**	8				
0125 Textile yarns & fabrics			**	12				
0126 Textiles, finished goods			**	4				
0127 Leather & fur goods			**	16				
0128 Footwear			**	21				
0129 Rubber products			**	11				
0130 Food products			**	17				
0131 Beverages			**	13				
0132 Animal food							****	31
0133 Tobacco			**	5				
0134 Printing			**	9				
0135 Recycling			**	18				
0139 Other	*	1						

Figure : Adjustment Performance by Capital Intensity - 1987



2.76 Apart from the underlying systemic tendency to underinvestment, incentives for investment are also distorted by the structure of redistribution through the tax/subsidy system. These distortions are most serious for firms having either high or low success indicators which places them in the flat parts of the curve outlined in Figure 1. These are the firms that are most taxed or subsidized in relative terms. Given the framework of redistribution, investment projects with significant probabilities of large losses are not rejected, as such losses cannot cause wages to fall below the minimum level (these firms are on the left hand side of the curve). This problem is, of course, more serious the worse is the condition of the firm envisaging the project. Indeed, workers in better performing firms could be hurt by large losses, which would reduce their wages, but workers already earning the minimum wage have nothing to lose. Symmetrically, workers in better performing firms avoid undertaking projects that can generate large gains with high probability even when the chances of losses are relatively small. The gains in case of success would be reaped by others, while the losses would be fully borne by themselves (these firms appear on the right hand side of the curve). In general, the incentives to invest are smaller the better the firm's performance.

2.77 Given the distorted investment environment it could be expected that the entry or exit of firms would not take place in an efficient manner. In any case, as described in the next section, entry and exit are very limited. From an investment viewpoint, if the task of creating new enterprises were left to workers the coordination problems and their lack of capital would preclude the undertaking of any large projects. It is not surprising that creation of new enterprises almost has been an exclusive attribute of the state in Yugoslavia. In other words, entry mostly has been planned, either at the republic or at the local level. Moreover, the division of the country into independent republics has further distorted investment decisions, as each republic has moved towards autarchy. Local governments also have had an important influence, and in many cases uneconomical enterprises have been created with the objective of reducing unemployment in certain areas. As stated above, some forms of exit, such as the disposal of a firm's assets, are formally precluded. Bankruptcies are in practice impossible, for political reasons. Loss-making enterprises are informally subsidized, usually through forced investments of more successful enterprises, or loans at negative real interest rates.

2.78 Given the distortions in the investment process, it is not surprising that capital does not move from poorly performing to more financially profitable branches in Yugoslavia. Although the time period is short, this may be seen with reference to financial performance data for 1985 and 1986 where financial profitability may be defined as the ratio of net income to business fund. Regressions of investment on the ratio of net operating income to business fund and business fund for 1985 and 1986 do not yield significant coefficients for the former variable, but yield highly significant coefficients for the latter as seen below:

$$I_{85} = \underset{(0.017)}{-0.002} - \underset{(0.029)}{0.002}\ Ninc/B_{85} + \underset{(0.007)}{0.076}\ B_{85} \qquad (R^2 = 0.808)$$

$$I_{86} = \underset{(0.017)}{-0.002} + \underset{(0.028)}{0.004}\ Ninc/B_{86} + \underset{(0.005)}{0.044}\ B_{86} \qquad (R^2 = 0.775)$$

2.79 If wages per worker are substituted for the ratio net income over business fund very similar results are obtained. That is, the relationships remain relatively unchanged and the coefficients of wage rates are not significant:

$$I_{85} = \underset{(0.017)}{0.013} - \underset{(0.029)}{0.015}\, W_{85} + \underset{(0.007)}{0.073}\, B_{85} \qquad (R^2 = 0.818)$$

$$I_{86} = \underset{(0.018)}{0.015} - \underset{(0.006)}{0.008}\, W_{86} + \underset{(0.004)}{0.042}\, B_{86} \qquad (R^2 = 0.791)$$

These results suggest that there is almost no flow of capital from poorly performing to more profitable branches. This is consistent not only with the distortions related to investment decisions but is also a reflection of government intervention. The lack of any relationship between investment and performance indicators suggest that political considerations have been more important than rational economic calculation when investment decisions had to be made.

2.80 The factors described above point to very limited capital mobility across activities within Yugoslavia. There is also a regional dimension to this capital mobility problem and that is there is very little voluntary investment by firms outside their own region. The extent of this problem may be seen with reference to Table 5.

Table 5: REGIONAL ALLOCATION OF INVESTMENTS
(millions dinars)

	Fixed Capital Assets in New Projects	Inter-Republican Investment	Share of Inter-Republican Investment (percent)
1983	1679764	5593	0.33
1984	2615332	8225	0.32
1985	4556381	13591	0.30
1986	6840228	22181	0.32
1987	8977339	30157	0.34

2.81 This table shows the total estimated value of fixed asset investment in new projects Yugoslavia and the proportion that was sourced outside a given republic.[18] As can be seen the overwhelming majority of new investment (over 99 per cent) was sourced within the region where the project was located. Thus, for example, very little capital flows voluntarily from capital intensive to labor intensive regions in response to differences in wage rates. Also within Yugoslavia enterprises are encouraged to pool resources in joint ventures. However, this pooling of resources has been minimal during the 1980s as shown in Table 6.

18/ The numbers exclude investment for rehabilitation and working capital.

Table 6: POOLING OF RESOURCES IN YUGOSLAVIA
(percentage Share)

	1980	1981	1982	1983	1984	1985	1986
Pooled Resources As A Proportion of Operative Funds	1.5	1.6	1.8	2.0	5.4	5.3	4.5
Jointly Earned Net Income As A Proportion Of Total Net Income	1.4	1.7	2.3	2.5	2.9	2.9	2.5

2.82 Most of the pooling of resources that does take place is in manufacturing and mining and represents processing industries ensuring sources of raw materials by way of backward integration. The decline in pooling in recent years largely is the result of the difficulty in preparing complicated selfmanagement agreements between enterprises in the face of rapidly escalating inflation. In effect, there has been a slight disintermediation in capital flows due to unstable economic conditions.

2.83 In addition to this voluntary movement of capital the government has in place a Fund for the Development of Underdeveloped Republics, which collects a certain percentage of gross enterprises revenue from the more developed areas and disburses it as soft loans. The operation of this Fund is summarized in Table 7.

