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*Proposed outline
to be discussed with
the group, 12/12/89*(I) UNIDO paper to SELA Conference

I submit hereby some suggestions for further development of the draft outline for discussion for UNIDO paper to be submitted to the Regional Conference on New Industrialization Policies for the Latin American region to be organized by SELA in August/September 1990.

They include some preliminary notes geared to assess the overall position of the economies of the region as a result of developments that have taken place during the decade that is drawing to a close (see Annex I). They may serve as an input for the introductory chapter, where some quantitative information should be included.

The paper could proceed then with the treatment of some global issues regarding trends in international trade, international investment and technology transfer that bear upon needs towards industrial restructuring in the Latin American region.

Under international trade, the following issues may be covered: (i) trends towards formation of regional blocks; (ii) growth of interindustry trade; (iii) impact of EEC 1992, US trade deficit, selective opening of the Japanese market and opening of the Eastern European frontier; (iv) implications of the eventual settlement of the debt issue on trade.

Within the section on international investment and technology transfers, the paper may deal with: (i) strategic partnering and globalization; (ii) trends in direct foreign investment; (iii) new issues regarding access to technology ("privatization" of science, inter-company strategic alliances, skill obsolescence).

Next, drawing on the experience of the region and that of the industrializing economies of South East Asia, the nature and scope of some strategic issues for the Latin American economies may be discussed, including: (i) enhancing competitiveness of resource-based and engineering industries; (ii) international subcontracting and sourcing; and (iii) forms of entry into emerging science-intensive industries.

Then the paper may tackle some policy issues ("areas of attention for Latin America" as called in the draft outline), including: (i) the macroeconomic environment; (ii) financing of industrial restructuring; (iii) industrial deregulation and the rôle of the State; (iv) strengthening the domestic technology system; (v) industrial technology upgrading (productivity enhancement, facilitation of domestic technology diffusion, skill formation, training and retraining schemes, supply of R and D and technical services); (vi) development of domestic supply networks; (vii) promotion of organizational ^{and} management innovations at the enterprise and inter-organizational levels; (viii) institutional innovations to support competitiveness enhancement (financing of innovation regimes, linkages with the technology system, cooperation in R and D); (ix) regional and sub-regional cooperation.

The paper may then proceed to discuss technical assistance issues, review UNIDO's experience in this connection and, finally, sketch a UNIDO cooperative programme with the region as contemplated in the draft outline.

F. Sercovich
December 1989

Some preliminary notes for a UNIDO paper on New
Industrial Policies for the Latin American Region

1. Rapidly changing world market conditions pose the need for continuous reassessment of policy options for the industrial development of the Latin American countries. The shift in policy paradigm from inward-looking to export-oriented industrialization that took progressively shape across the region over the last decade or so has unfortunately failed to clear serious questions such as the feasibility of "soft landing" outcomes to the foreign indebtedness problem and how to gain or recover international competitiveness even in the assumption of the effective implementation of debt relief schemes.

2. Simple-minded approaches in this respect, when translated into policy prescriptions, are inevitably bound to fail. For instance, successful examples of adaptation to the dynamics of the world economy, such as that of the Republic of Korea, show that export-orientation is not necessarily to be identified with trade liberalization. Heavy, sustained, and often subsidized investment in building up export capabilities has been an usual feature of successful export-oriented strategies (Bhagwati, Westphal, Amsdean, Sachs). Here a caveat is necessary, though. What may make sense as a rationale for individual countries may not work for groups of countries pursuing similar strategies ~~as~~ as a whole.

3. Before considering the subtleties and trade-offs involved in fine-tuning effective policies towards industrial restructuring, careful attention should be paid to the rapidly changing international environment regarding technology, investment and trade.

4. In capital-starving Latin American countries access to genuine sources of financing has become a major bottleneck (a counterpart to the domestic technology diffusion bottleneck resulting from a halt in industrial growth on the "real" side of the economy).

