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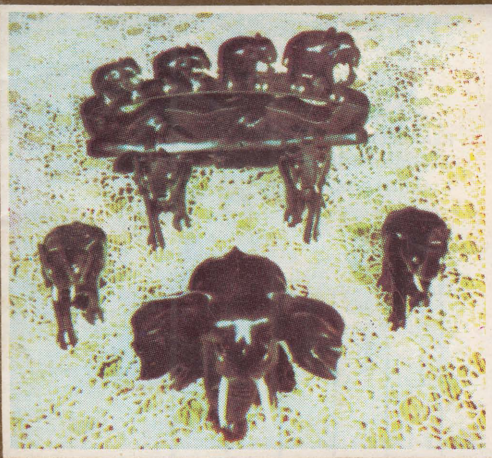
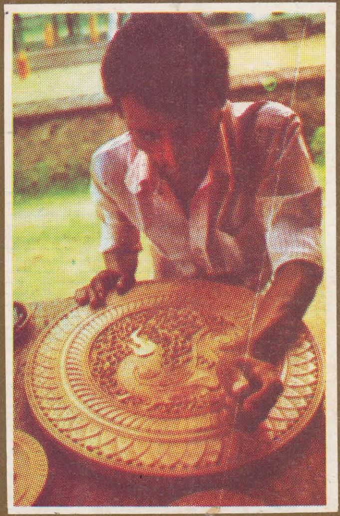
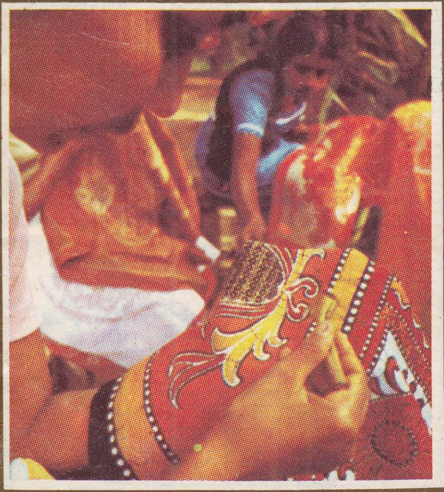
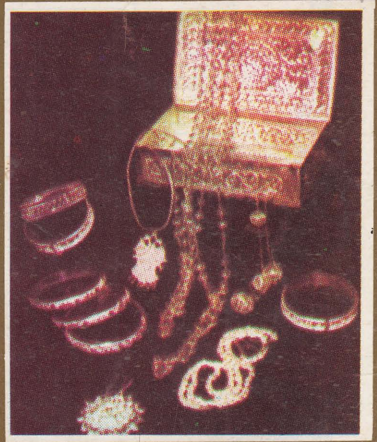


ECONOMIC REVIEW

October 1987



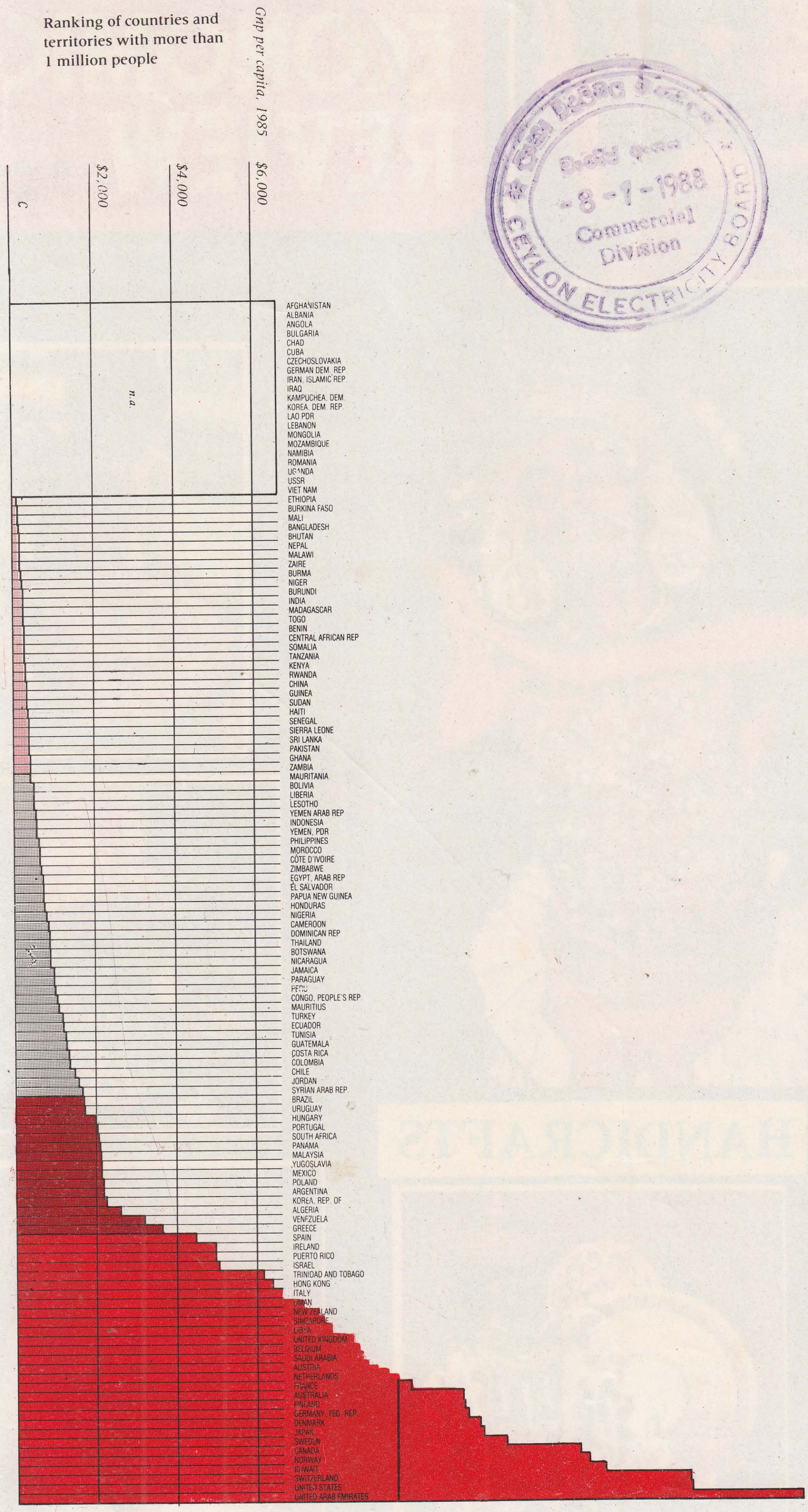




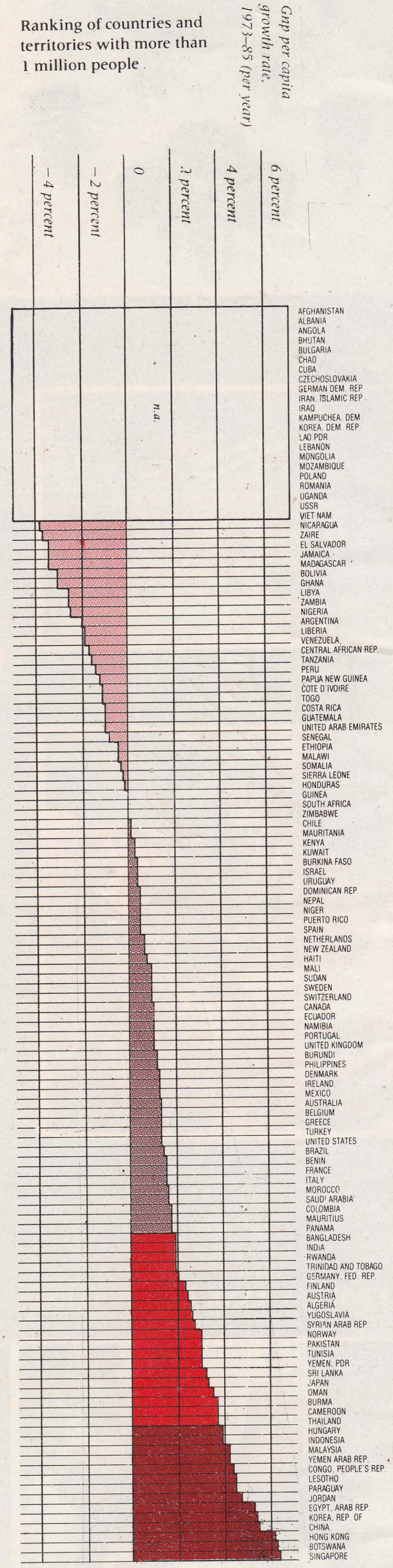
HANDICRAFTS

A PEOPLE'S BANK PUBLICATION

Ranking of countries and territories with more than 1 million people



Ranking of countries and territories with more than 1 million people



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FEATURES

SPECIAL REPORT

COLUMNS

NEXT ISSUE

- The Budget 1988 - A discussion of the rationale behind the budget, its revenue implications and impact on monetary policy and expenditure trends and specific economic sectors
- Tourism - The Sri Lanka situation and global trends
- Share holders, dealers and legislation

COVER

Sepalika Fernando

THE ECONOMIC REVIEW is intended to promote knowledge of and interest in the economy and economic development process by a many sided presentation of views & reportage,facts and debate.

THE ECONOMIC REVIEW is a community service project of the People's Bank. Its contents, however, are the result of editorial considerations only and do not necessarily reflect Bank policies or the official viewpoint. Signed feature articles also are the personal views of the authors and do not represent the institutions to which they are attached. Similar contributions as well as comments and viewpoints are welcome.

THE ECONOMIC REVIEW is published monthly and is available both on subscription and on direct sale.

DIARY OF EVENTS

August

1 The Colombo Consumers Cost of Living Index for August 1987 was 658.1, the Department of Census and Statistics announced. In July 1987 it was 653.3 while in August 1986 it was 611.0.

The EEC is to finance Intergrated Rural Development in system B of the Right Bank of the Mahaweli Area, according to an official EEC announcement. The financing amount of 25 mn ECU (US$ 28.5 mn) is a grant under the EEC's Programme of financial and technical assistance to non-associated developing countries.

4 The EEC decided to donate food aid to India and Bangladesh. India will receive 12,000 tonnes of skimmed milk powder and 4,000 tonnes of butter oil and Bangladesh will receive 1 50,000 tonnes of cereals and 2,000 tonnes of edible oil under the 1987 programme.

6 Iran and China agreed in Teheran to increase their annual trade to $ 500 million from $ 300 million, the national Iranian news agency IRNA reported.

Total oil output of the Organization of Petroleum Exporting Countries (OPEC) in July 1987 exceeded by 1.6 million barrels a day, the 16.6 million barrels a day production ceiling set for the period, the Paris-based International Energy Agency (IEA) announced.

12 The Government approved a proposal by the Minister of Agricultural Development and Research, that as a pilot Project 500 agro-wells be constructed and a 50 percent subsidy be granted on the cost of the agro-wells, water pumps and accessories. The project would be implemented in the districts of Anuradhapura, Mannar, Mullathivu, Vavuniya, Killinochchi, Kurunegala, Hambantota and Monaragala.

Government approved a proposal by the Minister of Finance to sign an amendment to the PL 480 title 1 Assistance to Sri Lanka, increasing the loan amount grant by the government of the United States of America to US$ 7 million for the United States fiscal year of 1987. This increase has been due to the prevailing drought in Sri Lanka and is intended to off-set the depletion of cereal stock and the loss of agricultural production; and also help the government's drought relief efforts.

Three exchanges of letters providing for a yen credit package and two grants were signed at the Ministry of Foreign Affairs in the presence of Tadashi Kuranari, the Foreign Minister of Japan and the Foreign Minister of Sri Lanka. In terms of the exchange of notes Japan would be providing loan funds in sum of yen 19,375 million (approx. Rs. 3726 million) for the implementation of the Samanalawewa Hydro Electric Power Project Phase 11 (Yen 13,920 million or Rs.2,677 million), the Port of Colombo Expansion Project Phase 111 (Yen 1,955 million or Rs.376 million) and for the purchase of commodities to sustain exsisting investments (yen 3,500 or Rs.673 million).

20 A gift shipment of Canadian wheat arrived in the Trincomalee harbour. This consignment consisting of 53,900 metric tons of Canadian Western red winter wheat is valued at US$ 8 million (approx. Rs.176 mn). This food aid is being provided by the Canadian International Development Agency (CIDA) as part of Canada's development assistance to Sri Lanka. Funds realised from the sale of this wheat will be deposited in a counterpart fund to be used for financing local costs of development projects and drought relief assistance, according to a High Commission release.

Thai Gueda traders have remitted about Rs.14 million under the recent bilateral agreement, between Sri Lanka and Thailand, on the gueda trade, according to a spokesman for the Ministry of Finance. This money will be used by the Thai traders to buy guedas at the gueda trading floor of the State Gem Corporation. To induce the local traders to bring their gueda stocks to the trading floor the Finance Ministery has offered them tax exemptions on the profits of their sales.

21 The Government of Canada and Sri Lanka signed two agreements at the Ministry of Finance and Planning providing for a grant of Canadian $ 8.35 million (approx. Rs.187 million) for the implementation of a Mahaweli TechnicalAssistanceProject and an Agricultural Extension Training Centre Project. A Canadian grant for the Mahaweli Technical Assistance Project amounting to Canadian $ 4.95 million will assist the Mahaweli Authority to acquire the ability to utilise its water and land resources efficiently and operate and maintain its physical facilities. The project which is planned to be carried out over a period of 4 years will provide advisory services, formal training local consultancies and requisite equipment to support the training and advisory services functions. The second grant of Canadian $ 3.4 million will be utilised for the establishment of the Agricultural Extension Service Centre.

September

1 The Colombo Consumers Cost of Living Index for September 1987 was 655.6 the Department of Census and Statistics announced. In August 1987 it was 658.1 while in September 1986 it was 611.0.

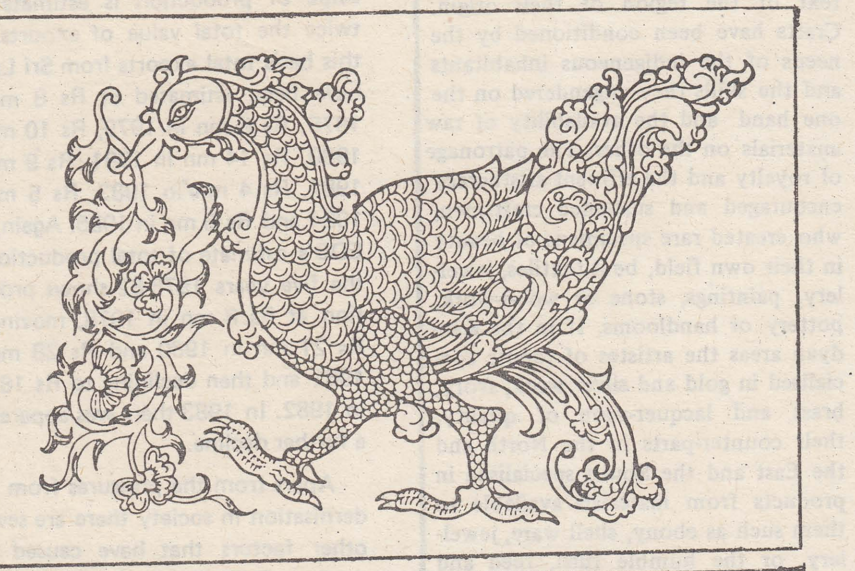
5 An agreement was signed in Colombo between the United States Agency for International Development (USAID) Mission to Sri Lanka and Ministery of Finance and Planning for a grant from the United States Government for US$ 655,000 (approximately Rs.19,280,000) as immediate emergency relief assistance to be used to resettle 10,500 persons in the Seruwila area between Trincomalee and Batticaloa districts.