Table 7: FUNDS DISBURSED FROM THE FUND FOR DEVELOPMENT OF UNDERDEVELOPED REGIONS

	Total (Constant 1987 - Dinars m.)	Proportion of Total Investment (percent)	Proportion Distributed to:			
			Bosnia & Herzogovina	Montenegro	Macedonia	Kosovo
1982	647471	6.0	31.0	9.4	19.9	39.4
1983	705389	7.5	24.0	9.4	20.0	47.1
1984	579879	6.8	24.5	8.9	20.3	46.4
1985	589762	6.5	25.2	10.0	25.3	40.0
1986	590391	6.6	31.0	8.3	14.9	45.7
1987	541126	N.A.	28.5	9.5	17.9	44.2

2.84 As can be seen from the table, transfers undertaken through the Fund are equivalent to about 6 5 per cent of total investment in Yugoslavia so far during the 1980s. This proportion has remained fairly constant from year to year. The proportion of funds distributed to each region has also remained constant with Kosovo and Bosnia and Herzogovina being the main recipients.

F. Competition in the Goods Market

(i) Domestic Competition

2.85 The flexibility of an economy and its ability to respond to changes in demand and technology is related to the prospects for the formation of new enterprises, which in turn hinges on the ready dissolution of poorly performing enterprises. The key features of the entry and exit performance of the Yugoslav economy is summarized in Table 8. From this table it is evident that entry and exit rates are low in terms of new formation of enterprises and bankruptcies.

Table 8: ENTRIES AND EXITS OF ENTERPRISES, SOCIAL SECTOR, 1983-87

	1984	1985	1986	1987
NEW ENTERPRISES	829	803	785	760
In formation	92	92	122	176
Activated	233	249	297	252
Completed Construction	19	63	79	59
Immediate Activation	214	186	218	193
Reorganizations	504	462	366	332
EXITS				
Bankruptcies Started	32	67	69	98
Bankruptcies Completed	65	79	62	43
Exits Through Reorganization	1029	1393	1545	1903
Total Number of Enterprises			33000	31333

Sources: "Organizations and Communities", Statistical bulletins numbers 1421, 1545, 1588, 1688, Federal Statistical Office of SFR Yugoslavia.

2.86 In 1987 within the social sector there were only 428 new enterprises in formation or activated and this corresponds to only slightly more than one percent of the number of enterprises in operation. In fact, actually formed enterprises comprise slightly more than half of this total and the numbers of such enterprises has remained relatively constant since 1984. The rate of entries is very low by international standards--for example it is about ten times less than that in the U.S.A.[19] This picture is even worse in terms of exits as only 0.43 enterprises per thousand were bankrupted or subject to the commencement of bankruptcy procedures. Moreover, whilst the bankruptcy activity has increased somewhat since 1984, the number of bankruptcies actually completed has declined by a third over the period 1984 to 1987. The effectiveness of the exit mechanism is seen more clearly in Table 9.

Table 9: PERFORMANCE OF EXIT MECHANISM IN YUGOSLAVIA

	1985/84	1986/85	1987/86
Bankruptcies Started	+35	+2	+ 29
Bankruptcies Completed	+14	-17	- 19
Changes in Loss/GSP Ratio (Year to Year)	+26%	+7%	+238%

2.87 In this table the decline in bankruptcy completed in the face of a significant increase in losses suggests the bankruptcy mechanism does not operate effectively in Yugoslavia. Moreover, the increase in bankruptcies commenced suggests that it is taking longer to process bankruptcy claims and that there is an increasing backlog in the system. These conclusions are consistent with the evidence outlined on loss makers in the following chapter.

2.88 To more clearly understand the significance of the increase in reorganizationss in Yugoslavia it is necessary to briefly recap some of the background to institutional change in Yugoslavia since the early 1970s. In that decade there was a desire to strengthen worker initiative in a profit

19/ See Dunne T, Roberts M, and Samuelson L, Patterns of Firm Entry and Exit in U.S. Manufacturing Industries, in RAND Journal of Economics, Vol. 19, No. 4, Winter 1988 pp. 495 to 515. Other evidence from Latin America, also supports the contention that entry rates are low in Yugoslavia. For example, the entry rates in Chile are about 4 percent and Colombia about 14 percent. See Tybout J, Entry Exit and Productivity in the Chilean Industrial Sector, May 3, 1989 unpublished mimeo, World Bank and Roberts M, The Structure of Production in Colombian Manufacturing Industries, May 2, 1989, unpublished mimeo, World Bank.

sharing environment by reducing the size of firms in order to make individual contributions more easily accountable. The BOAL became the basic building block of the economic system and BOALs were established wherever there was a well defined production process and a marketable output. The evolution in the number of BOALs is seen in Figure 4. As can be seen the number of BOALs increased by over 40 per cent from 1976 to 1982. Since then their number has declined to almost the same number as in the mid-1970s. This recent reorganization reflects the view that "boalarisation" had gone too far and was having adverse effects on the efficiency of operations. In practice BOALs had become too fragmented and the co-ordination problem increased manyfold as they proliferated. The 40 per cent increase in reorganizations over the period 1984 to 1987 shown in Table 8 simply reflects these formal changes to BOALs. Whilst the organizational changes may have had some positive efficiency effects they are basically undoing the organizational structure introduced in the 1970s. For this reason the increase in reorganizations does not represent a significant step forward in the flexibility of the economy.

