

by me: Book Review

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Reconstruction or Destruction? Science and Technology at Stake in Transition Economies, Claes Brundenius, Bo Göransson and Prasada Reddy, Universities Press (India) Limited, Hyderabad. 1999. ISBN 81 7371 200 X. 260 pp. Pbk. Price: Rs.550.

This book is a compilation of revised and edited contributions by a dozen participants in a workshop at the Research Policy Institute, Lund University, Sweden, 6-8 June, 1996, entitled *Economic Restructuring with Equity and Competitiveness — Implications for Science and Technology Policies*. The countries in focus at the workshop were nine "former Centrally Planned Economies (CPEs): Three former Soviet Republics (Russia, Belarus and Ukraine); three Eastern European countries (the Czech Republic, Hungary and Slovenia) and three 'Third World Economies' (China, Cuba and Vietnam)". The contributors are from these countries in focus (except China) and from Scandinavia. Their contributions deal with the "transition [in these countries] from plan to market...with an emphasis on implications for Science and Technology policies."

As the Preface notes: "This transition has been, and in most countries still is, quite painful. The restructuring of the economies, as a result of globalisation, the demise of the Soviet Union and their abandoning the 'command' economy strategy, *has not yielded the results that many had expected in the West. Even in a growth economy like China, the transition to market economy has implied serious social problems and widening income gaps.*" And, as shown in the introductory chapter, *the Russian depression is unprecedented in history, both with regard to length and depth.* (Italicisation by reviewer)

The 'Introduction' by Claes Brundenius of the Centre for Development Research, Denmark, gets to the nub of the 'problematique' of the Soviet model. "In Soviet strategic economic thinking there was an obsession with fulfilment of quantitative goals (with little or no consideration of quality) through capital extension, or "widening", rather than increasing capital intensity, "deepening"...Growth rates were impressive during the first five-year plans and in the immediate reconstruction after the war. But technology and organization of work were based on mass-scale Ford assembly line principles and with technology to a large extent imported, or imitated, from the West, and the model was then exported to Eastern Europe and many developing countries. [Including India — reviewer]

Lenin had, like the czars, been a great admirer of Western technological advances and he firmly believed that the combination of Western technology and the communist principles of planning and social relations would provide an invincible formula for eternal Soviet superiority.

Large-scale production with enormous concentration of power in huge state monopolies and trusts, *modelled after the US monopoly capitalism of the 1920s,* (Italicisation by reviewer) was the ideal for organization of the state-owned production units in the USSR.

The main problem with this strategy was that it was based on a static view of technological change (as well as of capitalist development). The Soviet model of accumulation was...based on energy- and resource-intensive technologies. *It is true that this was also the case in the West* (Italicisation by reviewer) but in the Soviet centrally planned economy...it was more problematic since there were no checks on imbalances in the system — such as waste and depletion of resources, pollution and other environmental costs. So when the bill came to the West in 1973 — in the form of quadrupled energy prices — for decades of ruthless exploitation [by the West] of energy and raw material resources, it [the bill] gave clear signals for the system to change and to initiate 'the painful transition to a new techno-economic paradigm'.

In contrast, no such signals were perceived in the Soviet system. For decades it had been assumed that crises, such as recessions and depressions, had been phenomena typical of capitalism. "

In other words, the Soviet industrial-economic collapse was caused by uncorrected systemic ossification, not by a wrong post-Russian Revolution (1917) choice of development model, which US-inspired model (what irony!) sought to emulate, in much shorter development-time, the consumption patterns and living styles of the West. The systemic ossification of the 'command economy', although recognised quite early-on in its coming by the Soviet S&T community, remained uncorrected because the Soviet 'command polity' was regressive (indeed cruelly repressive in the stalinist era) and paralysed by Marxist-Leninist dogma, continuing loyalty to which was engendered by its successful projection as having won for the Soviets release from tsarist despotism. That dogma had, ironically, been itself rendered obsolete by rapid Fordist industrial development enabled by the exertions of scientists and technologists of the Soviet Union. This form of development had been 'used-up', so to speak, in the post-War (re) construction of the Soviet Union accomplished at great human cost in the face of an implacably hostile West. So, "...when *perestroika* and *glasnost* came with Gorbachev in 1986, it was simply too late to modify a system that had long been obsolete."