Even under the most favorable international conditions imaginable, export-oriented industrial strategies require investment in technology, plant and equipment and human capital for which structural adjustment programmes sometimes leave little or no scope. To this the impact of negative real resource transfers, trends to increasingly managed trade and hard choices regarding entry into intra-industry trade schemes must be added. ✓

5. Assessing the challenges and opportunities posed by these shifting conditions is not at all a trivial exercise. It requires cautious interpretation of trends that are seldom clear-cut as to their impact, whilst the stakes at play and the risks involved in reacting to them are far from negligible.
6. For instance, it is far from obvious whether trends regarding entry barriers and threshold factors are actually making entry by the countries of the region to frontier technologies easier or ever harder. By the same token, there are still arguments as to whether frontier technologies can be taken advantage of to facilitate "short-cuts" in industrialization or if, rather, they make it necessary to engage in lengthy and costly adaptation processes of uncertain prognosis. Whether and how instruments such as strategic partnering can be put to effective use for the benefit of late-comers is another open question (OECD, Soete).
7. Are the Latin American countries in a position to borrow frontier technologies from advanced industrial countries, thus economising in research and development costs whilst, at the same time, providing for the mobilization of domestic innovative skills so as to upgrade existing industries and promote new ones? What are the implications that follow from this approach in terms of the need for the setting up and consolidation of domestic scientific and technological linkages and the channels and mechanisms for access to the relevant technologies?
8. This type of questions must be answered in a context of rapid technological change, acute competitive rivalry and increasingly managed trade that make the speed of acquisition of industrial experience and technological learning as well as the flexibility

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of its eventual applications ever more stringent constraints.

9. Very low or negative rates of investment, stagnating or declining real incomes and the pervasive impact of acute balance of payments problems are, however, making the economic rationale for satisfying such requirements hard to meet.
10. The 80s have witnessed a shift from a pattern of technological change driven by demand expansion to another driven by supply considerations and efficiency gains (although there is a renewed scope for satisfying specific local market needs and design-to-order demands). The spread of generic technologies, ie., those that have a pervasive impact across a wide variety of industries, like microelectronics-based technologies and biotechnologies, fuelled by radical, largely science-based and increasingly converging breakthroughs, has changed the conditions for effective learning processes in the region.
11. Major adaptations in policy emphases are in order so as to accommodate these and other changes in the prevailing technological and economic environment. In the search for such an adaptation to the new international scenario, the available battery of policy prescriptions and instruments is in need of close critical scrutiny.
12. In the growth scenario before the debt crisis, technological change in the most advanced countries of the region was characterized, among others, by the following features: (i) across-the-board, spontaneous learning processes, linked to repetitive experiences in the setting up and operation of new capacity; (ii) progressive development of domestic supply networks encouraged by legislation to that effect; (iii) steady and cumulative development of project, process and product engineering skills; and, (iv) learning in design engineering and capital good fabrication taking place often at accelerated rates thanks to increasing domestic project component.
13. Before this trends came to a halt *and, in some cases got reversed* during the 80s, as much in first-tier as in second-tier Latin American countries, the policy paradigm borne and developed under these conditions tended to be supported by emphases on: (i) new investment-related learning efforts; (ii) domestic

factor use ~~maximization~~⁺; (iii) taking advantage of spill-over learning effects across the board; (iv) gradually enhancing local science/industry linkages as a complement to foreign technology imports; and (v) maximizing assimilation of specific production and maintenance routines supported by localized innovative efforts in the context of largely invariant organizational patterns, management concepts and labour practices.