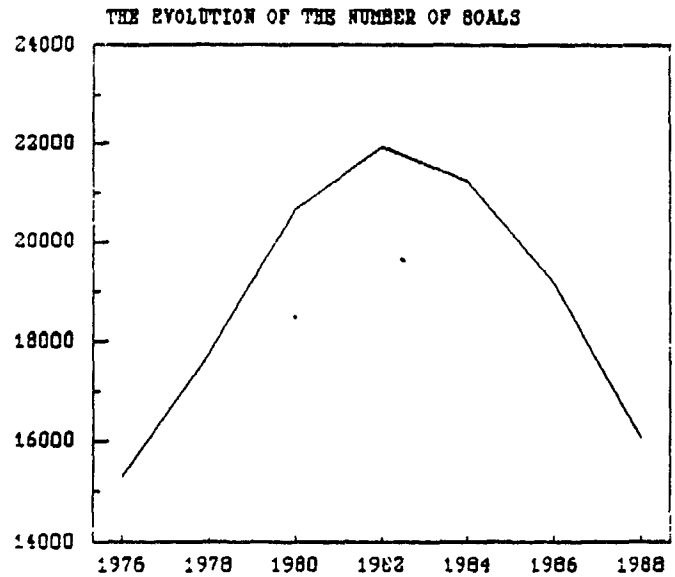


Figure 4

2.89 Also, until recently, there has virtually been no alternative to socialist self management in Yugoslavia so that, in practice, it is not possible to compare the efficiency of a privately owned and socialist self-managed firm operating in the same environment. Although some forms of private enterprise have been permitted in agriculture and the services sector, the size of these establishments have been restricted and tightly controlled. Thus there has been little competition in organizational forms in Yugoslavia.

2.90 Another striking feature of industrial organization in Yugoslavia is the bi-modal structure of enterprises. The majority of the labor force is employed in large enterprises with over 60 workers. Such enterprises comprise about 7 per cent of the total number of enterprises in Yugoslavia. But the

majority of enterprises are accounted for by very small units operating with less than 15 workers. There is a significant gap in the number of enterprises employing between 16 to 60 workers. Such enterprises account for only about 2 per cent of all enterprises and 4 per cent of employment. This absence of small to medium sized firms is largely attributable to two factors. First private firms have faced constraints on their size which have prevented them from growing beyond certain limits. Second the development of large social sector enterprises has been favored by the bureaucracy controlling investment in the belief of scale economies and to ensure easier control of the economy.

2.91 The low rate of entry and exit in Yugoslavia and the lack of competition from the private sector leads to fixed structure of production which is unresponsive to changes in demand and becomes increasingly out of step with developments in world markets. As discussed shortly the inflexible industrial structure is even more damaging when combined with constraints on competition within the framework of self-management agreements and low levels of inter-republican trade. The low level of competition on the Yugoslav market facilitates organizational slack and a decline in industrial efficiency.

2.92 As discussed earlier contracts between enterprises and market competition, in general, have been undertaken within the framework of self-management agreements. These agreements complemented the introduction of BOALs and were designed as the principal coordinating mechanism between economic entities. In other words, the fragmentation of the economy which followed the introduction of BOALs needed to be rectified and this was the role envisaged for SMAs. To a large extent SMAs were expected to reduce uncertainties associated with market transactions and to harmonize the diverging interests of small and local units. There was also a concern about abuses of power by larger units and so their plans were to be coordinated in self managed interest groups created for purposes such as price setting. Thus the participants of a SMA coordinated their often conflicting interests and by signing it they undertook the responsibility for its fulfillment.

2.92 In the process of coming to an agreement, consensus decision making prevailed over majority decision making. The framework of SMAs allowed for a considerable amount of discretion and often expressed broad areas of commitment to goals without indicating specific policies for their realization.[20] As could be expected, SMAs opened up the avenues for political interventions in economic decision making of firms and thereby monopolization of certain markets along product and territorial lines. In practice, socio-political communities would become the patrons of the enterprises on their territory and were in a position to exert pressure on trade organizations to buy locally, regardless of price and quality.

20/ For further details on institutional development see Tyson L, The Yugoslav Economic System and Its Performance in the 1970s, Institute of International Studies, University of Berkeley, California, 1980.

2.93 Thus, an analysis of the degree of concentration or contestability of markets runs into the problem of definition of a market. In many cases, the market for some enterprises will be regional and not economy-wide. But aside from this problem of definition, there is little data available which could shed some light on this issue. For example, on the basis of official statistics, it is not possible even to calculate simple firm concentration ratios at the economy-wide or republican level. However, the analysis of the 320 major users of business assets provides some recent information about degrees of concentration and this is presented in Table 10. It should be noted that the 320 major enterprises account for about 50 percent of industrial business assets and that the proportions relate to the share of major firms in total branch assets, operating income and losses.

Table 10: LEVELS OF CONCENTRATION ON BASIS OF 320 MAJOR FIRMS 1988

	Proportion of Branch (percent)		
	Used Business Assets	Operating Income	Losses
Largest 2 Firms			
Crude Oil	75	29	N.A.
Iron Ore Mining	70	62	19
Oil & Gas Refining	65	25	N.A.
Tractors	75	44	100
Largest 4 Firms			
Food Industry	2.7	1.1	4.5
Chemicals	4.8	10.5	2.0
Electrical Machinery	4.2	2.9	3.5
Timber & Wood Products	6.8	3.4	3.5
Leather	9.0	4.0	17.0

2.94 The information outlined in Table 10 suggest that the major users of business assets are concentrated in the power supply and basic industries. Their share in operating income is much lower than business assets which provides additional evidence about the financial inefficiency of large enterprises. On the surface, the data suggests that there is significantly greater potential contestability of markets for processed products, as in many branches the four largest producers account for much less than 10 percent of business assets. However, past studies using 1973 data show that at a more

disaggregated level, Yugoslav industrial concentration significantly exceeded that of other market economies and approached that of the Eastern European economies.[21]

2.95 However, the contestability of markets is likely to be much more constrained when regional protectionism is taken into account. The extent of this problem is highlighted with reference to Table 11, which outlines the local orientation of total sales of republican economies.

Table 11: INDICES OF THE SHARE OF SALES TO OWN REPUBLIC 1970-1987 (1970 = 100)

REPUBLIC	1970	1976	1983	1987
BIH	100	106	111	115
Montenegro	100	129	135	137
Croatia	100	109	114	116
Macedonia	100	95	103	106
Slovenia	100	112	107	111
Serbia	100	107	110	111

2.96 This table has to be interpreted with caution. In particular, the estimates of trade are based on sales between entities within a republic and with outside purchasers. However, the definition of an economic entity has undergone significant changes since 1970. For example, over the period 1970-76 there was considerable fragmentation of enterprises and consequently what used to be internal transactions within a consolidated enterprise, would appear as trade between separate enterprises in 1976. As expected, the data show that the share of sales to own republic increased significantly between 1970 and 1976. More recently, the number of BOALs has declined so the reverse trend would be expected. However, between 1983 and 1987 the share of sales to own republic has continued to increase. More generally, more than 70 percent of aggregate purchases is effected within own republics and the volume of such trade is increasing, while the volume of trade between republics is declining.

