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COMPARATIVE ADVANTAGE AND SUBSIDIES IN THE BULGARIAN ECONOMY

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COMPARATIVE ADVANTAGE AND SUBSIDIES IN THE BULGARIAN ECONOMY

Structural reform is one of the notions most frequently used in the context of market transition in Central and Eastern Europe. The change in export patterns, the liberalization of the external sector from government control and administrative constraints are seen as agents of structural change which should reveal comparative advantages that reflect the fundamental characteristics of the national economy.

The simple hypothesis that should be tested consists in the following: In a centrally planned socialist economy the development of the structure of production and export specialization are not the natural result of competition, either domestic or international but are the consequence of a voluntaristic decisions of the planning body - be it national or international (the Comecon). Price reform (la verite des prix), the introduction of a market-based exchange rate, changes in trade policies and the predominant use of market-based instruments for export promotion , most notably, the lifting of quantitative restrictions and licensing procedures for exports and imports, force the national economy to adjust to international competition and patterns of exports begin to reflect factor endowments typical of an economy in transition to a more efficient manufacturing base. Success of market reform can easily be judged by the degree of adjustment to trends in international trade and investment.

During the 1990s the dramatic decline in the share of manufacturing and the advance of a number of energy-intensive and resource-based industries such as iron and steel and chemical production has become a distinct characteristic of Bulgarian exports. This observation contradicts our intuitive understanding of linkages and interdependencies between factors of production, factor endowments, scarcity, etc. The evolution of Bulgarian trade is conducive to the conservation of an export pattern typical of economies with low productivity and a number of structural inefficiencies, e.g. high energy intensity per unit, minimal value-added in the final output. It is evident that existing regulations, government priorities and investment policies provide specific incentives for this pattern of exports. Economic agents, either public or private, respond in a perfectly rational rent-seeking way to incentives or disincentives that stem from existing market imperfections or government failure. This paper has the task of providing the theoretical framework for a general towards relative competitiveness and examines the available data for determining the revealed comparative advantages of an emerging market economy.

Measure analysis with all its dialectical Hegellian overtones can be used for the study of comparative advantage. It starts with the notion of **simple measure** which reflects the nature and the price/quality features embodied in a product. It then proceeds with the examination of the **system measure** which reveals the relative competitive position of a firm/technology and/or specific production within an industry, be it national or global. And finally the **real measure** of competitiveness is the complex expression of general economic conditions and interrelated factors - political, economic, cultural, etc., - which shape the comparative advantages of a national economy.

Let me use a recent Bulgarian example to illustrate this theoretical construct. DZU was the only disk-drive manufacturer in Eastern Europe. The loss of the Soviet market and the wide availability of superior technologies deprived this Bulgarian company of its monopoly position in this region of the world and its production came to a practical standstill. Nevertheless, in a peculiar way DZU gained access to American high-technology products and as a result of unique circumstances the Bulgarian company started 1994 as the owner of a R&D subsidiary in Sunnyvale, California and a very promising product line which included innovative PC disk drives and a new generation of servo-writers. The simple measure which was defined by the features of the existing product line could not be transformed into a favorable system measure due to the prevailing uncertainty about Bulgarian government policies and financial stability. Despite the existence of sale contracts with prestigious US and Korean firms, DZU could not start mass production. Its principal,

the Bulgarian government, was unable to provide the much needed working capital or guarantee outside financing.

After the December 1994 parliamentary elections there was a change in management which brought back the pre-1990 team. This led to insurmountable difficulties, order cancellation, increased international isolation and severe agency problems. Two years after the innovative technological breakthrough DZU manufactures nothing and its management was directly implicated in the transfer of control over its own patented US technology to alien interests.

A mirror US company, JTS, with similar start-up positions, but owned by a capitalist and functioning in a purely competitive environment, was capable of completing the research and design phase for the disk drive. It raised the necessary capital through a private placement and secured a long-term OEM contract with Compaq. The final phase of its successful development was its recently announced merger with the well-known Atari Corp.

Governments in formerly centrally planned economies regard direct management control and income redistribution as legitimate instruments of economic policy. In Bulgaria conflicts arise from the involvement of government bureaucrats in company management. They dominate corporate governance structures without really representing legitimate social interests. Existing regulations do not provide sufficient monitoring and do not resolve inherent principal-agency problems. Even lack of financial resources does not stop the Bulgarian government from making arbitrary investment decision affecting the allocation of funds from the State Fund for Reconstruction and Development (SFRD). Its recent history of directing funds to a limited number of state-owned enterprises can hardly be qualified as the conduct of a proactive investment policy which usually amounts to the oft-discredited game of picking winners. *Table 1* demonstrates that the SURD does not live up to its own name and its limited resources are used mainly to provide a life-line to the largest loss-making state-owned enterprises thus becoming a source of implicit subsidies to a limited number of export manufacturers.