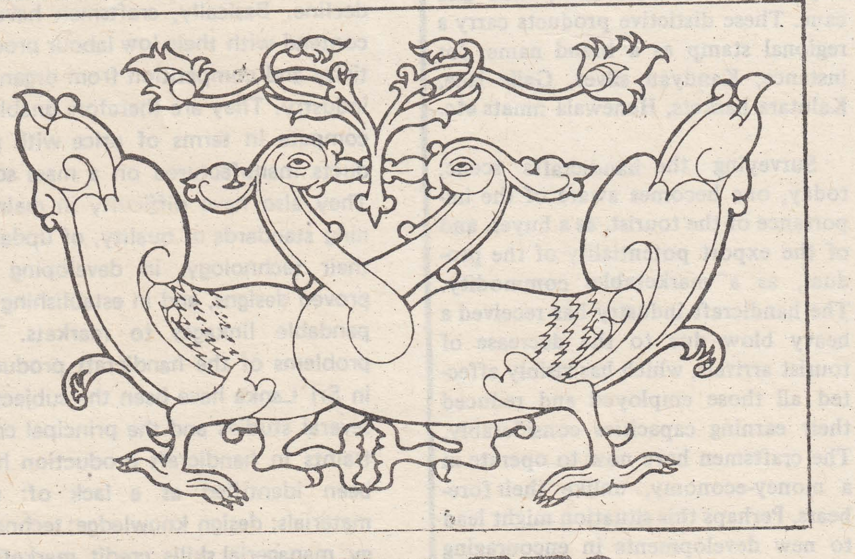
17 The Government approved in principle a proposal by Minister of Food and Agriculture to include as a pilot project the manufacture of processed rice products; and to enter in to a technical assistance agreement with the Chinese Government for machinery and expertise, and the training of local staff. The immediate objectives of this project are to manufacture popular processed rice products and make them available at competitive prices in the market.

Government approved proposals by the Minister of Finance and Planning to enter in to three agreements with the Overseas Economic Co-operation Fund (OECF) of Japan; firstly, for a loan not exceeding yen 3,500 million, (approximately Rs.673 million) and secondly for a loan of yen 1,955 million, (approximately Rs.376 million), and thirdly for a loan of yen 13,920 million,(approximately Rs.2,677 million).

"Art is of the first importance as the form of culture which most easily humanises man's toil and spiritualizes his ideas. So long as man is related to the world of phenomenal appearance, whether real or not, art of some kind is the necessary means of spititualising that relation. This applies as much to the ornament of utilitarian objects and to architecture, as to the purely substantive and ideal art which definitely aims at the revelation of the divine. All art is a very essential part of culture, an integral and inseparable part of any noble 'civilisation'. The ornament added lightly by the craftsman to an everyday utensil, is at once the humanisation of his labour, and the witness that man does not live by bread alone"(p.47)

(Excerpt from Ananda K.Coomaraswamy, Mediaeval Sinhalese Art. New York, 1956)





HANDICRAFTS

Handicraft production is considered a distinct expression of the artistic skills and creative urge of a country's craftsmen; and is an activity peculiar to its people, their way of life and environment, their history and their culture. Thus, although in earlier times many of the craftmen's products were mainly for their day to day needs, the production of a great variety of decorative and utility handicraft items in Sri Lanka is looked on as the culmination of a twenty-five century old heritage of artistic and creative endeavour. Also, when the present plight of the craftsmen is discussed the question is generally asked whether handicraft activity were not better suited to the less competitive environment of the feudal societies in which they developed and in which the services of these craftsmen to their community was indispensable. The modernisation that came in the 20th century, particularly over the last few decades, gave the craftsman little chance of survival. Those craftsmen who continued in the occupations they were born into have had to seek new direction and meaning in their artistic enterprise. As Prof. J.Tilakasiri states in the adjoining box "In recent times, with changes in the country's development rapidly gaining momentum, handicrafts have acquired a new meaning and efforts are being made to maximise their market potential". The changing demands of society has seen handicrafts and craftsmen showing sufficient flexibility to adapt to these new situationsby accepting the utility factor yet retaining the artistry of their craft. It is for this reason that in countries such as India, South Korea, Taiwan or Mexico and Yugoslavia the handicrafts sector has continued to retain an important position in their societies and economies.

We could consider the case of India, where its traditional handicrafts have shown remarkable progress in recent decades. A development consultant from Pune, India, Krishan K.Taimni illustrated this position recently in a paper. He showed that during the three decades from 1955 to 1985 the value of production of Indian handicrafts increased from US$ 8 mn to $ 3,000 mn; while export earnings climbed from $ 8 mn to $ 1,400 mn. Moreover, in 1955 the handifrafts sectors contribution to foreign exchange earnings was negligible, but in 1985 its share of India's total exports reached 18 percent - close to one fifth of India's total export earnings. It is instructive to place beside this the position of Sri Lanka's handicrafts sector. To quote the National Export Development Plan of 1983 - 87" the place of handicrafts in foreign trade has so far been minimal in commercial terms, but the potential they offer as a foreign exchange earner is very significant".

HANDICRAFTS OF SRI LANKA

The handicrafts of Sri Lanka, as of any other Asian country, occupy an important place in its history and reflects its cultural development. In recent times with the changes in the country's development rapdily gaining momentum, handicrafts have acquired a new meaning and efforts are being made to maximise their market potential. But, we generally take handicrafts for granted and tend to think of them as non-essential items and of value only to the connoisseur or the tourist.

What are 'handicrafts' really? They are, literally, 'handcrafted' objects of traditional value. Of course all handcrafted objects are not considered to be handicrafts as the 'artistic' quality of the product imparts to it the genuine craft/art character. In that sense handicrafts are objects of art embodying a tradition with a historical background and have to be distinguished from other crafts purely uitilitarian in purpose.

All cultures of the world take pride in their handicrafts as they seem to express the ethos of the people. It was during the mediaeval period that authentic Sinhala art, called Kandyan art (because it has been best preserved in the Kandyan areas), flourished in a social organisation where the artists and craftsmen were rigidly controlled by a system of caste guilds, service tenure and a traditional method of apprenticeship leading to specialisation. The painters, smiths (blacksmiths, silversmiths and goldsmiths), brassworkers, carvers of wood, stone and metal, drummers, trumpetors, singers, weavers and potters, comprising a classified range of artificers (according to their caste grades) had their appointed duties to perform for the king and received payment in kind, title and rank and land for their meritorious services. It was a closely knit community where the practitioners of the crafts, who were thoroughly schooled in the methods and techniques of their vocation, scrupulously adhered to the traditions handed down by thier ancestors. They belonged to an honourable profession and supplied all sections of the community with the goods and services required.

For a better understanding of the growth of the crafts individually it is necessary to examine them in the context of the region of their origin. Crafts have been conditioned by the needs of the indigeneous inhabitants and the skills they engendered on the one hand and the availability of raw materials on the other. The patronage of royalty and the affluent aristocracy encouraged and sustained craftsmen, who created rare specimens of beauty in their own field, be it textiles, jewellery, paintings, stone or wood-work, pottery or handlooms. If in the Kandyan areas the artistes of repute specialised in gold and silver work, ivory, brass and lacquer-ware of quality, their counter-parts in the North and the East and the South specialised in products from materials available to them such as ebony, shell ware, jewellery, or the humble rush, reed and cane. These distictive products carry a regional stamp as a brand name; for instance, Kandyan silver, Galle lace, Kalutara baskets, Henewala mats etc.

Surveying the handicrafts scene, today, one becomes aware of the importance of the tourist, as a buyer, and of the export potentiality of the product, as a marketable commodity. The handicraft industry has received a heavy blow due to the decrease of tourist arrivals, which has visibly affected all those employed and reduced their earning capacities considerably. The craftsmen have now to operate in a money-economy, unlike their forebears. Perhaps this situation might lead to new developments in encouraging them to concentrate on the domestic market and possibly exports, and produce improved quality. The products should be competitive and able to satisfy the demands of discriminating taste while also being aesthetically and economically acceptable.

Prof. J. Tilakasiri, Chairman, National Crafts Council.

Lack of statistics has been a major constraint in determining the capacity, production and exports of Sri Lanka's handicraft products. A very broad official estimate is that total value of exports from all sources would be twice the exports of Laksala and the Department of Small Industries; while total value of production is estimated at twice the total value of exports. On this basis total exports from Sri Lanka have been estimated at Rs 8 mn in 1978, Rs 6 mn in 1979, Rs 10 mn in 1980, Rs 14 mn in 1981, Rs 9 mn in 1982, Rs 4 mn in 1983, Rs 5 mn in 1984 and Rs 6 mn in 1985. Again, the EDB's estimate of total production in the five years 1978-82 shows production at Rs 8 mn in 1978, moving to Rs 21 mn in 1980 and Rs 28 mn in 1981 and then declining to Rs 18 mn in 1982. In 1983 there was apparently a further decline.

Apart from the pressures from modernisation in society there are several other factors that have caused this decline. Basically, craftsmen have to contend with their low labour productivity and competition from organised industry. They are therefore unable to compete in terms of price with products manufactured on a mass scale. They also have difficulty in maintaining standards of quality, of updating their technology, in developing improved designs, and in establishing dependable linkages to markets. The problems of the handicraft producers in Sri Lanka have been the subject of several studies and the principal constraints in handicraft production have been identified as a lack of: raw materials; design knowledge; technology; managerial skills, credit, marketing, and state support.

It is mainly for these reasons that the full potentialities of handicraft production and local and export markets have not been exploited. Also, some utalitarian crafts have already become extinct and others could

CRAFTSMEN'S SONGS

The songs, which have come down to us from time immemorial and are associated with the different crafts, are valuable both literally and sociologically.

Like the folk songs which arose from among the farmers and peasents engaged in their daily work, craftsmen's songs have the purpose of relieving the monotony of working long hours while also describing the nature of their occupations and the details of design, colour and arrangements they used.

Among such songs are the blacksmith's song sung at the workshop, often lamenting his fate. Similarly the more leisurely crafts such as mat-weavinghave their own collection of songs, sung during the course of work. The Kinnarayas'Song describes the process of weaving from the preparation of hemp *(niyanda)* to the introduction of the designs (both geometric and animal) and the finishing of the product. The *Pannan Katura* is yet another song composition on rush-weaving tracing the general emergence of the mat with designs, subjects and colour and ending with a prayer to the Gods to protect the makers of mats.

The *Padurumalaya,* a garland of mat songs and *Kaldgedimalaya* constitute two important folk song collections, the former setting out various motifs-more than 100-used in mat weaving and the latter, a combined art-craft piece extolling the function of pots in the pot-dance.

J.Tilakasiri

tollow. At this juncture policy has been directed towards a general revival and support for the handicrafts sector, with identification for development of specific crafts which have a high potential.

In production of handicrafts there exists a marked degree of regional specialisation based on the availability of raw materials as well as other factors such as royal patronage in the past and specific demand for these products. A convenient basis for classifying handicrafts in Sri Lanka is that of raw materials and those most in demand. In these categories could be placed brass and silverware, textile products, batik, lace and embroidery, wooden carvings and other wood products, cane, coconut shell ware, drums and musical instruments, reed, rush and bamboo ware, pulp products, pottery, clay and ceramic ware, coir products, tortise shell, horn and ivory ware and lacquer ware.

Definitions of handicrafts have varied among countries but basically certain characteristics such as their cottage or small scale level of production, the skill and craftsmanship in manufacture and their artistic and decorative character is common to all definitions. One such definition by the international trade authorities which premitted handicrafts concessional terms of entry into countries such as Australia emphasises their artistic or decorative character as follows:

"In addition to being "hand-made" and of "traditional" materials, goods must also have attained, by reason of being "hand-made", an artistic or decorative character. Such artistic or decorative character must be generally compatible with traditional "hand-made" products of the country in which the goods were made. Goods may be said to have attained an artistic or decorative character if they:

(a) have decorative designs thereon covering a substantial area of the visible surface and have been effected by

Handicrafts in the Economy

Handicrafts have been an important factor in the economy of the country in the past and although its role has now diminished in importance owing to decreasing demand consequent to the decrease in tourist arrivals, it has the potential to develop into an export-oriented industry contributing to the country's economic growth. Several Asian countries, notably, Korea, Taiwan, Malaysia and Indonesia, have embarked on programmes of upgrading handicrafts by a successful matching of the international standard in quality.

To bring our handicraft industry in line with those of other developing countries market surveys, especially overseas, export promotion schemes, labour intensive and innovative production of exportable items, are some of the aspects which have to be emphasised in new drives of promotion. At the moment enterprising entrepneurs are wary of venturing into this field owing to the limited possibilities of earning on investments. But if we go by the experience of certain established handicraft exporters, who have specialised in the production of special items, exercising rigid quality control and scrupulous financial management, innovative handicrafts can contribute substantially to the country's economic development and also absorb more manpower for employment.

It is necessary to state here that the Government has been aware of the problems facing the handicraft industry and that has been attempting to promote and stablise the crafts and conditions for craftmen through the operation of the National Crafts Council, the Handicrafts Board and the National Design Centre (set up under an Act of Parliament and of course the Department of Small Industries, the present body as it were these have benefitted the crafts and the craftsmen in many respects. Through workshops, seminars, exhibitions, training schemes and centres for sales and raw material banks attention is being focussed on developing quality products, innovative designs appealing in colour and form and in effecting an all-round improvement in the product. But still a massive effort is required to co-ordinate the efforts of all those involved in the industry towards the production of export quality products which can compete with the increasingly improving products of other Asian countries.

J.Tilakasiri

one or more of the following hand processes:

applique work	— knitting;
beating	— knotting;
branding	— moulding;
carving	— needlework;
chasing	— netting;
crocheting	— painting;
cutting	— plaiting;
drawing	— printing;
embossing	— punching;
embrodering	— quilting;
enamelling	— rubbing;
engraving	— tooling;
etching	— twisting;
filigreeing	— studding;
inlaying;	— weaving;

(b) are goods, including ornaments per se, that in themselves have attained an artistic character or aesthetic appeal or; (c) are goods not necessarily of a decorative character which are still used as utility articles in day to day living by indigenous peoples of certain developing countries......"

It may be observed that the term "handicrafts" is generally applied to those products being turned out on a cottage basis, which have a partial utility value and a high aesthetic worth and are the results of handskill. Handicraft industries that have evolved over the years may also be classed in two distinct types: the artistic, characterised by high value per unit (such as gems and jewellery, and silverware) and an affluent clienteie; and the utilitarian, concentrating on products of low unit value (such as reed and rush ware,pottery, toys, or woodwork) that find a market among lower income groups.

Greater importance, however, appears to have been placed on the ornamental aspects of cottage industrial

Craftsmen Families

There is no doubt that the master-craftmen and the groups of craftmen, who worked under them, in the mediaeval period, not only enjoyed royal patronage and received title and land, but deserved the recognition given them owing to their professional skill and expertise. They lived very contented lives from all accounts which have come down to us

There are still to be found the dependents of these craftsmen families, who are themselves competent exponents of the traditional arts, testifying to the honoured status such families enjoyed. The names of the honoured masters are unfortunately not recorded in the works they have left for posterity, but fortunately mentioned in records, called *vitti poth* (statement of information) and *sannas* (royal decree), treasured by the descendants or cited in old Archaeological Reports. The most renowned of master-craftsmen of the Kandyan period is, of course Arattana Devendra Mulacariya, foreman in charge of the construction of the Audience Hall, in Kandy; who also designed the Octagon *(Pattiruppuwa)* of the Dalada Maligawa. Among his descendants, still living, is Dantasingha Mulacario Patabendi (the two latter names indicating the titles conferred by royalty), but feeble; a master-craftsmen in gold, silver and brass, inspired by the work of his ancestors. They still own the paddy lands in parts of Kandy district-gifted to their families by kings.

So also have the family of Nilavala Muhandiram of Mangalagama (close to Kegalle), descended from a master-craftsmen, attached to the sword-making workshop *(rankadu-pattala)* of the kings of the time who recognise their professional rank. For his skilled creations of craftsmanship one of their later descendents, Hadu Nayide of Mangalagama, was given gifts of land in appreciation. Their families, descendents of goldsmiths, continued the traditional occupations, serving royalty and receiving recognition for their services, especially in the masterly creations of jewellery, fit for royalty. Names such as Nilavala Ratnavalli Navaratna Abharanaya, Marukona Ratna Abharana Vedakaraya all master craftsmen, who have thus earned decrees *(sannas)* for their work are of hallowed memory.

There are also temple-painters of great repute whose names have passed into history and whose works remain permanent records of their skill. The 18th century painter-monk, Devaragampola Silvattena, has left behind his paintaings, at Degaldoruwa (Kandy) and at Ridi Vihara (Kurunegala), which have become national treasures.