2.97 This provides some evidence of increasing autarchy in the 1980s as republics defended their industrial base from competition from other Yugoslav suppliers. The increased decentralization of decision making facilitated the intervention of local politicians in investment decisions of enterprises. As could be expected they prefer to expand the industrial base and employment opportunities in their regions and the result has been a fragmentation of the Yugoslav economy. The strategy of import substitution at the national level has also translated into substitution at the regional level.

21/ See Prasnikar J, and Svejnar J, op. cit., p. 257.

2.98 Price controls have been another important factor in this process. In the past, price controls have been applied most forcefully to raw material and intermediate products. These controls were at first designed to provide cheap raw materials for emerging industry but then also were used as an anti-inflationary instrument. The less developed republics tended to have a disproportionate share of raw material industries, so their strategy was oriented towards diversifying into the production of processed products (which were not subject to price controls). However, the duplication of facilities meant that some enterprises operated at a loss. Since the exit mechanism did not work, such enterprises were simply subsidized. In turn, regional duplication led to a decline in trade among republics.

(ii) External Competition

2.99 Yugoslavia has conducted a more restrictive than liberal commercial policy since the 1950s. The country basically has operated under an administered trade regime with high protection and subsidy mechanisms to promote the selective exports of industrial goods. Yugoslavia's exchange rate has been unified since the 1960s, although until recently access to foreign exchange has been restricted largely as a means of ensuring the effectiveness of quantitative controls on imports. Basically the trade regime has: resulted in a diversion in demand towards local goods; allowed uncompetitive production to continue; and effectively taxed exporters. In practice it has provided an umbrella for monopolistic behavior of separated producers on relatively closed regional markets. In general, import restrictions have acted as a brake to structural change in Yugoslavia.[22]

2.100 As far as import quotas are concerned until recently there have been two main restrictive categories depending on whether import items potentially compete against local production or are non-competing intermediate inputs. In the first category (so called K quota) importable quantities have been set at zero if domestic production is considered sufficient. In the second category the value of imports has fluctuated with the availability of foreign exchange. The unrestricted category (free of licence) has generally been either non-competing imports such as medicine or items such as oil and gas which are imported and distributed in quantities administered by state monopolies.

22/ Details of the trade regime in Yugoslavia may be found in World Bank, Yugoslavia: The Challenge of Adjustment, Report No. 6353-YU, July 10, 1987. Also a historical perspective of past attempts at liberalization and the reasons for their failure may be found in O.Havrylyshyn, The Timing and Sequencing of Trade Liberalization Policy: The Case of Yugoslavia, unpublished monograph, World Bank.

2.101 The production coverage of quotas is one measure of the restrictiveness of the trade regime. In Yugoslavia for 1987 the restrictive K quotas shielded about 36 per cent of industrial output from import competition. Within industry there was a significant disparity in the coverage of K quotas and those activities with above average production coverage in 1987 (in descending order) were as follows:

Textile end products
Non-ferrous metals
Transport equipment
Chemicals
Food products
Beverages
Textiles
Ferrous metals (iron and steel)

2.102 Apart from the textile branches, these activities figure prominently as the largest loss makers and include enterprises which made the least adjustment to the increase in interest and depreciation charges in 1987. Thus the common thread through this chapter is that the system of incentives and redistribution in Yugoslavia has been geared towards supporting a handful of financially unprofitable branches. Given the evidence outlined on total factor productivity it is also apparent that support of such activities has also been questionable from an economic viewpoint given their poor contribution to economic development. Thus the economic system in Yugoslavia has provided open ended assistance to activities once they have been set up, which contravenes the principle of protection being time bound and conditional upon improvements in productivity.

2.103 Since 1987 the authorities in Yugoslavia have gradually opened up the trade regime in order to improve the efficiency and structure of domestic production and to hold down domestic prices to relieve inflationary pressures. The changes introduced have been far reaching. The restrictiveness and coverage of import quotas has been reduced with a significant decline in the production coverage of K quotas. The "conditionally free" control of intermediate inputs has been abolished and importers no longer need clearance from producers in the importation of certain goods. Another important reform, which will stem from the introduction of the new Law on Enterprises is that foreign trade will be allowed for all types of companies. These changes and the easing of restrictions on the entry into the foreign exchange market should result in increased competition, both in production and distribution.

2.104 Importantly there have also been reforms in the system of incentives for exporters and joint ventures. Specifically exemptions are available to exporters which export $150 for every $100 that they import. Joint ventures will no longer be subject to K quotas on their imports and those that are export oriented will be entitled to import inputs duty free.

2.105 These reforms will provide an important means for generating competitive pressures within the economy and for achieving a more efficient domestic structure of production. They will also improve the ability of the Yugoslav economy to compete more vigorously in world markets and provide competitively priced goods domestically. However, to ensure that these benefits are achieved will require complementary changes to the domestic policy environment. Most importantly the system of taxation/subsidies will need to be reformed and financial discipline introduced into enterprise/government relations. Otherwise opening up the economy will simply result in even larger transfers to loss making industries. The same industries that did not adjust to the increase in capital charges in 1987 are most at threat from continued import liberalization. Of course as argued in this report ultimately the success of trade and fiscal reform in turn hinges upon the resolution of property rights over capital and the role of labor in self-managed social sector enterprises.

CHAPTER 3

IMPLICATIONS AND RECENT DEVELOPMENTS

A. EXTENT OF THE LOSS PROBLEM

3.01 This report has outlined the workings of an economic system that does not have well defined property rights over capital and is oriented towards redistribution of income from financially profitable to poorly performing enterprises. Enterprises find it much easier to stay afloat by obtaining financial assistance rather than undertake much more difficult reorganization of production facilities in the face of changes in the incentives regime. A clear example of this behavior is shown by the response of enterprises to the capital charge increase of 1987--a number of poorly performing, capital intensive, enterprises did not adjust but simply kept up their wage obligations and material usage. Not surprisingly the financial performance of enterprises declined markedly during that year. Losses resulted in a significant reduction in the tax base and contributed to the tremendous acceleration in inflation.