Table 1: Credits Serviced by Commercial Banks with Funds from the State Fund for Reconstruction and Development 1991-1995

Banks	Company	Currency	Amount	Interest
United Bulgarian	NEK	Leva	2,000 000 000	Basic
	Metropolitan	Leva	150 000 000	Basic
	NEK	Leva	728 000 000	Basic
	The Mint	DM	650 000	10%
First Private	Balkancar	Leva	230 000 000	Basic
Bulbank	Balkancar	Leva	150 000 000	Basic
	Russia-agreement	Leva	870 075 600	Basic
Balkanbank	MDK Pirdop	\$US	3 000 000	10%
	Chavdar-Bgr	\$US	4 950 000	10%
Agricultural Credit	Ecotechnologies	DM	1 500 000	10%
TSBank	Arsenal	\$US	6 000 000	10%
	Vesletz	DM	2 580 420	10%
	NK-BDZ	Leva	1 000 000 000	Basic
	Maritsa-East	Leva	1 000 000 000	Basic
Elitbank	NEK	Leva	1 000 000 000	Basic
	Agrcomplect	\$US	3 000 000	10
Economic Bank	Kremikovtzi	\$US	34 000 000	10
First East Int'l	University Press	\$US	2 000 000	10
Central Coop.	Metropolitan	Leva	100 000 000	Basic
Teximbank	Arkus	\$US	8 000 000	10
	Trema	\$US	3 000 000	10
	Panayot Volov	DM	700 000	10

Source: *Pari Daily*, April 8, 1996

Availability and cost of capital have become a factor of increasing importance during the transition to a market economy. Given the low investment/GDP ratio which decreased from 22.6% in 1991 to 7.0% in 1995¹, the government is compelled to rely heavily on the use of subsidies as a main instrument of its investment policy. The widespread use of explicit and implicit subsidies cannot neutralize the negative impact of capital market fragmentation and the lack of an adequate mechanism for mobilizing and directing financial resources to most efficient users. Coupled with specific inter-industry transfer pricing mechanisms (Bulgarian rails charge much lower tariffs for big state-owned firms than for private companies, for example) subsidies recreate inefficient patterns of production and conserve structural inefficiencies.

Subsidies - both explicit and implicit - distort domestic relative prices, so the true comparative advantages of the economy cannot be revealed. They are essentially a means of income redistribution, i.e. some agents gain at the expense of others. Income is redistributed both among non-financial enterprises and between different sectors of the economy: financial - non-financial sectors, non-financial sector - Government, etc. because of time and space constraints this paper will examine here implicit subsidies and their impact on foreign trade since the start of economic reforms in early 1991.

The research agenda is determined by the available data. We will start with the structure of exports.

Trade balance in 1994 - 1995

The positive balance of Bulgarian external trade has often been described as the most positive outcome of recent economic reforms. Having been updated several times, the 1994 figures now stand at only \$US16.8 m. It is reported to be \$US283.4 m. for the first three quarters of 1995. *Table 2* gives the broadest possible structure of Bulgarian exports:

Table 2: Structure of Bulgarian Exports
(Relative shares in %)

	1993	1994	I-IX.1995
Chemicals	0.16	0.16	0.19
Metals	0.20	0.16	0.14
Food, Beverages, Tobacco	0.14	0.14	0.13
Agricultural Materials	0.03	0.12	0.11
Machinery Electrical, etc.	0.03	0.03	0.07
Transport	0.09	0.07	0.07
Textiles and Clothing	0.08	0.07	0.05
Plastic and Rubber	0.06	0.05	0.05
Live Animals and Animal Products	0.04	0.04	0.04
Wood, Pulp and Paper	0.04	0.05	0.03
Construction Materials	0.01	0.02	0.02
Others	0.11	0.10	0.10

Three industries rank highest in exports during the entire period - chemicals industry, metals, ferrous and non-ferrous, and food industry. The question then naturally arises: is this revealed comparative advantage the result from the working of market forces or from implicit subsidising of production factors.

¹ Agency for Economic Programming and Development 1995 Annual Report .

Productive use of electricity

About 76% of the electricity and thermal energy generated goes into intermediate use. The biggest consumers measured by direct costs are the following industries: coal-mining, ferrous and non-ferrous metallurgy and chemical industry. They are the industries which benefit most from subsidised energy prices and are most vulnerable to price-hikes. Historically energy prices have always been kept below-market levels. Hence the constant need of disbursing large credits to the National Electricity Company (NEK) in order to finance its chronic deficits caused by government price policy. It is obvious that the main reason, social welfare for keeping energy prices at the lowest possible is found wanting. The transfer of funds via the energy sector has become the main vehicle for supporting ailing state-owned companies. Bulgarian Rails (BDZ) face a similar financial situation due to long-term policies of providing below-cost tariffs to its largest customers which happen to be the biggest losers, Kremikovtzi being the biggest of them.

Current financial indicators of the main users of electric energy

Energy and transportation pricing favors industries with serious financial problems. The leading Bulgarian export-earners have serious liquidity problems, chronic working capital shortages, low inventory turnover which provide a very unusual backdrop for their positive rates of return.