Carvers in ivory also reached great proficiency and were suitably rewarded for their talents. Rajaguru Otunu Pandita Sakya Seneviratan Mulacharige Appu Swarnatilaka, who lived in Mawanellaand passedawaya few years ago, with his string of titles and honorofic names, was an exceptionally gifted ivory-carver whose like is rarely seen nowadays. In fact the four reputed ivory carvers of those times may not be living now, although a few young craftsmen from such families are continuing the tradition with difficulty. Swarnatilaka claims descent from the illustrious painter-monk, mentioned above. Singamani Patabendi Mudalihamy, a descendent of a master-craftsmen, sought now for turning out gifts and tokens of tribute to royalty,and W.M.Jeevathhamy, who lives near Kurunegala, producing ivory work of excellent quality and who carves addreeses and scrolls for royal visitors, are some of the surviving practitioners of the hallowed profession.

It is said that the craftsmen of royal patronage were so highly honoured and esteemed by certain kings that portions of their royal dress were presented to them on occasions. The patabendi decoration, conferred on eminent craftsmen, was in the form of a golden frontlet, tied by the king as a mark of honour. The greatest interest attached to the systems of apprenticeship and instruction found among the Kandyan craftsmen. Apart from the guid organisations which regulated the professional life of the craftsmen, the hereditary nature of the crafts and the necessity to maintain them by a system of training and apprenticeship was one of the most effective means adopted to preserve the priceless heritage of the arts and crafts. Workshop practice and slow inculation of the principles of construction, including drawing and design-teaching constituted important aspects of their training. It was a joint-family system where the relationship between master and pupil was one of lasting reverence and affection.

J. Tilakasiri

products. Originally all utility materials were manufactured under cottage industrial conditons, but with the introduction of machinery into manufacture and the subsequent organisation of industry on a factory basis, cottage industrial production began to mean something special in manufacture. It began to imply a cultural form, implying individualism as against mass production, and the distinguishing feature of a cottage craft was its association with the personality of a craftsman in its production. In this context it has been argued that to think in terms of economic development through cottage industries appears to be anachronistic. But in many countries of the developing world where specific raw materials and skills are availablē, production through cottage industrial methods are still common. In Sri Lanka too the handicraft industry provides an important component in the industrial sector; it enjoys priority in industrial development programmes and is looked at favourably for its foreign exchange earning potential. Over the last few decades however, these products have been progressively edged out as a result of mass production. For instance, pottery and earthenware utensils have been replaced by aluminium and metal utensils. Again, the introduction of plastic goods had its effect on pottery and on the rush and reed craftsmen. Even jewellery craftsmen have had to make way for mass production of costume

Parallels with other Countries

The development of the handicrafts industry has been a subject of absorbing interest in all Asian countries with traditions extending far back in their history. The World Crafts Council Asia, is an organisation of crafts-people, founded in 1964, as a nonprofit, non-governmental organisation, affliated with UNESCO. Its laudable aim is to strengthen the status of crafts as a vital part of cultural life, to promote fellowship among the craftpeople and to foster wider knowledge and recognition of their work.

There are also organisations of Master Craft Associations and Councils, in many Asian countries, engaged in their tasks of bringing the craftspeople together and working for their welfare and professional development. Such efforts also reflect the common traditions and values which bind them together and remind them of their common cultural heritage.

Sri Lanka owes a great deal to the master-craftsmen of India, who migrated or were brought to this country by early Aryan settlers and the Buddhist missionaries in whose retinue were goldsmiths, blacksmiths, stonecutters, carpenters, weavers and potters. With the passage of time later Indian influence came to be impressed on the crafts of Sri Lanka with respect to the designs and motifs, used by local craftsmen and even in the adaptations made. But despite these influences the indigenous Sri Lankan tradition did not easily go under the south Indian styles and techniques, and on the other hand, tried to preserve and emphasise the early Indian and Buddhist elements of design and decoration. There is a remarkable correspondence, underlying the diverse developments of Indian art(including the art of Burma, Siam, Java and Sri Lanka) not merely as regards the persistence in time of elements of decoration, but also geographically.

The migration of craftmen into Asian lands and the interrelations they have had with each other are also reflected in the evolution of comparable symbols embodied in traditional designs of certain countries. For instance, the *naga* motif and the *makara*, doorway, seen in Sri Lankan art, goes back to early Indian culture and even prehistoric religious beliefs of the people of Sri Lanka. The *naga* symbolised security and protection of treasures and was, therefore, used as a design, singly or in pairs or groups, in stone and wood, on pillars in architecture, at entrance to buildings and also as a decorative motif in brassware and cloth. As a cult figure, endowed with magical properties, it seems to have influenced the motif concepts of Asian countries, generally extending from India to Indonesia.

The *makara*, the mythical figure, adopted in the *makara torana*, the popular ornamental arch of Sri Lankan architecture, seems to be of Indian origin finding appropriate prototypes in the Buddhist cave temples of India. There are also mythical human and animal figures, conceived in the form of designs or decorative motifs, in Asian countries, showing parallels and perhaps, also, attesting to cross cultural migrations of symbols. The mask designs of Indonesian and Sri Lankan types show similarities of conception and design reflecting borrowing or adaptation from each other. The *garuda* symbol of Indonesia and the *gurulu* (eagle) mask form of Sri Lanka raises significant similarities, influenced by the adherence to common ritualistic concepts of the past. Even the demonaic and exorcistic masks with terrifying teeth and eyes in the Sri Lankan iconography of masks seem to have exact prototypes in theIndonesian demon masks.

Another important motif, which hasemanated from India seems to have been thoughtfully adapted into the designs of two countries as far apart as Sri Lanka and Indonesia. The flower-tree *(malgaha)*, used in the mats from Henewala, as a purely ornamental motif, invites comparison with the elaborate tree motif used in the decorative leather figure used in the shadow play of Indonesia, called *gunungan*, endowed with magical value and introduced at significant points in the progress of the performance.

Parallel developments in the concept of design, motif construction and even in shapes of figures of craft objects are, therefore, to be taken as evidence of the fact that there was not only a migration of cultures or cultural elements from a major country like India (with a developed civilisation) to other parts of Asia but a counter-migration of adapted forms and elements from say, a country like Indonesia, to India or even to Sri Lanka.

J. Tilakasiri

jewellery. The result is that craftsmen have had to go into factories or to take to other occupations giving up their traditional craft skills. Their children too have seen little hope in continuing in the traditional occupation and therefore the apprenticeship link has often come to be severed. After the second World War, however, the state began to address its attention to the plight of the cottage and handicraft sector in the country. In the 1950's and 60's it was realised that in the developing countries handicrafts played a significant role in the economy. Many craftsmen were also rural farmers and practised their craft along with their farming. Government's realised that a revival of the handicraft sector could significantly reduce unemployment and underemployment in the rural areas.

In 1955 specific attention was focussed on local craftsmen with the creation of the Department of Rural Development and Cottage Industries. The importance of local production of industrial goods came to be realised with growing balance of payments problems in the latter part of the 1950's:so much so that attempts had been made to introduce measures to protect local products, in the Ten Year Plan of 1959. By the latter part of 1960s the importance of protecting local industries and the exporation of non traditional goods, came to be emphasised and the government itself started providing incentives to meet this new goal. The District Development Councils (DDCs) that were established as part of the Five Year Plan of 1972 also made a substantial contribution towards the promotion of cottage and handicraft industries. This small scale industrial sector recorded a further growth with the expansion of demand for handicrafts following the development of the tourist industry after 1968.

Small Industries Department and Handicrafts

The Department of Small Industries continued to be the main public sector organisation responsible for the promotion and servicing of the handicraft sector. Its sales effort was re-vamped with the setting up of the Laksala Purchasing and Sales Organisations in the 1960's. The Department of Commerce and Export Promotion Secretariat, with some support from the Tourist Board, helped promote the exports of handicrafts over the 1960's and 1970's. There were, however, several deficiencies in these arrangements and the handicraft sector remained in relative neglect as a result. A study in the late 1970's pointed out that the principal drawbacks of the Department of Small Industries were that as a government department it suffered from serious limitations of authority with regard to both the freedom of planning and flexibility in decision making. It also had to face financial constraints which made meaningful participation in development activity appear impractical. Thus, although the Department had a great deal of management capacity and capability in offering assistance by way of marketing and training it did not have sufficient leverage to accomplish the necessary thrust for the accelerated development of the handicraft sector. It was on this basis that the recommendation was to the government for setting up the Sri Lanka Handicraft Board whose main

DECLINE OF CRAFTS IN SRI

Dunstan Fernando
Assistant Director, National Craft Council

Sri Lanka has preserved a rich tradition of arts and crafts for the last 2500 years. It was the patronage of the ancient Sinhala Kings that helped to develop these crafts. During the Colonial period the handicraft sector was neglected and several crafts were on the decline. It is necessary to study and observe the decline of crafts and their reasons.

REASONS FOR DECLINE

Non -Continuity of Crafts Skills

Craftsmen who engage in the traditional crafts, impart their knowledge and skills handed down from father to son, from generation to generation. But the present younger generation of these families refuses to accept the family profession and has endangered the continuity of crafts.

Inadequacy of Marketing

Marketing is one of the major problems in developing handicrafts. Change of tastes and impact of imported products have reduced the demand for local craft products. On the other hand the decline of the tourist industry has adversely affected the Handicraft market. Furthermore, craftsmen generally have to depend upon the middlemen which results in very low profits.

Non-Utilization of Modern Technology

Due to lack of education and also the inability to gain access to modern technology craftsmen still follow their indigenous technical methods. They cannot be more productive and competitive as a result. At present there are no training or reasearch facilities available at secondary level such as technical colleges or universities. It is the duty of the State to introduce modern technical know-how which can increase their level of production (both Quality and Quantity-wise) as well as their profit margin.

Non-Availability of Raw Materials

Scarcity of raw materials is another problem in the handicraft sector. Some materials (eg. Ivory, tortise shell) are not available due to unavoidable reasons. But craftspeople themselves can grow required raw materials such as reed and rush materials. Even the state institutions can launch programmes for cultivation of some raw materials. eg. Cane, ebony etc. It is necessary to make arrangements to introduce alternative materials for the crafts sector too.

Absence of Financial Assistance

Lack of financial assistance from the lending institutions is the major drawback in the handicraft sector. A number of credit facilities are available onjective would be to develop and facilitate the production of handicrafts and promote the marketing of these products both in Sri Lanka and abroad.

In addition, an organisation under the name of the National Craft Council was established under the National Crfta Council and Allied Council's Act No. 32 of 1982 whose objective was preservation of handicrafts of traditional national or cultural value; organizing of crafts people through the formation of Crafts Associations; Development of crafts and crafts people's skills and capabilities; and Enchancement of Crafts people's social and economic status.

Another specific need was a well equipped professional skills and design centre and in 1983 a special design centre was set up under the same Act of 1982. The main objective of the Designs Centre was the improvement of standards Sri Lankan handicrafts. Today we have in operation several government agencies and organisations including the Sri Lanka Handicraft Board, the National Crafts Council, the National Design Centre, the Department of Small Industries, the Department of Commerce and the Export Development Board, all the attempting to harness the significant potential in this sector.

These new goverment sponsored organisations were expected to remedy a situation where the revival of the handicraft industry in Sri Lanka in recent decades had been left entirely to the state. Studies had reported that many such policies proved to be counter productive and that "State policies have tended to be more well-meaning than well-directed".

Employment

The exact number of persons engaged in the handicraft sector is not easy to estimate, the main reason being the wide range of activity that may be characterised under handicrafts; the dispersal of such activities in many remote parts of the country; and the fact that it is not a full time activity for many of those engaged in production of handicrafts. One official estimate, however, places the number of persons engaged in handicraft activity at over 100,000 and a considerable number of them are in the rural areas and depend on this activity as a source of income. A study carried out in January this year showed that 55 per cent of those engaged in handicraft production did so on part time basis while 45 percent worked full time. Also, among the craft people as many as 65 percent were females and 32 percent males; while among the various categories of crafts 25 per cent were involved in palm based handicrafts; 20 per cent in rush based handicrafts, 13 per cent in fibre pased handicrafts; 11 per cent in clay based; and 5 percent in brass based handicrafts. It was also found that generally particular districts were dominated by one type of handicraft activity, for instance, in the Kandy district brassware was the main activity although there were 9 other important types of activity. Again in Hambantota pottery accounted for 75 percent in the handicraft industry, in Jaffna palm based ticipation; in Batticaloa fibre based handicrafts accounted for 67 percent, and reed-based for 20 percent of parti- handicrafts accounted for 89 percent of participation; in Vavuniya reed based accounted for 76 percent and

for export, fisheries and the organised industrial sector. But there are no specific credit facilities for the craftspeople. It isofsignificancethat it is not easy for the craftmen to obtain S.M.I. assistance, because of the high gurantee system, too much of paper work etc. Hence, it is necessary to formulate a special financial assistance scheme for the handicraft sector.

Many local craftmen are finding it more difficult to obtain their material requirements. The most essential may be tabulated as follows:

CRAFTS	Required Raw Materials
Mask Making	
Raw Material	Soft timber,paints
Tools and equipment	Chisels, hammer, bench wice, hand saw, sharp knives or small chisels, sand paper, brushes.
Ivory Carvings	
Raw Materials	Ivory
Tools and equipment	Chisels of different sizes, sharp knives.
Tortise Shell Products	
Raw Material	Tortise shells
Tools and equipment	Pullorama, handsaw, plier, rasp
Diya Tharippu	
Raw Material	Quarts
Tools and equipment	Dhandiyama, cutting wheels, grinder, polishing wheels, water tank with belt.
Dumbara Mats	
Raw Material	Niyanda and Hana
Tools and equipment	Niyanda Poruwa, Niyanda Kossa, Wooden frame.
Drums	
Raw Material	Timber, leather and paint
Tools and equipment	Saw, Lathe, knives or chisels , brushes.
Leather Products	
Raw Material	Leather
Tools and equipment	Sharp knives, small fret-saw, moulds or stamp, shaving machine.
Cane Products	
Raw Materials	Cane
Tools and equipment	Sharp knives, cane slitting device.
Lacquer Work	
Raw Materials	Timber, paints, wax
Tools and equipment	Hand saw, lathe, small hearth, talipot leaf, and brushes

palm based for 15 percent of parcipation; in Kurunegala 67 percent of participation were involved in palm based handicrafts; while in Anuradhapura 35 percent were involved in rush based handicrafts. An exception was the Galle district where participation is divided more or less equally among all nine categories of handicrafts that this study examined.

Another indication of the importance of activity and location may be observed from the official records of the public sector institutions. Thus the Annual Report of Sri Lanka Handicraft Board for 1985 gives details of its total purchases, amounting to Rs 23 million.

In 1985 the main items and values of purchases were as follows:

Item	Rs Mn
Silverware and jewellery	4.8
Brass silver plated	3.9
Wood based items	3.8
Textiles	2.8
Coir,Pulp	2.2
Reed, bamboo and leather	1.7
Batiks, lace and embroidery	1.1
Others	2.7

The Board's sales through its Laksales were in the region of Rs 33 mn in 1985 with nearly 90 per cent from Colombo. Among the main outlets were the following:

Outlets	Rs Mn
Fort	25.4
Kandy	1.7
Ratnapura	1.1
Liberty Plaza	.8
Galle	.6
Kegalle	.5
Matara	.5
Bambalapitiya	.3
Kurunegala	.3
Kalutara	.3
Batticaloa	.2
Hikkaduwa	.1
Kudagama	.1
Negombo	.05
Jaffna	.04
Exports	1.1

Apart from the Laksala's, the Department of Small Industries was also engaged in handicraft marketing. One intention in establishing the Laksala purchasing centres was to minimise the exploitation of craftsmen by middlemen and this has been achieved to a large extent. However, there are numerous private organisations and individuals in operation and better organised craftsmen are able to get the benefits of the competition among the private and public sector buyers, while smaller craftsmen continue to depend heavily on the middlemen.

The liberalisation of external trade consequent on the open economic policies resulted in a free inflow of foreign goods and entry into the local market of many cheap rubber and plastic limitations of local handicrafts. These products turned out on a mass scale, with the aid of modern technology, were more competitive than the local product in many ways. Aluminium and plastic utensils threatened the pottery and earthenware industry, while plastic goods were a threat to the rush, reed and allied crafts. The impact of this threat had been even more sharply felt in recent years with the setbacks suffered in the tourist industry after 1983, as demand for handicrafts in the tourism sectors weakened in comparison to that of earlier years.

Importance of the Handicraft Industry

The handicraft industry has been assigned priority, in development programmes of many of the less developed countries. It is argued that investment in selected handicrafts activities provides greater employment and higher levels of rural incomes than the same amount invested in larger industries. In Sri Lanka the benefits of handicraft activity have been listed in numerous reports. Among such benefits listed are: potential for generating employment in rural areas and improving rural economy; Low capital/output ratio and low overhead costs; optimum use of indigenous material resources; maximum use of human skills; development of rural institutions and improvement of the quality of rural life.