3.02 More generally, squeezed between high taxes and low efficiency, Yugoslav manufacturing enterprises have consistently earned low returns. In 1987, the manufacturing sector as a whole made losses. In other words losses from poorly performing enterprises were larger than retained earnings of profitable firms. The continued subsidization of loss making enterprises leads to a misallocation of resources as more efficient enterprises become starved of funds. Also redistribution reduces productive efficiency through its adverse effects on incentives to work.

3.03 The extent of the loss making problem is outlined in Table 1 and Figure 1. The losses made in Yugoslavia have become enormous in 1987 and 1988, with about 20 per cent of the labor force working in loss making enterprises.

Table 1: LOSS MAKING ENTERPRISES (LME) 1983-84

	Number of LMEs	Proportion of Workforce in LMEs	Loss to GSP Ratio
1983	2678	11.4	3.2
1984	2195	8.8	2.3
1985	2369	10.2	2.9
1986	2306	11.0	3.1
1987	4218	22.7	7.4
1988	2772	17.5	6.5

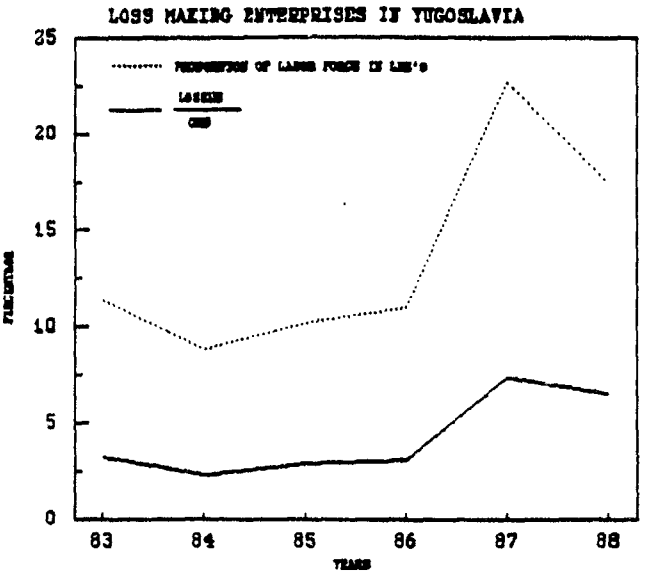


Figure 1

3.04 Losses as a proportion of gross social product reached 7.4 per cent in 1987, which is more than double the level recorded in 1983. One earlier study concluded that loss making was already a severe problem at least 10 years ago when losses were about one to two percent of GMP.1/ Clearly matters have deteriorated significantly since then. The bulk of the loss making problem is attributable to problem enterprises in industry. Industry accounted for between 70 to 80 per cent of total economy-wide losses between 1985 and 1987. Industry losses as a proportion of industry GMP climbed from 6 per cent to reach almost 16 per cent in 1987.

3.05 In Table 2 the ten branches with the highest ratio of losses to gross material product in the years 1985 to 1987 are outlined. In 1985 and 1986 the losses of these branches accounted for about 70 per cent of the total losses of enterprises in the manufacturing sector. In 1987 the proportion of losses accounted for by the ten largest loss makers declined to 55 per cent. Likewise the proportion of the manufacturing labor force in these branches declined from 26 to 17 per cent over the same period. This indicates that the deterioration of the financial conditions of enterprises in 1987 was more widespread that before. Losses as a proportion of activity GMP for the problem branches are outlined in Figure 2. As can be seen from this figure losses climbed to over half of GMP for the worst branches in 1987. The situation was much worse for the largest loss makers and in particular the iron and steel and petroleum refining branches incurred losses amounting to more than 100 per cent of their GMP.

1/ See Peter T. Knight, Financial Discipline and Structural Adjustment in Yugoslavia, World Bank Staff Working Paper Number 705.

Table 2:

	Loss	Proportion of Industry Loss	Loss/ Activity GMP	Proportion Uncovered			Proportion Industry	
				Wages	Income	Materials	GMP	Investment
***** 1985 *****								
Basic chemicals	50245	0.19	0.34	0.13	0.37	0.50	0.03	0.09
Food products	53794	0.20	0.21	0.32	0.16	0.52	0.06	0.07
Electricity	42283	0.16	0.14	0.33	0.42	0.25	0.07	0.18
Non-ferr. met. bas	8213	0.03	0.12	0.44	0.36	0 19	0.02	0.01
Furn & wood products	13012	0.05	0.10	0.72	0.10	0.17	0.03	0.02
Animal food	1252	0.00	0.10	0.27	0.08	0.65	0.00	0.00
Non-metal min. extr.	1583	0.01	0.08	0.29	0.20	0.51	0.00	0.01
Non-ferrous ore min	5028	0.02	0.07	0.79	0.20	0.02	0.02	0.02
Building materials	5559	0.02	0.06	0.63	0.11	0.26	0.02	0.01
Coal Mining	5591	0.02	0.04	0.83	0.17	0.00	0.03	0.10
Total	186560							
MANUFACTURING	262840	0.06	0.39	0.26	0.35			
***** 1986 *****								
Basic chemicals	104212	0.20	0.43	0.17	0.35	0.48	0.03	0.05
Animal food	8334	0.02	0.33	0.04	0.05	0.91	0.00	0
Non-ferrous metals,	16185	0.03	0.20	0.64	0.31	0.05	0.01	0.02
Non-ferrous ore mini	14892	0.03	0.15	0.70	0.15	0.15	0.01	0.02
Food products	72310	0.14	0.13	0.37	0.25	0.38	0.07	0.06
Petrol Refining	12151	0.02	0.13	0.19	0.42	0.40	0.01	0.01
Electricity	62220	0.12	0.12	0.47	0.47	0.06	0.07	0.17
Iron & steel	31852	0.06	0.12	0.34	0.36	0.30	0.04	0.12
Coal Mining	26382	0.05	0.11	0.91	0.09	0.00	0.03	0.10
Furniture & wood pro	22194	0.04	0.08	0.70	0.12	0.18	0.03	0.02
Total	370732							
MANUFACTURING	527971	0.07	0.44	0.27	0.28			
***** 1987 *****								
Iron & steel	422372	0.17	1.09	0.29	0.23	0.48	0.0[illegible]	
Petrol Refining	219233	0.09	1.02	0.08	0.23	0.68	0.01	
Animal food	49374	0.02	0.92	0.10	0.14	0.76	0.00	
Coal Processing	16111	0.01	0.57	0.44	0.12	0.44	0.00	
Basic chemicals	289028	0.11	0.47	0.21	0.34	0.45	0.04	
Non-ferrous metals,	32932	0.01	0.28	0.77	0.18	0.04	0.01	
Non-ferrous metals,	49881	0.02	0.26	0.42	0.51	0.07	0.01	
Shipbuilding	36629	0.01	0.22	0.45	0.31	0.24	0.01	
Non-ferrous ore mini	40837	0.02	0.21	0.68	0.28	0.03	0.01	
Food products	236505	0.09	0.18	0.38	0.17	0.46	0.08	
Total	1392902							
MANUFACTURING	2522506	0.16	0.45	0.22	0.33			