14. Strong discontinuities in the growth process, in the pattern of technical change and in the international economic environment have detracted effectiveness to some of these policy orientations, irrespective of how much sense they might have made hitherto.
15. Indeed, their bias, in favour of largely debottlenecking-oriented efforts aimed at stretching the use of available resources to the limit could not be sustained under the new environment. The link between innovative decisions and investment decisions became increasingly loose: it began to be perceived that the former could no longer rely much on the latter whilst the need arose to associate them to major organizational and behavioral discontinuities both within and among industrial enterprises. The need for a more endogenously driven technological effort with a more exogenously oriented market outlook made itself progressively felt.
16. This, however, as well as a somewhat superficial review of the recent experience of industrial countries, gave raise to the emergence of some science-push advocacies, precisely at a time when most of the industrial fabric of society is in acute need for modernization and upgrading. These are certainly not the poles of a genuine dilemma (ie., "upstream" science versus "downstream" industrial activities). What is at stake and in need of debate is the nature of a coherent set of policy instruments and guidelines geared to technological upgrading and enhanced competitiveness under the severe constraints prevailing and in tune with the fostering of emerging national innovation systems aimed at articulating the effective mobilization of the broad range of skills and capabilities required to that effect.

17. Without recovering reasonable levels of industrial investment it is rather doubtful whether adequate domestic technology diffusion rates could be resumed. But such a recovery of industrial investment levels can hardly be expected without access to genuine sources of financing which, for the most part, will have to result from technological upgrading and enhanced competitiveness. Herein lies one of the most difficult dilemmas currently posed to policy-makers since it requires a most skillfull design and management of macroeconomic and industrial policies.

18. Genuine gains in competitiveness in the region have to go hand ⁱⁿ hand with improving real incomes. Increasing export supplies based on depressed domestic demand through recurrent devaluations and falling real income levels would only reiterate past failures.

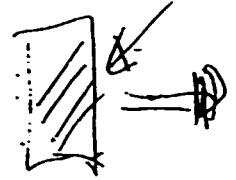
19. A sound and stable macroeconomic environment is absolutely critical for creating conditions conducive to gains in competitiveness, but these cannot come about just by focusing on macroeconomic fine-tuning of relative prices and remuneration rates whilst neglecting the strengthening and mobilization of domestic scientific and technological skills and capabilities and articulating them with efforts aimed at industrial technology upgrading.

Date: 28 November 1981

Newspaper: EL PAIS

Page: 73

Annex II



España e Italia advierten a Argentina que canalizarán la mayor parte de sus ayudas para el desarrollo hacia el Este europeo

C.S., Madrid. Los Gobiernos de Italia y España transmitieron en forma oficial al Ejecutivo argentino un mensaje, a través de un contacto privado del presidente Carlos Raúl Menem, en el cual explican que los acuerdos económicos firmados bajo el Gobierno del ex presidente Raúl Alfonsín serán respetados, aunque advirtieron que, "de ahora en adelante, la mayor parte de los recursos para el desarrollo serán canalizados hacia la Europa del Este". En el caso de España la advertencia fue hecha al representante por

fuentes del PSOE próximas a la política de Gobierno.

Un funcionario del Ministerio de Asuntos Exteriores señaló ayer, al respecto que "ningún compromiso futuro con los países del Este europeo pueden ir en detrimento de compromisos adquiridos con las naciones Iberoamericanas". Los compromisos adquiridos hasta la fecha están recogidos en los acuerdos económicos con diversas naciones, más los adquiridos a través de los países de África, Caribe y Pacífico (ACP), entre los cuales figurarán Haití y República Domi-

nicana por presión de Francia y España, además de 500 millones de dólares de ayuda en áreas de educación y sanidad con motivo del quinto centenario del descubrimiento de América.

Hace dos meses, Italia hizo saber a los organismos multilaterales de ayuda que había congelado 30.000 millones de dólares en concepto de asistencia al mundo en desarrollo a la espera de la evolución de los acontecimientos de los países socialistas.

La notificación española e italiana al Gobierno argentino es la primera indicación de indole ofi-

cial sobre este cambio de estrategia, pese a que Asuntos Exteriores preparó una propuesta oficial española para llevar a la cumbre de la Comunidad Europea, ante la cual España, Francia e Irlanda

presentarán un proyecto de financiación del Este europeo.

El problema fundamental que enfrentan afrontan España y Francia es liberar recursos comprometidos en otras regiones, puesto que sin el alivio del crédito comercial es imposible entrar en los mercados del Este a vender tecnología, sistemas o productos manufacturados.