Many of the above benefits apply in the Sri Lanka situation, particularly since current levels of unemployment are considered to be around one-fifth of the work force. In areas such as Kandy and Matale where art crafts are concentrated and the situation is accentuated by a pressure on land which is incapable of satisfaction unemployment levels are also high. The population density in some of these areas (348 persons per sq.km.) is much higher than the national average 238 persons per sq.km.) and the benefits of agriculture in solving the problems of unemployment are limited. It is therefore essential to generate secondary activities in these areas, and handicraft activities backed by existing skills and requiring low levels of investment are regarded an obvious answer.

In other areas such as the western coastal belt, semi industrial handicrafts have developed in recent decades, mainly under Government sponsorship. In the southern areas these products catered to an expanding tourist market. It is apparent that with adequate incentives and markets development could not only result in higher levels of employment, but could also provide more satisfactory incomes than at present.

As already noted the lack of credit, raw materials, upto date technology non-continuation of traditional skills and inadequate markets have all been factors contributing to the gradual decline of crafts in Sri Lanka. However, the inadequacy of marketing and the poverty of markets has continued to be a major problem. In Sri Lanka the domestic market in based on low priced utilityware and cheap ornamental goods which bring a very poor return to the craftsmen and makes little demand on his skills. There are also limitations in the tourist market and the souvenir industry is said to have a tendency towards debasing traditional skills of craftsmen who have to cater to highly commercialised markets. On the other hand, the international market, with its very specialised demand and high standards, can still help the craftsmen to retain the high quality of their art as well as bring them high returns and it is for such reasons that the export market has been selected as a main target for handicraft promotion. It has also been found that in these articles, that demand considerable hand work skills and where the raw materials are genrally not found in buying countries, that there the greatest possibilities exist for exports.

A study conducted by us on the marketing problems of some of the handicraft communities reveals that despite the state sponsorship and support many craftsmen are still heavily dependent on individuals who benefit most from the craftsmen's skills. The situation in earlier times was that the craft item was produced and taken to the weekly fair (pola)or from house to house for sale. The same system still prevails when these products are sold either by craftsmen or by individuals who go around selling them. Festivals such as the Kandy perahera or Kataragama season often give a boost to handicraft sales. This situation has not changed much although there are several government and non government institutions marketing handicrafts. In some of the craft centres such as Natharampotha in the Kandy district a state organisation has a sytem of visiting the place and purchasing what is available. Our study showed that prices took into consideration material costs, labour costs and quality of craftsmanship and many craftsmen here were satisfied with theprices paid.

The earliest government promotional organisation for handicrafts was the Department of Small Industries whose activities included manufacturing, marketing and export of handicrafts,local sales, training of craft apprentices and provision of technical know how and other services. Today this Department concentrates on a selected range of handicrafts. Meanwhile, the main sales and marketing organisation of Laksala has come under the Sri Lanka Handicrafts Board which also promotes handicrafts production and marketing. Meanwhile, a National Crafts Council has come into being also to promote handicrafts and specifically to implement programmes for the welfare of the craftsmen; while allied to the Council, is the National Design Centre whose objective is the development of new designs and product implementation, including studies on the handicraft sector, product development and market intelligence.

Although there is no state monopoly in handicraft marketing, the Sri Lanka Handicrafts Board and Laksala is the largest of the marketeers, eclipsing all others in the size and scope of its operations. Its intervention in the market is said to stabilize prices. Although the Board is for craftsmen and crafts of Sri Lanka not all craftsmen benefit from its marketing network. Not all crafts people are able to sell their products to the Laksalas and therefore many craftsmen are not in a position to depend on it. They are compelled to sell their products to private buyers, often at unreasonable prices. There were also allegations that influentialsuppliersget preference.

The Minstry of Rural Industries follows a system similar to Laksala in the purchasing of handicrafts and handlooms for their sales centres; generally the big ones are called sales "Handloom Emporium". There are 4 Emporiums under the Ministry of Rural Industrial Development, located in Bambalapitiya, Pettah, Polgolla and Kandy. There is a small sales centre in Mawanella as well. A range of about 310 types of handicrafts turned out in Sri Lanka, which includes ceramics, reed ware, wood carving, lacker ware, brass and silver ware, masks soft toys, jute and coir fibre, wall hangings, artificial flowers, etc. are sold at these centres.

Purchasing Procedure

The purchasing decision is taken by a purchasing committee comprising five membrs from the Ministry. If a craftsman wishes to sell any of his products through the sales centres he has first to register with the emporium as a supplier, usually when craftsmen are registered at the beginning of each year. Samples of their products are presented to the committee and once the committee's approval is given the craftsman gets an order to bring his goods to the emporium. On supply of these goods payment is generally made within 3-5 days.

Another system of purchasing is called the pola system. The pola is held mainly in Kandy where a considerable number of craftsmen are located. It is open to the public. The date is notified to the craftsmen through their societies or individually and also it is given wide publicity by the Department. Any craftsman is allowed to exhibit his crafts at this pola. The department selects the best items for sale through their Sales Centres, while the public and dealers are also allowed to purchase their requirements.

Pricing

The pricing of handicrafts bought by the handloom centres as well as by Laksala is on a markup of 40 to 50 per cent. The explanation given by both institutions regarding this high margin is that the products like handicrafts do not move or sell fast and sometimes have to be kept several months on the shelves, although the producers or the suppliers have already been paid.

The basis of profit margins of both institutions are not rational in that they both keep the same margin for already secured export orders as well, and also fast moving items. It is argued that a margin of 40 per cent was exhorbitant and unfair to both the customer and the craftsmen. The money a customer would pay for the satisfaction he gets from an artistic creation does not sufficiently reach the creator of the product.

On the other hand it appears that the prices of many of these items were then beyond the reach of the average person. Also, there is the charge that similar items could be purchased from private sales outlets at lower prices. The plea of the craftsmen was that the benefit of the craftsman and the local consumer also needs to be taken into consideration when fixing prices.

The study of the Kandy District showed that a majority (more than 50 per cent) of the crafts people appeared to be engaged in brassware, silver ware and silver jewellery crafts. The other main area of craft activity was the wood based crafts in which nearly 25 per cent of the crafts people were engaged. This activity included drums, carved figures and lacquer work. Another main category was the fibre based crafts which included Hana ware and Dumbara mats, where about 10 per cent of the craft people were engaged.

What was more significant in the industry, however, was the economic importance of the various activities for these craft families. Brass and silver ware made a substantial contribution to the family income. So too with wood based drums and carved figures. However, lacquer work provided largely a supplementary income and this was the case with the Rush and Reed and Palm based crafts as well. Clay based crafts gave a fair income; while miscellaneous activities such as paper crafts and hand embroidery provided a supplementary income to families in this sector. Clay based pottery and fibre based ornamental coir also provided a substantial income to the craftsmen engaged in these activities in the Kandy district.

There were a considerable number of workers trained in hana and wetakiya crafts and also hand embroidery, who were not engaged in handicraft work in the Kandy district. Pottery and paper pulp crafts also had a fair number of trained workers not engaged in these crafts.

In the Kandy district Embekke, Kalapura and Gunnepana were the main villages where wood carving crafts werecentred;while Kuragala and Kuragandeniya were noted for drums; and Hurikaduwa and Kalapura were noted for lacquer work; and Henewala for Dumbara mats. A major centre for brassware and silverware was Natharanpotha with Embekke, Danture, Bomure, Neelanwala, Ululandupitiya, Wannipola, Kirivalvala, Gadaladeniya, Deliwala and Pamunuva also famous for both brass and silverware.

Smaller craftsmen also found it difficult to compete with well to do craftsmen who were fully equipped with the machinery and workshop facilities. They obtained large orders and were able to meet these orders which the smaller craftsmen could not do. It was alleged that these bigger craftsmen had greater assess to raw material supplies and other facilities from official sources. They also appeared to have influence within the purchasing system.

The study found that in Kandy where there are several different categories of craft workers there are middlemen in practically every village where craft work is carried on. In villages like Kuragandeniya, Kirivavula, Danture, Dellwela, Madawala and Pamunuwa most of the craft products are sold through middlemen even though Laksala had organised a programme to purchase handicraft products at their sales room in Kandy and even organised purchases in the villages themselves.

According to Ministry officials there was no room for interference from intermediaries or any other unfair practices within this purchasing system, which arranged for buying of requirements direct from the craftsman. However, the department was keen on maintaining quality standards of craftsmanship and enforces these standards among its registered suppliers numbering about 250.

In the opinion of some craftsmen, on the other hand, there were still intermediaries or brokers operating within this system.

The village of Embekke is a draw among visitors both local and foreign tourists since it is noted for its Devala which has many specimens of ancient art preserved in their original state. It is also famous as a craft village particularly its wood carftsmen and brassware, on which artists make reproductions of the temple's art works. One would, however, expect the craftsmen to be flourishing but this is not so. Our investigations showed that there were craftsmen's workshops close to the temple, and boutiques sold the crafts from the village at this spot. There were also a few craftsmen at work,and a wide range of handicrafts on display, which gives the impression that this is the spot where traditional craftsmen of Embekke were also located. But the fact is that the traditional craftsmen of the village are not allowed anywhere near these premises. These craftsmen have to earn their living by selling their heridatary skills to the middlemen w who display their wares for sale near the temple area. The craftsmen in the village are generally poor and continue to sell their products at only around 1/3 to 1/4 of their final price. These craftsmen also have to depend on middlemen for funds for their requirements.

At the Kalapura at Natharampotha, the study observed, four institutions set up to help about 71 craft families. The institutions included the National Design Centre; a Light Engineering Centre; a Common Services Centre; and a Raw Material Bank. The Design Centre is intended to introduce new designs to suit orders received by the craftsmen; the Light Engineering Centre is meant to offer training facilities for craftsmen; while the Common Service Centre is equipped with some machines to service the craftsmen in the village who cannot afford to buy such machines. At the time of investigation it was observed that the Common Service Centre was being used by craftsmen and was rendering a useful service. There were also young people being trained at the Engineering Centre. The Design Centre according to the craftsmen has not been as useful. They also stated that the raw material bank was unable to supply them the materials they require. Many craftsmen said they had to pay high prices for their supplies although there were institutions to help.The constraint of raw material supplies was a serious one for many of the smaller craftsmen.

Successive governments have over the last four years continued to claim a special place for the crafts and small producers of the country. In keeping with these intentions various forms of incentives, encouragement and recognition is being officially provided for the crafts people of the country. Among specific support measures are the establishment of various institutions to encourage, promote and develop the handicrafts sector; making available facilities such as credit, raw material, marketing and technical services, including the obtaining of foreign expertise to assist ceraftsmen; reduction of import duties on raw materials and machinery required for the crafts sector; while other official institutions have at considerable cost helped to introduce local crafts in foreign markets through participation in international trade fairs and sending out craftspeople and other exporters to study foreign conditions at first hand, and more recently helping craftsmen to establish foreign marekts through specific export villages.

Still in thecourse ofthis survey the Bank's researcher found a large proportion of the traditional craftsmen were comparatively poor and have hardly benefitted from all these efforts of official support for the sector. As another study emphasised, today the marketable commodity in the handicraft sector was not the tradiitional product but the traditional skills and the challenge the traditional craftsman faced was that he is not fully equipped for the conception, design and production of marketable crafts using only his traditional skills. Looking at the situation realistically many of these craftsmen have no illusions about the future of the handicraft industry in Sri Lanka as an economic factor in their lives. To them it would not matter if their children departed from their traditional pursuits; what they were most concerned about was the measures that should be adopted to ensure the survival of our crafts.

FINANCE

Constraints to Equity Financing in Sri Lanka

One of the primary objectives of the country's monetary policies in recent years has been to evolve an interest rate structure that would encourage investment. It has also been maintained that a policy of more selective credit such as exempting from credit ceilings the Commercial Bank credit given to the private sector for industrial purposes would help to promote activities in the productive sectors of the economy. Meanwhile, several attempts have also been made to remove some of the distortions in the incentive structure for manufacturing industries; the objective here being to alleviate the country's unemployment problems and improve export earnings. However, the question has arisen whether such policy measures alone could bring about the necessary expansion in the productive sectors; particularly whether in sectors such as industry, anticipated returns are bing realised from investments at this stage. The experience of the newly established Capital Development and Investment Company Ltd. (CDIC) has shown that a major obstacle to successful operations in new projects has not been funds or motivation, technology or markets but management capability.

The CDIC which is headed by National Development Bank Chairman C.A.Cooray, and has on his Board representatives of the Finance Ministry, Central Bank, Export Development Board, People's Bank and Bank of Ceylon, commenced its operations in January 1984 and had disbursed Rs 43.1 million in the form of ordinary and preference shares in 21 companies. Over the past 2½ years, however, there have been virtually no cash flows from these investments. The CDIC has carried out diagnostic and performance oriented analyses of its portfolio and has come to recognise among other factors the extreme vulnerability inherent in the pre-dominant use of high risk instruments in its financing.

Among its investments 68 percent have gone into new projects; 14 percent into expansion and diversification; 9 percent into capital re-structuring; and 9 percent for rehabilitation of companies. Of its total invested value nearly 86 percent has gone into new projects.

Commenting on the Company's equity financing the CIDC Chairman states that its investments must incorporate equityandquasi-equity features, but since inherently such investments are riskier than better secured term loans, expectations of loans have been commensurately higher.The reality of it, however, is that results rarely meet expectations. CDIC's lament is that its "limited experience with ordinary - and preference- share investments within the context of our incipient capital market seems to underline the woeful reality that cash flows and profits are a long way off from apprai-sal-stage expectations". CDIC's Chairman also emphasises that increasing attention needs to be focused on the quality of management particularly during the pre-operational and early post-operational phases of implementation. "Too many projects seem to fail despite the availability of funds, market, technology and even genuine motivation. It is not often that project sponsors appear to have the experience or capability in project management and operational startups or the ability to appreciate what is entailed in these activities. This question needs to be urgently addressed specially by the development finance institutions and perpaps a remedy may lie in the creation of project/operational management companies having high-calibre staff resources to undertake contract management", he says.

INVESTMENTS ANALYSED BY SECTOR TOTALS AND BY INSTRUMENTS, AS AT 31MARCH 1987

Sectoral Investment	Cumulative Approvals Rs.	Disbursements & Devolvements Rs.
Food, Beverages & Tobacco	25,100,000	5,100,000
Agriculture, Agro-business & Fishery	24,000,000	17,760,762
Textiles, Wearing Apparel	3,550,000	2,150,000
Wood & Paper Products	4,000,000	2,773,400
Metals & Chemicals	40,650,000	17,980,850
Service Industry	30,700,000	—
Transport Industry	920,000	700,000
Miscellaneous	12,080,000	9,580,000
	141,000,000	56,044,992

Type of Investment	Nos.	Cumulative Approvals Rs.	Disbursements & Devolvements Rs.
Ordinary Share	16	33,470,000	16,150,000
Preference Shares	06	6,400,000	6,400,000
Equity-type Loans	11	35,730,000	12,953,880
Underwriting	04	50,400,000	20,541,112
Guarantees	01	15,000,000	—
		141,000,000	56,044,992

The Chairman of CDIC has summed up from the brief experience of the Company's equity financing as follows:

i) **An equity portfolio takes time to mature and cannot be expected to turn around in less than 4 to 5 years and may well extend beyond 5 years.**

ii) **Returns to equity on new projects take longer than what is generally forecast at the appraisal stage. The reasons are varied but management inadequacies both during implementation and operational stages are increasingly surfacing** as a critical factor.

iii) **The individual** investments being **generally small**, most client-firms **are not constituted** as publicly **quoted companies**. This restricts the **liquidity** of investments and thwarts any prospects for realising capital gains.

iv) Even in instances where operations are profitable there is a reluctance to declare dividends particularly when institutional shareholders are among the beneficiaries. The sponsors themselves need not depend on dividends for deriving benefits from the company.

v) The constraints inherent in our business environment compel and justify recourse to a blend of equity instruments in order to reduce risks and improve cash flows.

Among the guidelines the Company has set out for the immediate future are the following:

* Maintain an even balance in the choice of instruments as between higher-risk equity (comprising ordianry and preference share-capital) and quasi-equity instruments normally carrying interest-bearing features.
* In dealing with client-companies which are unlisted and without an established track record in particular, a blend of equitv and quasi-equity instruments including debentures should be the preferred approach to formulating a financing package.
* Whenever practicable and where the magnitude of the overall investment is of the right order, the sponsors should be induced or encouraged to make a public offering of shares with CDIC providing such assistance as bridging finance and underwriting.
* In the case of businesses managed more like family concerns and typically averse to declaring dividends, the more prudent mode of assistance might be in the form of redeemable preference shares and/or subordinated loans.