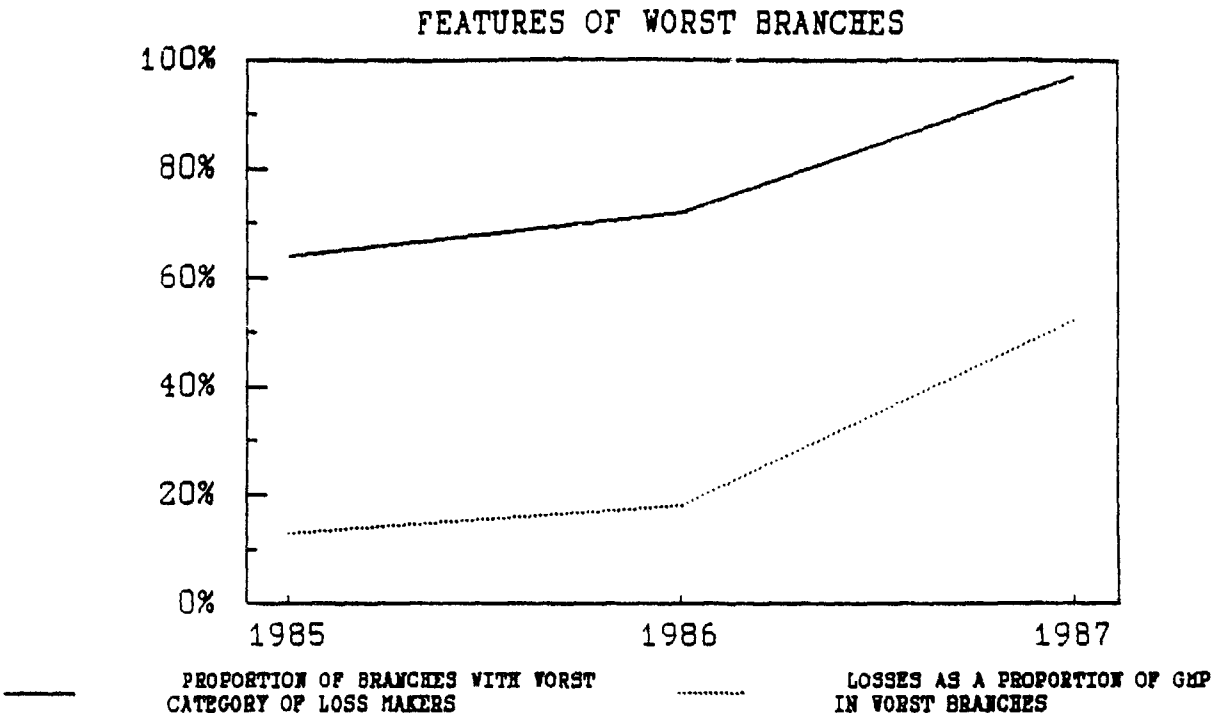


Figure 2

3.06 The problem branches repeatedly appear in the largest loss making category. In fact, five branches are among the ten with the largest loss/GMP ratio in all three years and they are: basic chemicals; food products; non-ferrous Metals (basic); animal Foods; and ferrous ore mining. Another five branches are amongst the largest loss-makers in two out of the three years: electricity, furniture and wood products, and coal mining in 1985-86, and petroleum refining and iron and steel in 1986-87. Also five branches are among the largest loss-makers only in one year and these are non-metallic minerals and building materials in 1985, and coal processing, non-ferrous metals and shipbuilding in 1987. The fact that five branches remained amongst the largest ten loss-makers in 1985-87 suggests that no adequate measures were taken to reduce costs, or increase efficiency in these branches.

3.07 The extent of the loss making problem may be seen with reference to the standard accounting identities:

REV - MAT - DEP = NInc

INC - TAX - INT = NOI

NInc = WAGE + RET EARNINGS + OTHER CONT

3.08 In where INC is income and niNC is net operating income. Loss making enterprises may be placed into three categories and these are in ascending order of severity;

(i) those that cannot cover wage payments. For such enterprises WAGE > niNC and they have zero retained earnings. Such enterprises are able to cover other operating expenses including materials, depreciation, interest and taxes. This is the least severe category of loss making;

(ii) those that cannot cover both wages and taxes and interest obligations on fixed assets. These enterprises can barely cover materials and depreciation out of income. In theory there would be nothing left for wages or retained earnings;

(iii) those that cannot cover material costs and depreciation out of revenue ie, MAT + DEP > REV. This is the most severe form of loss and suggests that material costs alone are excessive. Such enterprises are incapable of making any social contributions or pay any fixed asset obligations.

The number of branches which included enterprises in the worst category of loss making in that revenue did not cover materials and depreciation, is outlined in Figure 2. As can be seen from this figure by 1987 almost all branches included enterprises in this category. In all three years approximately one third of the total losses of the industrial sector originated in such enterprises. According to Yugoslav accounts in 1987, materials are the only variable cost so accordingly the weakest test for closing down an enterprise should be when material costs exceed revenue. This would apply to most of the enterprises in the worst category of loss making. Yet because of the open-ended redistribution system these enterprises continue in operation, and what is worse, their number has actually increased in recent years. Thus the drain on the economy has been aggravated and the backlog of structural adjustment has been mounting.