Table 3: Current Financial Indicators

		Chemicals	Industry Average
Current Liquidity Ratio		0.7	0.9
Working Capital per Leva 100 of Sales	Leva	-15.2	-1.9
Inventory Turnover	Days	68.3	96.6
Collection Period for Receivables	Days	57.9	48.6
Profit Rate (From Principal Operations)	%	8.6	11.1

Table 4: Current Financial Indicators

		Iron & Steel	Industry Average
Current Liquidity Ratio		0.7	0.9
Working Capital per Leva 100 of Sales	Leva	-15.2	-1.9
Inventory Turnover	Days	93.0	96.6
Collection Period for Receivables	Days	20.1	48.6
Profit Rate (From Principal Operations)	%	35.1	11.1

The low liquidity ratios typical of both industries - 0.7 as opposed to the "ideal" textbook 2 to 1 indicate difficulties in meeting current liabilities - wages and other payments to employees, taxes, interest due to banks and other current liabilities. The profitability rate of these industries which happen to be the main Bulgarian export earners is a striking contrast to their low liquidity.

The state of the financial system which is supposed to facilitate payment collection and provide short-term funding to cover working capital needs becomes of crucial significance for the financial health of those enterprises. It can be claimed that negative working capital ratios result from external factors, i.e. factors not stemming directly from the activity of firms in their respective industry. Interest expenditures are mainly determined by macroeconomic policies. Exporters suffer mostly from the interest differential that is maintained between assets in domestic and foreign currency. Exporters pay their liabilities in Leva, while a significant part of their sales revenues come in foreign currency. The interest differential then implicitly increases interest rates on Leva credits.

The interest differential has the positive effect of attracting short-term foreign capital and maintaining a stable exchange rate. However, it has a negative effect as well - an increased dependence of the banking system on short-term capital and vulnerability to a massive and rapid capital outflow. In the longer run the interest differential leads to lower exports and deterioration in the current account balance. Achieving export-led growth is impossible with an interest differential kept for a long period of time.

The levels of current liquidity and working capital indicate both the ability of producers to meet current liabilities and the flexibility in adjusting to changes in the markets for final goods and production factors. Low current liquidity ratios and low working capital levels indicate that an increase in the price of electricity would restrict producers' potential to adjust to market changes.

Conclusion

Low electricity prices are undoubtedly a form of subsidizing certain industries. Yet the level of these subsidies can hardly be directly measured because of the opposite effects of cheap energy and the specific monetary policy. Part of the subsidies is eaten up by the interest differential. The proper analysis of implicit subsidies should include the impact of interest rates, the exchange rate and other macroeconomic policy instruments.

Maintaining an interest rate differential results in trade balance deterioration in the long run. Bulgaria has an open economy and the degree of its openness is comparable to that of Germany, Japan, South Korea and other major exporters. The negative effect of the interest rate differential is much more obvious and significant in the case of open economies. The greater the degree of openness of the national economy, the faster the negative effect of interest rate differentials is revealed.

Serious economic reform efforts must lead to the convergence of domestic and international prices. Price equalization is reinforced by sensible monetary and fiscal policies and is conducive to export specialization based on the real measure of market competitiveness. In Bulgaria these advantages could not be revealed due to the conflicting phenomena of implicit subsidies via the mechanism of below-market electricity prices and the interest rate differential that is the outcome of BNB policies maintained in 1995 and early 1996. The absence of well-defined market-based criteria for resource allocation for Government funds as well as for commercial bank lending policies is due to the inability to formulate a clear understanding of structural change and comparative advantage in Bulgarian economic policies. Credits extended by the State Fund for Reconstruction and Development in 1995 exceeded 6-fold those in 1994. The fund had \$US122.9 m. worth of credits outstanding at the end of 1995. Credits were extended on the basis of the rather vague concepts of "industries of structural importance" and "export promotion". They are freely interpreted to include interest-free loans to agriculture, the financing of defense industry enterprises and to cover the losses of national utilities.

Uncertainty and financial instability have come to define the real measure of competitiveness to a much larger degree than productivity and market share. Revealed comparative advantages is a misguided criterion for export promotion and investment decision unless budget constraints of all non-financial enterprises are hardened. International metals trade is an example of a strongly competitive market. Thus far, big Bulgarian producers such as the Kremikovtzi steel mill have benefited from the implicit subsidy provided by cheap electricity and cheap credits from the State Fund for Reconstruction and Development. But any sudden change, e.g. the power cut-off in late 1995 or any decline in international prices caused by a slowdown in demand may become a prelude to permanent market share losses if these implicit subsidies are eliminated.

Metals and chemicals are commodities whose simple measure of competitiveness, e.g. quality of the product do not really affect comparative advantage. Their exporters either benefit from economies of scale, superior organization of production or access to cheap inputs. In industries such as these

cost of sales have well-defined components: direct labor plays a minimal role, whereas direct material and manufacturing overhead have the most significant impact on their overall level. Companies in financial distress such as the Bulgarian metal and chemical exporters would not survive without specific policies to manipulate energy prices, transportation costs and other domestically controlled cost components. And yet, at the final count the real measure of national competitiveness cannot be maintained without sacrificing important macroeconomic policy goals and exacerbating risk and uncertainty in the Bulgarian economy.