From incorporation in October 1983 upto March 31, 1987 the Company has made three capital calls at the following rates per share: First Call Rs 1.00; Second Call Rs 2.00; and Third Call Rs 2.50. Since then a further call of Rs 2.00 per share has been made and was responded to by 30th June 1987. The Board has decided to make a fifth call of Rs 1.00 per share to be paid in October 1987 and the final call sometime during the first half of 1988.

Of the CDIC's total portfolio of Rs 69.2 million as much as 56 percent was in Ordinary Shares in Quoted Companies, 19 percent in Quasi-equity Investments including Bridging Finance, 16 percent in Ordinary Shares in Un-quoted Companies, and 9 percent in Preference Shares. The net profits shown by the Company has been Rs 2.4 million in 1985; Rs 4.8 million in 1986; and Rs 5.5 million in 1987.

(Also see pages 23 and 24).

Sri Lanka's Merchandise Trade Deficit Exceeds Rs 10 bn in first half of 1987

Sri Lanka's trade deficit for the first six-months of 1987 has exceeded Rs 10 billion. Total value of exports reached Rs 17.9 billion while value of imports went upto Rs 28.5 billion. The deficit in the previous year, during the same period, was Rs 9.5 billion with an increase in the deficit in 1987 of more than 10 percent. In SDR terms, however, as a result of the declining value of the rupee, the trade deficit in the first six months of these two years was SDR 299.6 mn in 1986 as against SDR 286.7 mn in 1987. (See Table 1).

Japan continued to be Sri Lanka's largest supplier; with value of imports from Japan amounting to Rs 4.8 billion or 17 percent of Sri Lanka's total imports in the first half of the year. The next most important suppliers were U.K. providing 7.1 percent and USA 6.4 percent of total imports.

The largest buyer of Sri Lankan products was USA which took 27.7 percent of Sri Lanka's total exports in the first half of the year. The second largest buyer was West Germany taking 6.9 percent and in third place was Egypt with 6.8 percent; while Japan and U.K. accounted for 5 percent each. There was a positive trade balance in Sri Lanka's trade with USA; while a negative trade balance was recorded with Japan, Taiwan, Hong Kong, United Arab Emirates, South Korea and U.K.

TABLE 1

BALANCE OF TRADE IN MERCHANDISE (SIX MONTHS ENDED JUNE)

		1986	1987
Exports	Rs Mn	15,167.5	17,965.5
	SDR Mn	(478.6)	(487.4)
Imports	Rs Mn	24,662.1	28,533.8
	SDR Mn	(778.2)	(774.1)
Balance of Trade	Rs Mn	9,494.6	10,568.3
	SDR Mn	(299.6)	(286.7)

Source: *Department of Commerce, Customs Returns*

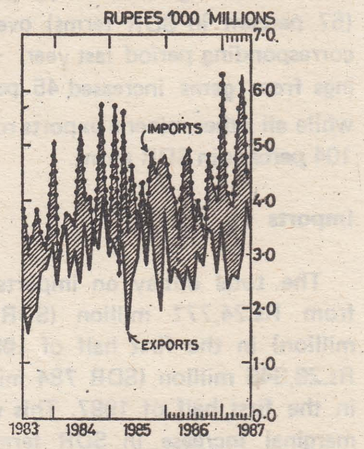
Merchandise Trade

Adjusted Central Bank figures show that in merchandise trade in the first six months of 1987 the value of exports is estimated at Rs.18,450 million (SDR 501 million) and imports at Rs.28,846 million (SDR 784 million), respectively. Accordingly, the trade deficit for this period at Rs.10,396 million (SDR 282 million) showed a decline of 6 percent in SDR terms as compared with the deficit of Rs.9,486 million (SDR 299 million) for the same period, last year. However, in Rupee terms the deficit increased by 10 percent. Total earnings from exports at Rs. 18,450 million (SDR 501 million) recorded an increase of 21 percent (4 per cent in SDR terms) over that of Rs.15,285 million (SDR 482 million) realised in the corresponding period of the previous year. The increase was largely due to higher earnings from tea, textiles and garments and mineral Exports

Export

Export earnings from tea increased by 25 percent (8 percent in SDR terms) from Rs.3,932 million (SDR 124 million) in the first six months of 1986 to Rs.4,911 million (SDR 133 million) in the first six months of 1987.

Earnings from rubber during the first six months of 1987 amounted to Rs.1,423 million (SDR 39 million) in comparision to Rs.1,290 million (SDR 41 million) in the same period last year, showing an increase of 10 percent in Rupee terms and a decrease of 5 percent in SDR terms.



MERCHANDISE EXPORTS AND IMPORTS
Source: Central Bank

Earnings from the export of coconut by-products declined by 1 percent (170 percent in SDR terms from Rs. 377 million (SDR 12 million) to Rs.372 million (SDR 10 million). Earnings from minor agricultural exports too, dropped by 13 percent (25 percent in SDR terms) from Rs.744 million (SDR 24 million) to Rs.647 million (SDR 18 million), mainly due to reduced earnings from coffee, cloves, cardamoms, betel leaves, arecanut and essential oils.

Earnings from industrial exports in the first half of 1987 amounted to Rs.9,019 million (SDR 245 million) as compared to Rs.7,376 million (SDR 233 million) in the same period last year, showing an increase of 22 percent (5 percent in SDR terms). However, this increase was entirely due to increased earnings from garments and textile exports which rose by 43 percent (24 percent in SDR terms) from Rs.4,058 million (SDR 128 million) to Rs.5,819 million (SDR 158 million). In contrast, earnings from petroleum exports and other industrial exports declined by 26 percent and 11 percent in SDR terms, respectively.

During the first half of 1987, earnings from mineral exports recorded a substantial growth of 82 percent (57 percent in SDR terms) over the corresponding period last year. Earnings from gems increased 45 percent while all other mineral exports rose by 104 percent in SDR terms.

Imports

The total outlay on imports rose from Rs.24,771 million (SDR 781 million) in the first half of 1986 to Rs.28,846 million (SDR 784 million) in the first half of 1987. This was a marginal increase in SDR terms although it recorded an increase of 16 percent in Rupee terms.

The Central Bank has noted that the outlay on consumer goods imports increased by 17 percent (1 percent in SDR terms) to Rs.8,156 million (SDR 222 million) in the first half of 1987 from Rs.6,951 million (SDR 219 million) in the same period last year. This was mainly due to increased expenditure on imports of sugar, milk foods and textiles and clothing.

The expenditure on intermediate goods imports rose by 13 percent in Rupee terms, but declined by 2 percent in SDR terms over the same period last year. Among those imports, the value of fertilizer, wheat grain and chemical imports declined, while paper and paper boards increased significantly.

The expenditure on investment goods imports rose by 15 percent from Rs.4,398 million to Rs.5,107 million. However, in SDR terms, the value of these imports remained at the same level of SDR 139 million as in the previous year. However, the value of machinery imports increased substantially by 17 percent in SDR terms while all other categories of investment goods recorded decreases.

The classification of imports by end-use revealed that the composition of imports remained almost unchanged during the two periods. The share of imports of consumer, intermediate and investment goods of total imports in the 1987 period were 28 percent, 42 percent and 18 percent, respectively.

DEVELOPMENT ISSUES

What ails the administration

The administrative system of Sri Lanka is afflicted by a twin malady– namely, a high level of over staffing and a unrealistically low salary structure. This was a fundamental finding of the Administrative Reforms Committee's Second Report, which it has submitted to the President. The Committee showed that these factors were interlinked and they in turn led to poor morale and discipline in the administrative service; to an erosion in standards of integrity; to public servants turning away from training and self employment; to low productivity and consequent high costs of government operations; and, finally, to an erosion of public confidence. Together, they have triggered a process of administrative deterioration. It is with a view to attempting to correct this situation that the Minister of Finance has proposed a revision of the salary structure and an overall reform and reorganisation of the administrative system. The Committee has emphasised that systematic cadre management is the most important immediate task that faces the Government if administrative reform and performance are to be realised.

The lack of effective cadre management appeared to be at the heart of the problem, in the view of the Administrative Reforms Committee which pin-pointed several factors that contributed to this situation. Firstly, the inadequacy of the institutional machinery for cadre management. The Committee is of the view that value determination in the public service has been, at best, a perfunctory, reactive process to requests from ministries, departments and sub-departments for increases of cadres, particularly at the time of the formulation of the annual budget. The ability of the Treasury to subject such requests to scientific analysis appears to be minimal. Its capacity is even further restricted by time constraints as well as by the high levels of pressure exerted by requesting organizations. The negotiations between the line ministries and the Treasury relate, at best, only to cadre increases, existing cadres are neither subjected to analytical appraisal nor require periodic justification. They are taken for granted. No machinery is available to carry out in-depth organizational and manpower analysis.

A second contributory cause has been the absence of any procedure for periodic review of government organisations, in terms of their continuing programme content, to determine whether such organizations should not be terminated. The immediate and urgent need is to correct the present untenable situation in the administrative system wherein departments and sub-departments which were established for programmes and activities in a different development millieu continue, with no real valid mandates, long after the context in which they were established has changed. The committee finds difficulty in seeing a rationale for the present levels of staffing of many such departments.

The absence of staffing norms and standards is a third contributory cause for over-staffing. With the dismantling of the Management Services Division of the Ministry of Public Administration there is no focal point in the administrative system to develop and set such standards. Thus, there are wide variations as between departments, etc., in regard to staff utilisation for comparable tasks, both in terms of numbers and in terms of levels, both of which involve extra costs.

Cumbersome work procedures are

CLEAR CASE OF HEAVY OVERSTAFFING

A study was carried out for the Administrative Reforms Committee in an administrative district with an approximate population of 830,000, by a team which included the senior-most officials in the district. The study indicated that there were 1,072 field level workers, belonging to 7 departments, as well as the 253 Grama Sevaka Niladharis of the district administration proper who are supposed to be supervised and backstopped by 261 officers at the divisional level and who are, in turn, directed by 49 staff grade officers at the district level. A preliminary survey indicates that, in this district alone, 3 posts belonging to the SLAS cadre, 40 field officers at the district and divisonal levels, 69 middle level office staff, 556 field staff at the village level and Office Employees Service personnel could be dispensed with, without affecting the effective delivery of the government programmes. This would reduce a total of 680 positions, representing 28 per cent of the total cadre strength of 2,438 in that district, the savings on the salary bill of which would be available for other development activities. This is not an isolated case. The Committee has noted the clear implications of these findings for all the 25 administrative districts.

another contributory factor to overstaffing. Not only have work systems and procedures continued unchanged over decades, they have not been looked at from the point of view of staff time and costs. On the contrary, these very systems and procedures have been used to support claims for staff increases.

Another area in which there is heavy cadre proliferation is that of field staff, at district, divisional and village levels. The existence of more than one ministry which either covers a single sector (eg.Agriculture) or seeks to further a single development objective (eg. Rural Development) has led to over-lapping and duplication of staff at field level who perform tasks which are indistinguishable from one another. This duplication is over and above the historically existing field staff of the Home Ministry itself. There have been many studies and examinations of this phenomenon since the 1960s but the problem, has worsened rather than been resolved. (See Box).

Another shortcoming in public personnel management which has an equally pernicious effect on cadre management, is the prevalence of narrow job definitions, particularly at the subordinate and manual levels. This contributes to under-utilisation of personnel and, consequently, to overstaffing. There is a strong case for more and more multi-tasks personnel at these levels. This would contribute to a reduction in numbers, and thus facilitate payment of better compensation to such employees, as well as lead to bettter efficiency in government work places.

Under-utilisation of staff is also contributed to by many practices common in government offices. Reservation of motor vehicles for individuals instead of their being placed in vehicle pools which results in drivers idling for long periods of time is an example.

Absence of modern office equipment and adherence to cumbersome procedures are other contributory factors to over-staffing. Regrettably, much of the office equipment is of the type familiar in offices of the 1950s and 1960s rather than of the second half of the 1980s. The work processes, hence, consume time, induce fatigue and demand large manpower inputs.

Considerable room exists for much higher levels of delegation of functional authority within government organizations, both spatially and within individual offices than is presently practised. A large volume of the work done in government organizations is repetitive, routine and highly structured. This makes it possible to set out instructions and procedures which could be easily learnt and followed by those at the operational levels. Collation of data and information for analysis and decision making can be carried out at levels lower than the staff grade levels at which they are done now.

There is a large scope for the greater use of personnel at junior executive levels for the tasks referred to above.

Poor quality of staff creates a need to multiply cadres to cope with the work-load which has to be delivered by a government organization. The poor quality of staff is directly related to defective recruitment processes and lack of induction training.

The Committee has found that cadre management would be significantly assisted by the proper selection of personnel through properly administered objective methods of competition and the exposure of the selectees to rigorous programmes of induction training. This would, through the availability of more efficient staff, contribute much to maintaining lower levels of better compensated cadres. It also emphasised that the uncontrolled growth of staff in the line ministries and departments entails concomitant increases of staff in the nodal servicing ministries and departments (eg. Public Administration, Finance) thus leading to a cumulative increase in the total government cadres. This the committee noted is an aspect of the problem which is often overlooked and the insidious cadre growth which occurs through this process often goes unnoticed.

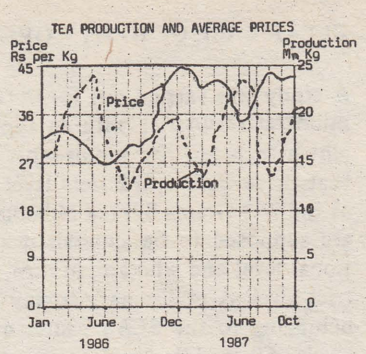
The Administrative Reforms Committee comprises Mr H.S.Wanasinghe (Chairman) Mr.B.Mahadeva, Mr.S.M.L. Marikar, Prof.Willie Mendis, Dr. Rienzie Peiris, Mr Asoka Senanayake, Mr.S.K.Wickremasinghe and Mr Eraj Wijesinghe. Mr.V.T.Navaratne functioned as Secretary.

COMMODITIES

TEA Production not keeping pace with price increases

Although prices had increased by nearly Rs 10.00 per kg. over lastyear's figures, Sri Lanka has not been able to take full advantage of the favourable price trends as production was running below the last year's figure upto September, and in October it was only marginally higher. (See tables 1 and 2). Meanwhile, other major producers have recorded substantial production increases.

In India total output in 1987 is expected to reach a record figure of 662 million kg. However, with rising internal consumption exports would have to be restricted around 202 million kg. A recent report in the "Madras Hindu" on India's tea production states that in the current year North Indian estates have staged a remarkable recovery with ample rainfall in the tea growing areas and the modernisation and replantation programme implemented by many profitably functioning units. The actual production of north India in January-August was 303 million kg against 274 million kg and in the southern region 91.5 million kg against 90.9 million kg in the same period in 1986. With the late monsoon having a favourable impact tea growing in Tamil Nadu and Kerala, it is now expected that the output for the whole year may be even higher by three million kg as compared to 1986. With north Indian estates too raising their output by 35 million kg., aggregate production will be around 662 million kg.-three million kg more than the earlier peak of 659 million kg.



As the Soviet Union and Iran have been effecting larger purchases so far and other countries may be absorbing the same quantity, it should not be difficult for India to raise exports to 210 million kg and earn even Rs 700 crores in 12 months. The profitability of working of North Indian estates are expected to be more encouraging than that of the Southern region as the cost of production may decline significantly because of larger outturn.

All other leading producers also recorded an increasing trend in production over that of the previous year. The crop figures in Kenya have shown a significant increase. Its crop figure in 1987 (Jan.-Aug.) reached 102.4 mn kg. as against 87.1 mn. kg. in 1986 (Jan.-Aug)Other producers recording increases were Bangladesh, Indonesia, Tanzania and Zimbabwe.(See Table 111).