3.09 The breakdown of consolidated profits at the branch level into profits of profitable firms and losses of loss-making firms indicates that many profitable branches still included enterprises with large losses. Nevertheless there is a positive relationship between branch performance and the presence of profit making firms. In other words, loss making enterprises are not distributed randomly throughout industry. As a proportion of GMP average industry profits declined from 16 per cent to 7 per cent over the three year period to 1987. The better performing branches in terms of retained earnings to GMP are found in the more labor intensive processing industries. Conversely most basic or mining industries have much lower performance in terms of measure as shown in Table 3. Given that the basic industries tend to be located in southern regions there is also a regional dimension to the financial performance of enterprises

Table 3: BRANCH PERFORMANCE BY RETAINED EARNINGS TO GMP 1987

Significantly Above Average	Significantly Below Average
Tobacco	Iron and steel
Animal food	Non-ferrous metals, min
Leather and fur	Non-ferrous metals, bas
Beverages	Non-ferrous metals, proc.
Processed chemicals	Coal processing
Food products	Petrol and gas extraction

B. CAUSE OF THE SOFT BUDGET CONSTRAINT

3.10 At present Yugoslavia lacks adequate checks and balances which could provide some discipline and control over income transfers. Coalitions pushing for redistribution invariably gain enough support to overcome any opposition to transfers. This may be seen with reference to concessionary finance and inter-firm grants.

3.11 In the case of concessionary finance, it is clear that the beneficiaries are the workers in the recipient enterprise. However, it is not clear as to who would be opposed to a subsidized loan, particularly as it is usually supported by the representatives of communes. In Yugoslavia the wages of bank managers and staff do not depend on the financial results of the bank. Moreover a bank itself will not be the ultimate bearer of the costs of concessionary finance because it can count upon support from the Central Bank. Thus banks do not have an incentive to avoid unprofitable loans. If losses are large enough the bargaining for subsidies simply takes place at a higher level. Ultimately the opposing coalition is the community as a whole as it eventually pays for the concessionary financing via the inflation tax. However, a coalition with such a broad base is not well represented in Yugoslavia.

3.12 As far as inter-firm grants are concerned, it is difficult to see why well managed BOALs are prepared to subsidize workers in loss making BOALs. After all they have little to do with the causes of the financial problems in such BOALs. The explanation is that transfers are part of an implicit insurance scheme. The need for such a scheme stems from variations in wages in an economic system where labor absorbs all the risk. However, if an "insurance" scheme were implemented on a voluntary basis it is unlikely that the "premium" would be the highest for the best performers, whilst being waived for enterprises in the worst condition.

3.13 The key characteristic of the redistribution process is the bargaining nature of decision making. However, as Yugoslavia shows it is difficult to achieve either efficiency or equity through comprehensive bargaining. More general coalitions are not well represented in the system

and the extent of potential redistribution is almost unlimited due to the lack of independent institutions as, for example, represented by capital markets. This partly explains the wide range of instruments available for transferring funds to loss making enterprises. Moreover, the system lacks transparency by design as officials prefer to keep the extent of the redistribution hidden.

C. Recent Developments

3.14 Recently there have been revisions to the constitution which could transform ownership and incentive structures in Yugoslavia. Complementary and wide-ranging changes have also taken place in the key laws that underpin the legal structure of the economic system. The changes in the Law of Enterprises have particular importance, given that it deals with the very core of the ownership question. The new law appears to have the potential to usher in a legal structure in which economic entities can be based on equity ownership rather than labor inputs. Managerial rights and profit distribution can now be determined by equity, that is, by invested capital. Different types of economic agents can acquire equity: state enterprises, Yugoslav citizens, and foreigners.

3.15 At the same time, the previous forms of economic organization, based on social ownership and labor contribution are not excluded. Under the new law, firms can be privately, cooperatively, or socially owned. The law also provides for new forms of social ownership: social stock companies, joint enterprises, pooled resource enterprises, social-private enterprises, and special social enterprises. These share some common traits. They are established by two or more investors, at least one of which is a socialized enterprise. The investors acquire rights and responsibilities in proportion to their invested capital, and have the right to sell their assets to cover losses, if faced with insolvency. They also have the right to participate in decision-making, again in proportion to the capital invested.

3.16 Traditional social enterprises are allowed to continue operating under the self-management system. However, the law explicitly states that they cannot enjoy any privileges, and must compete in equal footing with other enterprises. Governmental intervention to favor or hinder enterprises is precluded, and injured firms are allowed to seek compensation. The decision making power within the enterprise is removed from the Workers' Council, and given to managers. Finally, BOALs no longer exist.

3.17 The general trends of these legislative changes are encouraging. The transfer of power from the Workers' Council to managers may streamline decisions, and decrease the tendencies to underemployment and underinvestment. The introduction of the concept of equity into the economy will help prevent abuse of the system of financial intermediation. To the extent that a capital market will substitute for the banking system in financial intermediation, the possibility of the banking system being used for redistribution will be curtailed. It will also bring the possibility of spreading risk in the form of diversified portfolios, which reduces the risks connected with wages and thus also diminishes the need for compensatory redistribution.

3.18 The Law on Enterprises, furthermore, introduces several important features aimed at improving internal efficiency of Yugoslav enterprises.

First, it strengthens the position of management by abolishing the concept of BOALs, thus putting an end to the autonomy of the lowest level of business units. Second, in precluding the participation of external parties in the elections of managers it strengthens the autonomy of enterprises. This should lessen the avenues for local government interference in enterprises affairs.

3.19 Significant progress is achieved also in the new law on accounting system. The most important change is the return to profit as the relevant measure of business success. Moreover, profits are to be distributed amongst equity owners as well as workers. Thus the new law abolishes the "net income" concept of accounting. Under the previous system workers had too much discretion in the area of income distribution. Also because the income fund was determined ex-ante the system continually generated a need for compensatory income redistribution. Instead, the new law treats personal earnings as costs, and thus produces a standard accounting entry of profit (or loss).

3.20 Furthermore, the new law has significantly simplified accounting by reducing the number of entries in the balance sheet and income statement. The new accounting scheme does not explicitly allow for quasi-tax channels (such as "investments" in development funds), even though they can still appear under "obligatory financial investments". Of course, the issue of quasi-taxes cannot be addressed only by law. A further important initiative is the reorganization of banks which will result from the new law on banking. Banks may be set up as shareholding or limited liability companies, and will become independent, profit maximizing agents. Broadening of their ownership base and the implied changes in their decision-making process are necessary steps in protecting banks from political pressure.