(II) National Workshop on Industrial Restructuring in Costa Rica

Besides contributing to assess policy issues and improve co-ordination in the design and execution of industrial policies amongst the different government agencies concerned, this workshop should be expected to facilitate the identification and discussion of specific industrial restructuring-related requirements of technical assistance where UNIDO may provide essential inputs both at the sectoral / sub-sectoral and cross-sectoral levels.

As a result of what I have learnt from discussions with UNIDO staff and with Mr. Jose Manuel Salazar, Executive Director of CODESA, the following would be some of the areas where such critical inputs may be provided so as to augment the overall efficiency of the industrial restructuring programme currently at work:

- i. Evaluation of the financial and technical standing (and actions thereof) of wholly or partially state-owned enterprises in need of rehabilitation;
- ii. Interfase between financial and technical support in the implementation of rehabilitation programmes and, more broadly, in efforts geared to enhance the competitiveness of industrial enterprises, particularly in priority sectors. This both, at the feasibility study stage and at that of actual execution of technical upgrading programmes.

In addition, the workshop will provide the opportunity to assess the results of technical assistance programmes that are already under way and identify possible follow-ups (current programmes refer to small scale industry, leather technology, agro-industrial development, and development of operative policy instruments). Similar evaluation should also take place in respect of the output stemming from UNIDO-supported work to be carried out before April (on the Costa Rican industrial restructuring programme, study on its financial aspects and subsectoral studies referred to textiles, food/ food-processing, pharmaceuticals and footwear).

In respect of the footwear sector, advantage may be taken of the approaching likely availability of a Norwegian expert, Mr. Otto Birkhavg, whose stay in Argentina on behalf of UNIDO is coming to an end. In case the hiring of an expert to make a presentation on the industrialization experience of East Asian countries were decided, the names of Alice Amsdean (MIT) or Larry Westphal (University of Pennsylvania) would be worth considering. Jeffrey D. Sachs (Harvard University) or Paul Krugman (MIT) could make first rate presentations on the situation and prospects of the international public and private finance and capital markets as viewed from a Latin American country standpoint.

As a final reflexion, I would submit that, although the workshop will be primarily addressed at Costa Rica's specific

experience, it would be of useful to make explicit during its deliberations how the settlement of the foreign debt issue is affecting the macroeconomic and financial conditions under which the industrial restructuring programme is being carried out and what lessons can be inferred from this experience for the benefit of other countries of the region.

(III) Technical Cooperation Projects with Uruguay

After consultations with Mr. Luis A. Soto-Krebs, Senior Industrial Development Field Adviser for Argentina and Uruguay, the following observations can be made:

(i) It is unlikely that progress could be made regarding the two projects already prepared by the Regional and Country Studies Branch (the Textile Policy Project and a study of the industrial sector aimed at identifying broad areas and projects for technical cooperation) and whatever new initiatives may emerge, before the newly elected administration takes office next March.

(ii) It will still be necessary to secure financial contributions from UNDP and/or other donor agencies.

(IV) Round Table Meeting on Financial Aspects of Industrial Restructuring in Mexico

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It may be advisable to include in the agenda for this meeting one theme that appears to have been neglected: ie., policies and instruments for the financing of innovation. This has a clear international dimension (the experience of the Republic of Korea, for example, is in this respect certainly rich, as well as that of Brazil and some other Latin American countries and, of course, that of various advanced industrial countries, particularly the US and England). Whilst venture capital financing of innovation has reached in the US a very advanced stage, Europe is still in the process of catching up in this respect. However, there are in Europe, as well as in Japan, quite sophisticated schemes geared, for instance, to facilitate the domestic diffusion of advanced technologies that would be worth reviewing in a meeting of this nature. Finally, Mexico's own experience is quite advanced by Latin American standards, through the activities of FONEI. There are a number of issues here that may be paid some attention, such as evaluation of innovation projects, sources and terms of lending; funds, shared-risk schemes, management of innovation; project financing and the special case of technology intensive and small and medium sized innovative firms.