TABLE 1

TEA AVERAGE NET PRICE (RS PER KG)

	1986 Jan.- Oct.	1987 Jan.-Oct.
High Grown	29.33	36.85
Medium Grown	26.15	34.19
Low Grown	29.34	40.63
Total	28.54	37.68

TABLE 2

SRI LANKA TEA CROP ELEVATIONWISE (IN MN KILOS)

	1986 Jan.-Oct.	1987 Jan.-Oct.
High Grown	63.5	61.1
Medium Grown	43.5	44.6
Low Grown	66.4	69.3
Total	173.4	175.0

TABLE 111

TEA CROP FIGURES OF MAJOR PRODUCING COUNTRIES (IN MN KG)

		1986	1987	Change
Sri Lanka	(Jan.-Sept)	156.9	155.3	- 1.6
India(North)	(Jan.-Aug.)	274.1	303.5	+ 29.4
India (North)	(Jan.-Aug.)	90.9	94.6	+ 3.7
Kenya	(Jan.-Aug.)	87.1	102.4	+15.3
Malawi	(Jan.-Aug.)	26.9	25.2	- 1.7
Bangladesh	(Jan.-Sep.)	26.2	28.7	+ 2.5
Tansania	(Jan.-June)	5.0	8.8	+ 3.8
Zimbabwe	(Jan.-June)	9.3	9.5	+ 0.2
Indonesia	(Jan.-June)	42.5	43.9	+ 1.4
Mauritius	(Jan.-June)	4.6	4.4	- 0.2
Uganda	(Jan.-May)	1.1	1.0	- 0.1
Total		724.6	777.3	+ 52.7

Source: *Brokers Reports.*

Sri Lanka's economy in 1987

Growth in many important sectors of Sri Lanka's economy registered a decline in the first half of 1987, compared to the same period in the previous years. The result is that overall growth has shown a significant drop. A basic cause for this trend is attributed to the direct and indirect effects of the ethnic conflict, said to be now taking a severe toll on economic performance. Another major factor was the drought conditions which affected agriculture and caused a drop in production for most crops.

The Central Bank, in its half yearly review of economic performance, reports that from January to June 1987 although some sectors were affected adversely by factors such as the continuing civil disturbances and drought conditions, yet others performed well. Among those sectors where performance indicators were brighter are the monetary and price fronts where a reasonable degree of stability was maintained; the budgetray performance which improved significantly despite the high level of defense expenditure; and the external trade sector which recorded a marginal improvement as compared with the corresponding period of the previous year and helped in a marginal improvement of the balance of payments situation in the first half of 1987. Industrial output also showed an increase in real terms.

The sectors where performance indicators were gloomy, included agriculture where all major crops experienced severe set backs in production; the energy sector which felt the adverse effects of the drought and this resulted in a heavy demand for petroleum products to generate thermal power. The demand for petroleum and diesel increased even further in order to meet the heavy requirements of the security forces. The other area severely affected was the tourism sector with tourist arrivals continuing their downward plunge of the previous year. Total debt service payments for the period showed a 26 percent increase, while the debt service ratio went up nearly 3 percent to 28.2 percent.

In terms of SDRs the value of the rupee had depreciated from Rs 32.97 per SDR in June 1986 to Rs 37.40 per SDR by June 1987.

Gross external assets were down in terms of both rupees and SDRs, with the drop in rupee terms from June 1986 to 1987 amounting to Rs1,230 mn (See Table 4). Also, net capital inflows to government declined by nearly 50 percent during the first half of 1987.

Monetary performance

A stringent monetary policy had been in force since 1984, but a cautious relaxation of this policy was initiated in the first half of 1987. There were signs of moderate levels of growth in monetary aggregates and domestic credit expansion. Emphasis was placed on stimulating economic activity by reducing the restrictive elements contained in certain policies. Reduction in the statutory reserve requirements of the commercial banks was the means of effecting this relaxation in monetary policy. The reserve requirements were further relaxed by the withdrawal, with effect from June 1987, of the requirement to maintain reserves against unutilised balances of overdrafts imposed in December, 1983. However, the major modification in reserve ratios came in August, 1987 with the introduction of a uniform ratio of 10 per cent. As a result, the reserve ratio on demand deposits declined from 18 to 10 per cent, while that of time deposits (not exceeding 90 days) dropped from 14 per cent to 10 per cent. By thus reducing the cost of funds of the commercial banks and promoting a downward revision in their lending rates, potential borrowers

TABLE 1
CHANGES IN MONETARY AGGREGATES AND UNDERLYING FACTORS

Monetary Aggregates			
1. Change in currency held by the public........	+ 708.1		+ 6.1
2. Change in demand deposits held by the public...	+ 187.5		+ 1.9
Net change in M1		+ 895.6	+ 4.2
3. Change in time and savings deposits of private sector held with Commercial Banks		+ 2,186.0	+ 7.4
3.1 Co-operative institutions	28.9		+ 4.1
3.2 Government corporations	+ 1,280.6		+ 27.0
3.3 Other private sector constituents	+ 876.5		+ 3.6
Net change in M 2		+ 3,081.6	+ 6.1
Underlying Factors			
1. Domestic Credit Expansion (DCE)		+ 4,364.9	+ 6.8
1.1 Net Credit to the Government	+ 1,705.9		+ 7.6
1.1.1 Gross Credit to the Government	- 750.2		- 2.7
By Central Bank	- 3,257.7		- 13.1
By Commercial Banks	+ 2,507.5		+ 91.1
1.1.2 Government deposits and cash balances	+ 2,456.1		+ 48.6
1.2 Gross credit to the private sector	+ 2,659.1		+ 6.4
1.2.1 Co-operative institutions	- 74.3		- 5.2
1.2.2 Government corporations	+ 1,407.4		+ 29.7
1.2.3. Other private sector constituents	+ 1,236.0		+ 3.7
2. External Banking Assets (net)		- 374.5	- 4.2
3. Other items (net)		- 908.9	- 4.1
3.1 Other liabilities (net) of the Central Bank	2,133.3		
3.2 Other liabilities (net) of Commercial Banks.....	- 2,909.0		
3.3 Adjustments for items in transit	- 133.2		
Net change in M 2		+ 3,081.6	+ 6.1

Note - Signs indicate the effect on M 2   Source: *Central Bank of Sri Lanka.*

The commercial banking system as a whole remained considerably liquid during the first half of 1987, though certain banks experienced temporary liquidity problems at times largely due to a slow growth in the deposit base. The continuing excess liquidity position in the banking sector was mainly due to the slow growth in credit which partly resulted from the uncertainty that prevailed in the business climate. Moreover. the high real lending rates in the context of reduced inflationary pressures appear to have depressed the demand for credit. In the event, the commercial banks continued to look for short-term investment outlets for placing their excess funds.

The Central Bank reports that there was a moderate expansion in monetary aggregates in the first half of 1987. The narrow money supply (MI), consisting of currency and demand deposits held by the public, increased by 4 per cent, compared with a growth of 6 per cent in the corresponding period of the previous year. Meanwhile, broad money supply (M2) defined to include MI plus time and savings deposits of the private sector held with commercial banks (quasi money) rose by 6 per cent during the first six months of 1987. The corresponding increase in 1986 was only 1 per cent. The expansion in monetary aggregates during the six months upto June 1987 was caused entirely by a rise in domestic credit. See Table 1, and also Diagram 1.

Budgetary situation

The budgetary performance recorded a significant improvement in the first half of 1987. The current account recorded a surplus of Rs 4,822 million compared with a surplus of Rs 2,008 million in the same period of 1986. The budget deficit for the 1987 period too was considerably narrower at Rs 12,458 million, compared with the deficit of Rs 14,049 million in the corresponding period of the previous

TABLE 2

CENTRAL BANK WHOLESALE PRICE INDEX

Item	Weight	Average: 12 months ended June 1986	Average: 12 months ended June 1987	% Change
All Items	100.0	357.3	387.6	8.3
Food	67.80	314.2	352.1	12.1
Alcoholic drinks	2.86	366.8	418.0	14.1
Textiles & Footwear	4.02	303.6	319.4	5.2
Paper Products	1.37	429.9	414.9	− 3.5
Chemicals & Chemical Products	5.16	241.8	228.2	− 5.6
Petroleum Products	6.42	685.1	685.1	—
Non Metalic Product	1.78	643.6	601.6	− 6.5
Metal Products	0.93	319.7	320.2	0.2
Transport Equipment	0.80	306.5	311.3	1.6
Electrical Appliances & Supplies	0.96	293.1	296.5	1.2
Machinery	1.33	202.2	231.0	14.2
Fuel & Light	1.79	684.0	706.2	3.2
Miscellaneous	4.78	516.3	584.4	13.2
Sectoral Sub Indices 1				
Domestic Group	50.31	317.6	329.2	3.7
Import Group		358.2	354.0	− 1.2
Export Group, ...	22.52	445.1	558.7	25.5
Sectoral Sub Indices 11				
Consumer Goods	75.30	334.0	373.5	11.8
Intermediate Goods	20.52	433.2	437.5	1.0
Investment Goods	4.18	406.0	397.8	− 2.0

Source: *Central Bank of Sri Lanka.*

year. These achievements in the fiscal front were helped by an improved revenue performance coupled with a modest growth in overall expenditure. In financing the budget deficit, the Government mobilised resources amounting to Rs 5,852 million from domestic sources and Rs 6,606 million through foreign loans and grants. The outstanding debt obligations of the Government stood at Rs 167,849 million at the end of June, 1987.

Balance of payments

Sri Lanka's balance of payment position improved marginally in the first half of 1987. Both trade and current accounts recorded narrower deficits in SDR terms. The estimated deficit in the trade account was SDR 315 million, compared with a deficit of SDR 323 million in the corresponding period of 1986. This improved performance reflected a higher level of export earnings against a modest growth in outlay on imports. The overall balance, however, continued to be in deficit resulting in a drawdown of net external assets to the tune of SDR 26 million. The level of gross external assets at the end of June, 1987 was sufficient to finance 3.4 months imports projected for the balance half of the year.

Consumer prices

Consumer prices recorded a lower rate of growth in the first half of 1987. The Colombo Consumer Price Index (CCPI) increased by 5.4 per cent compared with a rise of 6.3 per cent in the corresponding period of the last year. Meanwhile, the prices at primary market level as measured by the Wholesale Price Index (WPI), recorded an increase of 9.3 per cent during the first 5 months of 1987 compared with a decrease of 4.8 per cent during the corresponding period of 1986. The rise in the WPI was largely due to improved export prices for tea and coconut. See Table 2.

Industrial output

Industrial output, in real terms, increased by 8 per cent during the first half of 1987. Private sector industries recorded an impressive growth of 16 per cent, reflecting mainly the higher levels of output in categories such as textiles and garments; and food, beverages and tobacco. Meanwhile, the output of public sector enterprises declined by 4 per cent mainly due to a drop in output of the petroleum refinery which was closed for nearly one month in the first half of this year.

The value of industrial exports increased marginally by one per cent in SDR terms during this period as compared with the corresponding period of the previous year. However, the value of industrial exports excluding petroleum products, increased by 8 per cent in SDR terms when compared with the first half of 1986.

Agriculture sector

The performance of the agriculture sector in the first half of 1987 was characterised by a noticeable reduction in output of all major agricultural crops. See Table 3. This was largely due to the severe drought conditions prevailing in major producing areas. Production of tea, rubber and coconut dropped by 3 per cent, 8 per cent and 20 per cent, respectively. Meanwhile, in Maha 1986/87, paddy production recorded a decline of 18 per cent over the production in Maha 1985/86. However, the performance of the minor food crops sector in Maha, 1986/87 was favourable. This largely reflected an increase in the extent cultivated, particularly under the Accelerated Mahaweli Programme, improved cultivation practices and higher producer margins. Also, the output of some minor export crops such as peper, cocoa and sesame seeds increased during the first half of 1987.

TABLE 3

COMPARATIVE PERFORMANCE OF THE AGRICULTURAL SECTOR – FIRST HALF 1986 & 1987

Crop	Unit	1986 Jan.-June	1987 * Jan.-June
1. Tea			
1.1 Production	Mn.Kgs.	116.1	112.4
1.2 Average Price			
– Colombo	Rs./kg.	28.82	36.95
– Export f.o.b.	"	45.43	52.69
1.3 Fertilizer issues	'000 Mt.tons	69.9	62.5
2. Rubber			
2.1 Production	Mn.kgs.	74.2	68.0
2.2 Average Price			
– Colombo RSS 1	Rs./kg.	15.94	18.88
– Export f.o.b.	"	22.39	25.84
2.3 Replanting	Hectares	943(c)	2,135(c)
2.4 Fertilizer issues	'000 Mt.tons	14.4	14.7
3. Coconut			
3.1 Production	Mn.nuts	1,606	1,277
3.2 Average Price			
– Colombo	Rs./nut	0.72	1.67
– Export f.o.b.	"	1.47	3.60
3.3 Fertilizer issues	'000 Mt.tons	13.8	15.0
4. Paddy (a)			
4.1 Production	'000 Mt.tons	1,688	1,378
4.2 Gross extent sown	'000 Hectares	555	508
4.3 Yield per hectare	Kgs.	3,585	3,473
4.4 Net extent harvested	'000 Hecatres	469	398
4.5 Purchases under GPS	'000 Mt.tons	138	57
4.6 Import of rice (b)	"	99	40
4.7 Fertilizer issues	"	124	115

* Provisional
(a) Maha Only.
(b) On a calendar month basis.
(c) Includes public sector estates.

Sources: *Sri Lanka Tea Board; Rubber Control Department; Coconut Development Authority; National Fertilizer Secretariat; Department of Census & Statistics; Ministry of Agricultural Development & Research; Paddy Marketing Board. Food Commissioner's Department*

Tourism

The level of activities in the tourist sector continued to decline. Total tourist arrivals in the first half of 1987 decreased by 23 per cent compared with the same period of 1986. The low level of performance in this sector mainly reflected the impact of the continuation of civil disturbances.

Conforming to the trend observed since 1983, the tourist industry has continued to be adversely affected by the continuing civil disturbances in the country and the impact of adverse publicity in regard to the security situation in Sri Lanka. Tourist arrivals during the first half of 1987 amounted to 104,090 compared with 134,232 in the same period of 1986. Apart from a marginal increase of one per cent from Eastern Europe, tourist arrivals from all other regions, namely Western Europe, Asia, North America and Australasia dropped substantially. Compared with the number of arrivals of 207,608 in the first six months of 1982 when tourist traffic reached its peak, arrivals during the period January to June 1987 had declined by 50 per cent.

Services and transfers

The deficit in the services account estimated at Rs 1,764 million (SDR 48 million) for the first half of 1987 remained virtually at around the same level, in SDR terms as in the first half of 1986. The deficit in 1986 amounted to Rs 1,546 million (SDR 49 million). Foreign exchange receipts on account of services declined by 17 per cent. The decline in services receipts is attributable largely to a 37 per cent drop in the earnings from tourism and a 29 per cent decline in other services receipts.

Capital flows

Gross inflows of non-monetary capital to the government sector which consists of both concessional and commercial loans declined from Rs 6,640 million (SDR 210 million) during the first half of 1986 to Rs 5,460 million (SDR 149 million) during the first half of 1987. This indicates a 29 per cent drop in non-monetary capital inflows to the government sector. Amortization payments in respect of government sector loans, however, increased from Rs 1,264 million (SDR 40 million) to Rs 2,232 million (SDR 61 million) between these two periods. Accordingly, net capital inflows to government declined by nearly 50 per cent during the first half of 1987.

Debt service payments

Total debt service payments, including both amortization payments and interest payments, increased to Rs 6,747 million (SDR 184 million) during the first half of 1987 as against Rs 5,362 million (SDR 170 million) in the first half of 1986. Amortization payments increased from Rs 3,108 million (SDR 99 million) to Rs 4,332 million (SDR 118 million) while interest payments declined, in SDR terms, from

TABLE 4

GROSS EXTERNAL ASSETS OF SRI LANKA

Rs.Million (SDR million in brackets)

Holder	End of Period June 1986	End of Period June 1987	% Change June 1986/1987
1. Government	774.1 (23.5)	849.6 (22.8)	+ 75.5
2. Government Agencies and Institutions	0.7 (–)	0.7 (–)	-----
3. Central Bank	11,616.0 (352.4)	9,316.1 (249.2)	– 2,299.9
4. Commercial banks	5,973.5 (181.2)	6,967.5 (186.3)	+ 994.0
Total	18,364.3 (557.1)	17,133.9 (458.3)	– 1,230.4

Source: *Central Bank of Sri Lanka.*

Note: The SDR Holdings Account of the International Reserve of the Central Bank is converted at the Representative Rate agreed with the IMF. All other rupee figures are converted into SDRs at the following end of month exchange rates.