3.21 Thus, potentially the constitutional and legal changes provide for a level playing field between private and self-managed enterprises. If this became the reality, one could predict that, in the long run, private enterprises would out-compete other types of enterprises, as they have in most countries where a level- playing field exists. The open competition among organizational forms could provide the key to unlocking productivity improvements, which could ultimately provide growth and stability.

3.22 However, from the viewpoint of this report, it is not enough to simply change the laws in Yugoslavia. This is because there is too much capital tied up in loss-making enterprises and the concern is that private entrepreneurs simply will not have sufficient capital to make other than a marginal contribution to restructuring of the economy. While foreign direct investment may be important, the main impetus to change must come from a concerted push to rationalize and reorganize inefficient state enterprises. But so far, there has been little action in this regard. This conclusion supports comments made in the Bank's recent report on financial restructuring, which set out the main elements of a drive for economy-wide and effective restructuring. An important change proposed in that report is the ultimate transformation of existing social sector to one whose character and basic features are similar to those of enterprises in market economies.

3.23 Unless the ownership question is resolved, there is a danger that Yugoslavia will become a managerial economy. This is because the legal

framework as it has evolved recently has accorded more power to managers but has not facilitated monitoring of their performance by large shareholders. The socialized sector will continue to dominate the economy and it may well come to be controlled by a managerial class with a significant degree of freedom in its actions. As is well known, managers' objectives do not necessarily coincide with value maximization and implementing extensive performance indices is undesirable given their poor track record in socialist economies.

3.24 Consequently, lack of strategy of defining property rights for existing social sector enterprises is one weakness of the current reform proposals. Before the property rights issue can be resolved, the government should settle the accounts of the past. In many respects, the problems of loss making enterprises can be attributed to government policies on investment and price controls. Consequently, the government should implement a debt reduction program for those enterprises that can remain viable. This program would involve the government partially absorbing the debt and financing this through bond issues to the public. The intention would be that debt reduction settles the account of the past and that, in principle, future investment would be the responsibility of new owners. The governments' moral hazard problem is minimized as it becomes less accountable for the future direction of problem branches. Any debt reduction would be conditional upon the general rule that no more subsidies would be granted.

3.25 The legal framework does allow for many different types of social ownership. One option would be for the government to encourage workers to set up councils to run social enterprises under an employee shareholder movement (akin to an ESOP). Workers would then have to decide to what extent they should invest in their own enterprise as they would be free to invest in other enterprises or bank account if they so desire. Also they would be responsible for attracting potential outside shareholders. Under this approach, the new owners would also be responsible for developing restructuring strategies on their own with the assistance of banks or consulting groups.

3.26 It may be the case that restructuring and rationalization of some problem branches may be too large for the emerging capital market to handle in the medium term. Consequently, there may be a need for government to guide this process and assume the responsibility of assessing the potential viability of enterprises and ensuring that change takes place within a policy framework of a gradual reduction in subsidies and elimination of price controls. In this case, the delineation of property rights may require nationalization of some enterprises.

3.27 The option of guided restructuring has significant drawbacks. It would require that the government take responsibility for the contraction of the total output of problem branches as a share of industrial output. Within this overall contraction, some efficient enterprises would need to expand as others are restructured and closed down. Yet, the government will encounter a moral hazard problem. Enterprises would hold the government responsible if restructuring does not turn out as expected, which will make it vulnerable to requests for subsidies for losses. In turn, the government involvement is likely to expand the period of adjustment. The experience of other countries has been that restructuring can be a long drawn out experience - for example,

the trimming down of the Swedish shipbuilding industry took 15 years. However, Yugoslavia simply does not have the luxury of taking too long to restructure. The contraction of the inefficient industries will be the main source of resources for expanding industries and the speed of this adjustment will determine rates of economic growth.

3.28 This leads to the other major weakness of the current reform proposals and that is the lack of action on the taxation system. As documented in this report, the taxation system currently facilitates substantial income redistribution. More productive enterprises are heavily taxed in order to subsidize poorly performing enterprises, with the implicit goal of leveling personal income differentials and protecting firms from going bankrupt. The lack of conditionality to any of these transfers undercuts incentives to work. In this regard the legislation can be improved. It still provides too many openings for redistribution to continue. For example, the Law on Financial Operations still allows for many channels of "soft financing" and these include: specific purpose grants; voluntary contributions and solidarity funds; waivers of taxes and contributions; and the possibility of absorption of creditor claims into the funds of poorly performing enterprises through the rehabilitation process. For the sake of financial discipline, these provisions ne o be abolished.

3.29 The policy implications are clear cut: the existing form of redistribution should be abolished in order to provide a more rational system of incentives. This could be achieved largely by: eliminating enterprise subsidies (whether from government or enterprise sources); making the tax system more neutral in its incidence (through more uniform tax rates and elimination of para fiscal "financial investments"); increasing transparency of the system so that the public is better informed about its operation; and reducing the complexity and number of taxes paid by enterprises. Of course, positive real interest rates would need to be enforced for all loans.

3.30 For reform of the taxation system to succeed will require complementary institutional changes. As argued in this report, the reason for the unconstrained institutional framework and the specific structure of political and economic power. So far, governments in Yugoslavia have lacked credibility when attempting to harden the budget constraint. A clear example is provided by the lack of effectiveness of the increase in capital charges during 1987. Economic agents realized then that the power of the coalitions for redistribution had remained unchanged - consequently, they did not react to the change in incentives by restructuring, but simply petitioned for, and received, increased subsidies.

3.31 To a large extent, redistribution is an outcome of an economic system based on comprehensive bargaining, but where different groups have different abilities to represent their common interests. The introduction of capital markets and increasing the autonomy of enterprises will at least lessen the ambet of this bargaining process. Moreover, the Yugoslav experience shows that laws do matter. For example, following the reforms of the mid-1970s, the introduction of BOALs significantly increased the number of economic agents in a short period of time. Consequently, there is a chance that the recent legislative changes will improve the performance of the Yugoslav economy.