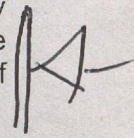
Economists pontificate on, and prescribe policies for, the one crucial factor of production (Science & Technology) they self-confessedly do not understand. Professional economists both from within and outside the governments they advise have a lot to answer for the collective miseries of whole nations and their peoples. The Nobel Prize in economics is (justifiably) something of a joke amongst natural scientists. Actually, it is a cruel joke; several of the winners have propounded theories which, when put into practice, ostensibly to improve the lot of peoples, have been the major cause of their worsening poverty. Thus the application of the counter-dogmas of the 'Washington Consensus' to the post-Soviet industrial economies of the Centrally Planned Economies (CPEs) has resulted in an S&T tragedy: "With the transition to market economy, that in many CPEs was unnecessarily sudden and drastic ('shock therapy'), thousands of S&T personnel have abandoned (or being forced to abandon) their professions as researchers. In some cases this has no doubt been a painful but necessary downsizing process. In many cases, however, the reason has not been the need for downsizing as such, but purely economic. The state does not have the financial resources for the simple reason that it does not prioritise R&D, which is likely to be a fatal mistake. This means that in many of these countries, primarily in the former Soviet Union, we are witnessing great potential going down the drain and it will take at least a generation to build up such a highly qualified scientific base again."

Such systemic destruction of the scientific potential of the CPEs cannot really be explained except as the Western follow-through to the defeat of the Soviet Union in the Cold War. What the contributors to this volume have not addressed (gingerly side-stepped?) is the fact that the S&T capabilities of the former Soviet Union and its 'dependent territories' of the CPEs have been systematically and deliberately brought down and destroyed as the final denouement of the Cold War, so that these capabilities may never again contribute to the military strength of these countries, except as supportive adjuncts to, and under the watchful control of, an eastwardly expanded NATO.

The exception is, of course, China. Too big, too talented, too experienced, too tightly controlled (internally), absolutely single-minded in its pursuit of economic and military power, the biggest non-member of WTO, a veto-wielding permanent member of the United Nations Security Council, a Nuclear Weapons State with a nuclear reach that extends to the continental United States, China is clearly a case apart. I am surprised the organisers of the Lund Workshop did not realise that China is so out-of-line on every parameter with the other cases considered as to suggest a mistake in its inclusion as a case; a mistake compounded by the absence of a contribution from a mainland Chinese.

Since only some of the contributions deal with the agricultural or medical components of the S&T systems in the CPE countries considered, the title of this compilation should have been "*Industrial Science and Technology at Stake...*" But shed a tear for this:

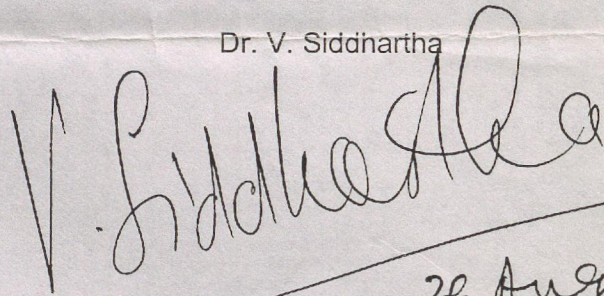
"In the late 1960s and the 1970s, Hungarian agriculture, due to its innovative development, was among the leading European countries in the productivity indexes of

its 42 products. The paradigm of technological development in Hungarian agriculture, with its innovative entrepreneurial values and system approach, at that time was basically different from that of the industry. It was limited, but entrepreneurship in the management of agricultural cooperatives and state farms was allowed, while the industrial management was deprived of it. The scarcity of resources, the industrial management blocking investment in agricultural sector, and the crisis of the whole economy stopped and even retarded the innovative development of agriculture in the second part of the 1980s. The loss of its Eastern market, and the excessively inappropriate governmental agricultural policy at the beginning of the 1990s, finally knocked out this once prospering sector of economy. After 1992, one third or half of the agricultural organizations were forced to use horses and manual power instead of machines....." 

At Rs.550, this paperback is at the margin of the reach of individual S&T policy-wallahs but worth the buy if your calling requires you to counter in real-time smart-alec free-marketeers peddling the 'Washington Consensus', and/or smarter-alec economists of Marxist-Leninist persuasion.

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