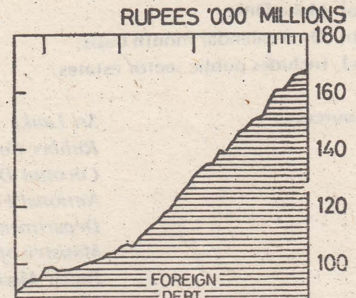
June,	1986–SDR 1 =	Rs.32.97
May,	1987–SDR 1 =	Rs.37.34
June,	1987–SDR 1=	Rs.37.40

SDR 71 million to SDR 66 million in the respective two periods. Debt service payments to the IMF increased marginally due to larger repayments. The overall debt service payments as a ratio of earnings from the export of goods and services increased from 25.4 per cent during the first half of 1986 to 28.2 per cent during the first half of 1987.

The overall position in government debt outstanding by the end of 1987 showed that both foreign and domestic debt together stood at Rs 167,849 million.

This was an increase of 7 per cent and consisted of Rs 72,928 million of domestic debt and Rs 94,921 million of foreign debt. While domestic debt increased by 4 per cent, foreign debt including an additional liability of Rs 5,368 million arising from exchange rate changes grew by 10 per cent. The outstanding liability on account of commercial loans amounted to Rs 8,686 million, which formed 9 per cent of the total foreign debt.

The foreign debt at end of June 1987 comprised Project loans Rs 57.9 bn, Commodity loans Rs 30.1 bn, and others Rs.6.9 bn. The outstanding project loans which formed nearly two thirds of the foreign debt rose by 15 per cent, while commodity loans increased by 8 per cent. The other loans declined by 13 percent.



PUBLIC DEBT (GROSS)

Source: Central Bank

THE INVESTOR AND INVESTMENT SITUATION IN SRI LANKA

To invest or not to invest - A point of view

Chandra Rodrigo

In this discussion note delivered at a recent NARESA Seminar on "Entrepreneurship in Sri Lanka" Dr Mrs.P.C.Rodrigo, Senior Lecturer Department of Economics of the University of Colombo raises a critical question of why those with a potential for investment fight shy of investment in productive economic activity and what could be done by way of policy to attract and channel their funds and aptitudes into priority investment areas.

Sri Lanka produced in 1984 and 1985 an output of goods and services worth between Rs.140 - 150 billion. (i.e. GDP at current factor cost). In the 1980s (with the exception of the year 1984), between 86 - 89 per cent of the country's Gross Domestic Product went into consumption.

Investment in absolute terms increased from a little over Rs. 2 ½ billion in 1970 to Rs. 22 billion in 1980, and to between Rs.35 - 40 billion in 1983 - 1985. In percentage terms this works out to 19 percent of the GDP in 1970 and and a 25 percent more in the 80s – an impressive performance one might say.

The entire amount however was not due to domestic investment activity. Computing an average for the period 1978 - 1986, national savings including migrant remittances financed only 60 percent of it, and the rest came from foreign sources. The last decade has seen an active promotion of foreign investment through missions and campaigns and generous incentives and concessions. Large amounts of foreign aid have been mobilised. The heavy dependance on foreign sources to sustain the country's investment effort has far-reaching implications. Apart from the return flow of dividends, interest etc. involved, one important implication is that if the foreign capital inflows were to stop overnight, investment programmes will have to be pruned down by nearly one half.

To give an idea of the magnitude of the task ahead; to support the growth target of 4.6 percent p.a. in GDP for the medium term ahead, (i.e. 1987 - 91) a total investment of Rs.284 billion (21% of the GDP) is contemplated. Of this, Rs.130 billion (46 percent is envisaged to come from the private sector, and Rs.154 billion from the public sector. The share of the private sector in the total investment effort is expected to go up from 40 percent in 1986-1987 to 49 percent by 1991.

In the financing of the contem ted investment programme, as much as 75 percent is expected to come from national savings. The relative contribution of foreign savings is expected to decline from 40 percent in 1986 to 16 percent by 1991. Thus, to improve the domestic savings - investment performance is an imperative must. This should also be viewed in a context of private transfers from Sri Lankans employed abroad levelling off.

Part of the government's current strategy is to shift the burden of investment gradually to the private sector. Budgetary investment is to be cut back and private investment and extra budgetary sources are expected to take the slack. Private enterprise is assigned an enhanced role, "to become the major force of further economic progress." Sectoral priorities have been spelt out. In view of the limited growth prospects in other sectors, vigorous, healthy, manufacturing development is seen as the imperative need. The exercise requires both the stimulation of savings as well as their effective channelling.

Every recipient of an income which leaves some margin after meeting the basic requirements of life (of himself and, where relevant, of his family) is a potential investor. This margin (i.e. potential) can be frittered away on consumption, hoarded, or put to some activity which can generate a stream of outputs. Logically, every individual with some margin (i.e. potential) faces a dilemma: to invest it or not to invest it.

"Investment" is a confusing term. It is used in a number of senses. In its broader interpretation it can mean putting funds into any use (eg. 'invest in a refrigerator', or a piece of land or in a 'good lunch' or in the education of children). Not all such uses will be output generating, however. The term investment is used here in the sense of deploying funds in a use which will generate productive capacity or a stream of outputs over a period.

What have been the constraints to investment in Sri Lanka? Why is investment slack? Investment is a function of a number of variables, and explanations are many. There is the familiar 'resource' argument that resources are not forthcoming in sufficient magnitudes to sustain the required investment effort. Another argument focusses on the investment climate. A third explanation runs in terms of the attitudes of the community towards uncertainity, risk taking, etc. The Third World investor is often accused of lacking innovation and dynamism in approach, and initiating little deviation from the traditional lines of activity pursued over generations.

Taking a close look at the economy in the mid 1980s one cannot help noticing the enhanced liquidity in the system in these years. This is manifested for instance in lottery ticket sales, public response to new share issues in the market, the expanding network of Finance Companies, sales of consumer durables etc. The real issue seems to be mobilisation and channelling of resources rather than a lack of resources as such ! The saver and the investor are not necessarily one and the same individual. Financial institutions play a useful intermediary role. If savers are averse to risk-taking in direct investments but have demonstrated a willingness to entrust their funds to banks and other financial intermediaries, these institutions can be developed to play a positive role in promoting investment. Finance companies for instance have a high potential but have shown a tendency to concentrate their activities in a few limited areas (hire purchase financing of houses, consumer durables etc). The recent bankruptcies may also have served to shake savers' confidence in the network of Finance Companies.

Turning to individuals' biases and responses, the Central Bank's Consumer Finance Surveys (CFS) throw some light on investment patterns and preferences of the Sri Lankan community in general. The latest survey data available (CFS, 1981/82) highlights the following features:

–Of all investment reported by spending units, financial investment (i.e. investment in fixed and savings deposits, bonds, securities, shares etc.) amounted to 55 percent and physical investment (i.e. land, buildings, plant and machinery, vehicles, stocks etc.) for only 39 percent.

–Within financial investments the most popular were savings accounts and savings certificates. (Together they accounted for close upon two-thirds of all financial investments). Furthermore, this investment was largely in the NSB and the two State-owned commercial banks. Comparison of 1978/79 and 1981/82 CFS data reveal a growing inclination towards financial investments.

Among the possible explanations for these patterns one may note
a) the higher interest rates paid on deposits in the early 80s;

b) general preference for more liquid forms of investment; and

c) limited availability of shares and similar instruments and lack of a broad based capital market.

Among physical investments, investment in plant and machinery was marginal at only 1 percent of total investment. The major investment items were observed to be commodity stocks, land and residential buildings, and commercial vehicles. Possible explanations for this pattern include:

– high house rents, the 'home-owning' tradition of Sri Lankans, tax concessions for housing etc.;
– appreciation of land values; and
– the opening of passenger transport to private sector participation.

The share of land purchases in the total is nevertheless marginal. Here, among other things, the ceiling on land holdings and declining profit margins in export agriculture deserve mention.

Loans and advances were another significant item accounting for 7 percent of all investments.

Thus, the general picture that emerges seems to be one of general bias against the kind of output- generating investment or entrepreneurial innovation that the economist is interested in. Rather than go in for long term commitments the preference seems to be for avenues which yield quick, secure returns and remain realisable in cash at short notice. The open economy has opened up a number of outlets which satisfies such aspirations (transport, trading, housing etc.). The investor cannot be accused of being irrational!

We also looked at another potential source of investible funds which recorded a significant expansion in recent times, namely, migrants' transfers. Analysis of data from several studies on returnee Sri Lankans from the Middle east has confirmed the Sri Lankan preference for financial investment and housing observed in the CFS studies. Purchases of land for residential purposes also emerges as an investment attraction among this group. Trade and commerce and transport equipment are other favoured investments. Government building, transport and other contracts seem to have attracted a fair number of male returnee migrants. Investment in plant and machinery and in manufacturing activity is conspicuously small as in the case of the CFS samples.

These investment patterns invite particular attention in view of the greatly enhanced potential of migrant savings as a source of investible funds. The fact that a substantial slice of such savings comes in the form of lump sum transfers is another significant feature.

Why those with a potential for investment fight shy of investment in productive economic activity and what could be done by way of policy to attract and channel their funds and aptitudes into priority investment areas is a critical issue for deliberation. Is it a mere question of resources and/or their mobilisation? Or, is it built-in, die hard irrationalities or biases in the system? Is it the political and economic climate with all its risks and uncertainities? The solutions need a careful identification of the underlying constraints.

Pattern of Industrialisation: Strategies and Responses

(Excerpts)

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These excerpts, mainly from the concluding part of a 30 page paper by Upananda Vidanapathirana, titled "Pattern of Industrialisation Strategies and Responses" in the publication 'Facets of Development in Independent Sri Lanka' are reproduced here with the intent of providing our readers another perspective on the investment climate in industry and entrepreneurship in Sri Lanka.

Export-led Industrialisation Strategy

Manufacturing industry which was severely constrained by the scarcity of raw materials, machinery and spare parts under the closed economy policy showed an immediate response to the liberalised economic policy introduced in 1977. In real terms, the rate of growth in gross industrial output jumped to 17 per cent in 1978 and averaged 22 per cent during the period 1978-80. This unprecedented level of growth in the industry was attributed mainly to the sudden availability of raw materials, machinery and spare parts in industries which had been starved of these essential components before 1977. During the period 1978-85 the average annual rate of growth in industry amounted to 10 per cent indicating that the growth momentum achieved in the latter part of the period is lower than that achieved in the initial three years.

soon after the introduction of the liberalisation policies entrepreneurs rushed to invest in the manufacturing sector to cater to a starved market. The substantial reductions in investment proposals since 1980 and the low level of implementation of the local industrial projects suggests that the relative prices in the economy have not been in their favour.

The pace of growth momentum achieved in the post 1977 period is, particulary impressive given the internal and external constraints, the economy encoutered. Although the strategy assumed acceleration of industrial activities by intergration of the economy into the world economy, the international environment was not favourable for Sri Lanka. This was because Sri Lanka's entrance into the Export Led Industrialisation (ELI) strategy coincided with the economic recession in the developed world which led to the imposition of protectionist measures against the exports of the developing world. These measures placed firm limits on the expansion of Sri Lanka's industrial exports. Internal constraints were mainly reflected in the ethnic problem which had an adverse impact on investment and production in the industrial sector.

Prospects for Industrial Development

The limited domestic marekt has been a constraint on the expansion of import subsituting industries in Sri Lanka. Even in the case of export oriented industries, exports are largely confined to garments and petroleum products. These products add not only a low value to production but also a high vulnerability to the economy. Prospects for petroleum products for a non-oil producing country also seems very limited. There are already constraints on refinery work. The propspects for garment exports are also not encouraging in a context of severe competition among third world countries on the supply side and increasing protectionist measures from developed countries on the demand side.

Developed countries have reacted to increasing manufactured exports from newly industrialising countries by erecting more and more non-tariff barriers (NTBs). NTBs which have created uncertainity among third world exporters are the core of developed countries neo-protectionist measures, to fend off competition from third world countries like Sri Lanka in the industrial countries'markets. In the light of the rising tide of neo-protectionism in the advanced countries, despite the fact that it runs counter to the spirit of the market mechanism, it appears that reliance on a few export products which are subject to protectionist measures are likely to raise the vulnerability of the economy. Bringing resource base sectors/priority sectors to production therefore may not only reduce the level of vulnerability of the economy to the external forces but also diversify the structure of export.

The issue however is whether identification and preferential treatment of priority industries constitute potential conflicts between policy objectives. Static analysis suggests that identidication and preferential treatment of priority sectors may create conflicts between policy objectives. This is because of the belief that one sector cannot be protected without discriminating against the other sectors. The central question howevr, is as to what extent the assumption of static analysis is valid to the condition of countries such as Sri Lanka.

The national and international markets are riddled with imperfections. Protectionist measures adopted by developed countries against key products in which LDCs are expected to have a comparative advantage are increasing. It is equally questionable whether a small third world economy such as Sri Lanka, relying largely on foreign trade, can rely on the state to centrally determine the direction of the economy to achieve rapid industrial development.

The Sri Lankan experience demonstrates that increased reliance on market forces as well as "over protection" have obstructed the development of the Sri Lankan industrial sector. The South Korean experience also proves that a proper blend of market and non-market forces would lead to a sound industrial development. Korea's pragmatism is combined with a considerable degree of flexibility between market forces and state intervention (Leudde Neurath: 1984; Datta-Chaudhuri: 1981). A package of policy incentives is therefore required to reduce or eliminate the effects of exposing export oriented industries to excessive international competition and over protecting import substituting industries in a pragmatic manner. Such a policy pacakage can generate dynamic benefits which exceed its static costs with a minimum level of conflict.

GROWTH AND ADJUSTMENT IN SOUTH ASIA

Experiences of Bangladesh, India, Pakistan and Sri Lanka in implementing adjustment programs supported by the IMF's extended Fund facility

Bijan B.Aghevli, In-Su Kim and Hubert Neiss

Most developing countries have faced serious payments imbalances during the last two decades and sought the assistance of the International Monetary Fund In lending support to these countries the Fund has advocated adjustment programmes. In this paper, three IMF economists Bijan B.Aghevli Assistant Director Asian Department of the Fund, In-Su Kim an Economist working in the Asian Department of the Fund, and Hubert Neiss Deputy Director in the Fund's Asian Department review the experiences of four South Asian countries including Sri Lanka. They show that these four countries were generally successful in achieving their growth objectives, despite a deepening of the international recession and adverse weather conditions. The study demonstrates that in Sri Lanka's case in the absence of financial stability, it was difficult for the authorities to focus their attention on structural adjustments.

During the late 1970s and early 1980s, the international economy experienced a re-emergence of serious payments imbalances, primarily reflecting the sharp increases in oil prices and the precipitous decline in commodity prices. These imbalances were particularly pronounced in the non-oil developing countries, which suffered not only from the marked deterioration in their terms of trade, but also from the ensuing recession in the industrial countries and the sharp rise in international interest rates. The severe external payments difficulties facing these countries led to a substantial increase in the number of adjustment programs supported by Fund resources under stand-by and extended arrangements, from 54 (with a total commitment of SDR 8 billion) during 1976-78, to 88 (committing SDR 24 billion) during 1979-81.

This increase in Fund-supported programs was accompanied by a growing emphasis on structural adjustment to strengthen productive capacity and foster growth. In view of the substantial payments imbalances and the apparent persistence of the shift in the terms of trade, the adjustment strategy generally attempted to supplement traditional demand oriented policies with more comprehensive structural policies. These policies were designed to improve resource allocation, promote domestic investment and savings, and strengthen external competitiveness. This shift in the adjustment strategy was reflected in a market increase in member countries recourse to extended arrangements with the Fund, which were designed to provide medium-term assistance to cope with structural imbalances. Among the members that entered into such arrangements were four South Asian countries-Bangladesh, India, Pakistan, and Sri Lanka which together accounted for more than half of the total commitment of Fund resources under the extended facility during 1979-81 (Table 1).

The article reviews the design and implementation of the growth-oriented adjustment programs adopted by the four South Asian countries, and attempts to analyze the impact of both policy and exogenous variables on actual developments during the program periods.

Background

The four countries initiated adjsutment efforts in the late 1970s before the introduction of the extended arrangements with the Fund. Except in India, these efforts to counter a deteriorating external position were supported by regular stand-by arrangements with the Fund. However, despite the progress made in achieving economic adjustment, the four countries continued to face a number of deep-rooted structural problems that required sustained reform efforts over the medium term. While the extent of these problems varied across the countries, a number of common factors are identifiable.

At the time the adjustment efforts were launched economic growth in most South Asian countries was hampered by inefficiencies in key economic sectors, industrial and infrastructure bottlenecks, and cost-price distortions arising from infrequent adjustments of both administered prices and the exchange rate in the face of domestic inflation. Further, adverse weather disrupted agricultural production

TABLE 1
ARRANGEMENTS OF SOUTH ASIAN COUNTRIES UNDER THE EXTENDED FUND FACILITY

	Date of agreement	Original expiration date	Date of cancel-lation	Amounts In millions of SDRs: Commit-ted	As percent of quota[1]	Drawn
Bangladesh	Dec. 1980	Dec. 1983	June 1982	800	(351)	220
India	Nov. 1981	Nov. 1984	May 1984	5,000	(291)	3,900
Pakistan	Nov. 1980	Nov. 1983	—	1,268	(445)	1,079
Sri Lanka	Jan. 1979	Dec. 1981	—	260	(219)	260

Source: IMF
[1] Based on the size of quota at the time of the inception of the programs.

and, in the case of India, also interfered with power generation. Fiscal conditions remained weak because of low and inelastic revenue and rapidly rising government expenditure propelled by increasing social and development needs. The fiscal imbalance was a primary reason for excessive monetary expansion, and consequent inflationary pressures.

Meanwhile, weak production bases, together with inadequate producer incentives, continued to constrain the countries export capacities. At the same time, rising domestic demand led to strong import demand, which was suppressed through tight exchange and import controls at the expense of economic efficiency. These strains on the domestic economies and the balance of payments positions were intensified by the marked deterioration in the terms of trade and the subsequent slowdown in export markets.

Design of extended programs

The adjustment strategy adopted by the countries under review was to strengthen productive capacity and promote economic expansion in a climate of financial and external stability.Higher economic growth rates were to be realized by supply-side measures designed to raise both domestic investment and savings and to improve the efficiency of production and resource allocation. The latter goals were to be achieved primarily by correcting cost-price distortions, relaxing restrictive industrial regulations, and liberalizing trade policies. All these policies were to be accompanied by restrained financial management aimed at maintaining price stability in order to facilitate structural adjustment. In view of the relatively long gestation period of structural programs, the external current account position was expected to improve only gradually.

Underlying the supply-oriented adjustment strategy was the recognition that there was substantial scope for export growth and import substitution in these economies through the removal of structural imbalances and bottlenecks. The strategy was also consonant with the urgent developmental need to provide employment for the growing labour forces and to alleviate poverty. The adjustment programs were, to varying degrees, incorporated into national development plans.

The adjustment programs of all four countries envisaged a substantial increase in domestic investment. In view of the major role of the public sector in these countries, the government was expected to take the lead in expanding investment. In general, public sector investment programs were to be reviewed and reoriented in close consultation with the World Bank to improve infrastructure, exploit comparative advantage, and avoid projects with excessively long gestation periods. Most programs foresaw a broadened role for private investment, encouraged by the adoption of policies conducive to liberal industrial and import licensing arrangements and to foreign collaboration.

The increase in domestic investment was to be financed by greater domestic resource mobilization, mainly through the public sector. The government budget was expected to generate large savings through tax reforms, reductions in subsidies, and restraint in wage outlays. Substantial savings were also to be generated by nonfinancial public enterprises primarily through flexible pricing policies and the rationalization of their operations. The programs also generally stressed the need for encouraging private savings through flexible interest rate policies, introduction of new financial instruments, and strengthening of financial intermediation.

The alleviation of cost-price distortions was seen to be essential for improving resource allocation and stimulating production. Procurement prices were to be increased substantially, particularly for those agricultural commodities that were either exportable or import substitutes. Administered prices for industrial outputs were also to be adjusted more flexibly to reduce distortions. Furthermore, increased financial incentives were designed to improve the profitability and external competitiveness of the export sector, which had been adversely affected by heavy indirect taxes and inflationary pressures. A flexible exchange rate policy responding to developments in domestic and external prices would support these measures.

A crucial element of the adjustment programs was the liberalization of restrictive industrial and import regulations which had been pervasive. In order to encourage private sector production and facilitate modernization, the programs called for the simplification of licensing approval procedures and for the easing of regulatory restraints on capacity utilization and expansion,particularly in India. The liberalization of imports was aimed primarily at ensuring increased access to raw materials and intermediate goods so as to alleviate supply bottlenecks and improve international competitiveness. Imports of capital goods were also to be liberalized in order to improve the efficiency of domestic production and investment. The program in Pakistan envisaged a shift from quantitative restrictions to tariffs for regulating imports and protecting domestic industry.

Notwithstanding the emphasis on structural measures, prudent demand management remained a principal element of the adjustment programs, as financial and price stability was viewed as a fundamental prerequisite for successful economic adjustment. A major policy objective was the strengthening of the budgetary position through measures to increase revenue and restrain expenditure. The programs sought to reduce substantially the overall budget deficit and thus government recourse to bank borrowing. At the same time, they envisaged restraints on the growth of liquidity and domestic credit to moderate inflationary pressures while supporting economic growth and private sector activity.

Performance under programs

The performance of the four economies with respect to growth, inflation, and external adjustment was uneven. India and Pakistan broadly achieved the original objectives of the programs, while Sri Lanka and Bangladesh were less successful in meeting all their targets. Generally, the average economic growth during the program period was broadly in line with program targets (Table 2). In the case of India and Pakistan, a favourable growth outcome was accompanied by relative financial and price stability and a larger-than-anticipated improvement in the external current account deficit. In contrast, Sri Lanka suffered from both intensified inflation and a marked deterioration in its current account balance. In the case of Bangladesh, program objectives in terms of both growth and inflation were not met and the reduction in the current account deficit was made possible only through a drastic cut in the issuance of import licenses. The Fund's extended arrangement with Bangladesh became inoperative during its first year.

The path and pace of adjustment in these economies were influenced significantly by unanticipated developments in exogenous factors and policies. Droughts during the programs adversely affected growth in Bangladesh, India, and Sri Lanka. The task of adjustment was further complicated by the prolonged international recession and by a precipitous decline in export prices that reinforced emerging fiscal difficulties, especially in Bangladesh and Sri Lanka. On the other hand, all four countries benefited from higher-than-expected remittances particularly from oil exporting countries, and from only moderate increase in oil prices (which were especially important for India).

TABLE 2

SELECTED ECONOMIC INDICATORS OF FOUR SOUTH ASIAN COUNTRIES (IN PERCENT)

	Pre-program	Program annual average: Targets	Program annual average: Outcome	Post-program annual average[1]
Bangladesh				
Real GDP growth	3.5	7.2	3.7	3.1
Inflation (Consumer Price Index)	18.5	11.5	14.4	10.2
External current account as proportion of GDP	–11.5	–12.09	–10.6	–8.1
Exports *(In billions of dollars)*	2.4	0.9	0.7	0.8
Imports *(In billions of dollars)*	2.4	2.8	2.5	2.4
India				
Real GDP growth	7.8	4.8	5.3	4.0
Inflation (Wholesale Price Index)	18.2	9.3	6.1	6.4
External current account as proportion of GDP	–1.6	–2.1	–1.6	–1.4
Exports *(In billions of SDRs)*	6.6	9.5	7.6	8.6
Imports *(In billions of SDRs)*	12.3	15.4	13.2	13.3
Pakistan				
Real GDP growth	7.3	5.7	6.5	5.3
Inflation (Consumer Price Index)	10.7	10.0	8.4	8.0
External current account as proportion of GDP	–4.5	–4.6	–3.3	–4.2
Exports *(In billions of dollars)*	2.4	3.2	2.6	2.5
Imports *(In billions of dollars)*	4.9	6.2	5.6	6.0
Sri Lanka				
Real GDP growth	5.8	6.0	6.0	5.1
Inflation (GDP deflator)	7.8	11.7	18.1	15.1
External current account as proportion of GDP	–5.5	–10.8	–14.9	–10.4
Exports *(In billions of SDRs)*	0.7	0.9	0.8	1.1
Imports *(In billions of SDRs)*	0.8	1.2	1.4	1.8

Source: IMF
Note: dates for pre-program, program, and post-progam periods are defined as follows:

	Pre-Program period	Program period	Post-program period
India	1980/81	1981/82–1983/84	1984/85–1985/86
Pakistan	1979/80	1980/81–1982/83	1983/84–1984/85
Sri Lanka	1978	1979–1981	1982–1984
Bangladesh	1979/80	1980/81–1981/82	1982/83–1984/85

[1] Partly preliminary.

The extent of policy implementation also varied across the four programs. On the whole, significant progress was made in the area of pricing policy: incentives to agricultural producers were raised, subsidies were reduced, and the financial position of public enterprises was improved. The price adjustments, however, did not eliminate certain costly subsidies or mobilize sufficient resources for investment in some cases. However, implementation of structural measures, especially those aimed at increasing tax revenue, mobilizing private savings, and relaxing industrial and import controls, was weaker than envisaged. Measures taken to promote exports were also modest. Financial policies were generally restrained in India and Pakistan, but they turned out to be expansionary in Bangladesh and Sri Lanka.

Production, Investment, and Prices

Production, investment, and prices. The favourable growth performance achieved by India, Pakistan, and Sri

Lanka was generally associated with higher agricultural production. This reflected the effects of policies to increase the area under irrigation and to stimulate the spread of modern production techniques and inputs, particularly fertilizer; the use of fertilizer was encouraged by reducing its price and by strengthening support services to farmers (India and Pakistan). Notwithstanding recurrent adverse weather, substantial progress was made in Bangladesh, India, and Pakistan toward self sufficiency in foodgrain production.

Industrial developments were also generally encouraging. Manufacturing registered a strong expansion in Pakistan, as a result of new capacity for import substitution, fuller capacity utilization, and improved availability of imported inputs. The growth of India's manufacturing sector remained well below program targets, reflecting the impact of the world recession and continued domestic controls. However, performance in basic industries and infrastructure generally improved, and bottlenecks were reduced substantially. The production of oil increased robustly in both India and Pakistan, leading to a substantial reduction in oil imports in the former.

Domestic investment relative to GDP was below target in both India and Pakistan. Public investment in these countries was lower than expected because of limited resource mobilization by the public sector. In India, private investment was constrained by weak domestic and external demand in the aftermath of the oil price increase and by uncertainties over the relaxation of industrial regulations and import controls. Sri Lanka was successful in achieving the program growth target, but at the expense of excessive expansion of public sector investment; private investment in the country also remained buoyant, aided by monetary and fiscal concessions and low prices for imported capital goods.

Despite the importance attached to domestic resource mobilization, savings fell short of program targets in all four countries. Shortfalls were registered by both the public and private sectors in the case of India. In India and Sri Lanka, private savings were adversely affected by drought induced declines in agricultural income, a sharp fall in the terms of trade, high energy prices, and weak policy initiatives. Weaker than expected domestic resource mobilization, however, was partly offset by buoyant worker's remittances in most South Asian countries.

Inflation subsided broadly in line with program targets in India and Pakistan, as restrained financial policies and improved supplies more than offset the increases in administered prices. In Sri Lanka, however, the rapid expansion in domestic credit, combined with a sharp increase in international oil prices, gave rise to strong inflationary pressures, and the program targets were exceeded by a wide margin. Inflationary pressures were also strong in Bangladesh.

External Developments

The cumulative current account deficit in India and Pakistan over the program period was substantially smaller than targeted. Bangladesh also kept its current account deficit below target, primarily through a substantial tightening of import licensing. In contrast, the current account deficit in Sri Lanka exceeded the program target because of higher imports and poor export performance.

Stronger net exports of services (workers) and private transfers (remittances) helped limit the deficits in India and Pakistan. In the former, a significant decline in imports, mainly because of reduced oil imports, also contributed to the lower deficit. The growth of non-oil imports was generally slower than expected in these countries, largely because of the improved domestic availability of key agricultural commodities and industrial inputs.

Exports were considerably below expectations in all four countries. The cumulative shortfall in export earnings largely offset the gains achieved in lowering imports in India and Pakistan. In most countries, the average growth rate of export volume was below that achieved by non-oil developing countries during the corresponding period. The disappointing export growth performance reflected the severe international recession, lingering domestic impediments to export development, and generally weak external competitiveness.

Post-program developments

During the program period, the South Asian countries stepped up thier efforts at structural adjustment. The progress made in this area, however, was relatively limited, partly because of the intensity of structural imbalances before the programs, but also because of delays in policy implementation and the lags before policies become effective. In order to sustain the structural adjustment efforts, most countries introduced follow-up measures after the Fund supported structural adjustment program came to an end.

In India, significant liberalization measures were taken during 1985 in the area of industrial licensing, import policy, and tax and financial reforms. The coverage of antimonopoly legislation was reduced considerably through a substantial increase in the asset limit and the exemption of a large number of industrial groups from restrictions on capacity expansion. In addition, most of the exempted industries were no longer required to operate under licenses and large companies were permitted to diversify their operations.

Regulations applying to foreign collaboration and investment were liberalized with a view to facilitating import of technology. Substantial progress was made toward a more liberal import regime through the removal of licensing requirements, simplification of procedures, and the termination of monopoly imports by public corporations for a wide range of materials and components. In the area of tax policy, the structure of direct tax was rationalized, with a substantial reduction in tax rates and an increase in the exemption limit for personal income tax, in order to foster private sector growth and reduce tax evasion. Steps were also taken to alleviate rigidities in the interest rate structure through an increase in interest rates on government securities. Complementary action is now under consideration for further financial sector reform.

In Bangladesh, an adjustmen program was reinstated in 1982/83 and supported by a new stand-by arrangement. Under the new program, the fiscal position was improved by increasing taxes, reducing subsidies, and adjusting key administered prices. At the same time, exchange rate policy was conducted more flexibly and a more liberal import policy was pursued with a view to improving the efficiency of the economy, especially that of the export sector. Adjustment efforts were stepped up in 1985/86 supported by another stand-by arrangement, in order to deal with a re-emerging deterioration in the balance of payments and weakening in growth performance.

The authorities in Pakistan continued to pursue flexible pricing policies for pertroleum and gas, leading to a significant increase in petroleum production and to the containment of petroleum subsidies. However, further progress toward structural adjustment was needed in key areas, including tax reform, liberalization of import controls, and promotion of manufactured exports.

The pace of structual adjsutment in Sri Lanka was slowed by the deterioration in national security, while the need for urgent action was softened by a marked boom in export prices of key primary commodites in 1983/84. The authorities, however, have been cognizant of the need to overcome the longstanding structural weaknesses in the economy, especially the diminishing growth potential of the narrowly based export sector, a weak budgetary process, and the poor performance of public enterprises. The first step in phased program of tariff reform was undertaken in late 1984.

Notwithstanding the further steps some of them have taken, continued adjustment efforts remain essential in the South Asian countries, particularly in the areas of export development, economic efficiency, and public finance. During the post-program period, export volume growth has remained generally low, partly reflecting slow improvement in economic efficiency. With the exception of Sri Lanka, the fiscal deficit has widened, as expenditure has risen rapidly in the face of stagnant revenues; in the case of Sri Lanka, a large cutback in current expenditure resulted in a substantial decline in the fiscal deficit. The weak management of public enterprises has remained a source of low productivity and financial instability in most countries.

Conclusions

The adjustment strategy of Fund-supported programs underwent a major shift in the late 1970s in response to the change in economic environment arising from the sharp rise in oil prices and the associated imbalances in members payments positions. Adjustment programs placed greater emphasis on structural measures to promote domestic resource mobilization, alleviate price distortions, ensure increased access to imports, and reorder investment priorities in countries that sought Fund assistance.

The adjustment programs adopted by the four South Asian countries, which have much in common in the way of economic legacy and structures, were framed against this emerging shift in the Fund's adjustment strategy. Under the programs, these countries were generally successful in achieving their growth objectives, despite a deepening of the international recession and adverse weather conditions. Notwithstanding this growth performance, the extent of structural adjustment achieved in key areas was below expectations. Public sector resource mobilization was constrained by inadequate returns from improvements in the tax systems and by rising current expenditure.

The most disappointing development for all four countries was the continued weakness in export performance. Export growth was below that achieved by other developing countries, mainly because of low productivity growth and inadequate financial incentives. Despite some progress in liberalizing trade regimes, the continuing tight control on imports constrained improvements in economic efficiency and export growth. Although there appears to be further scope for external adjustment through efficient import substitution in these countries, the strong development of the export sector is crucial for achieving external viability over the medium term. In these circumstances, continued progress in liberalizing industrial and import controls and in improving the profitability and external competitiveness of the export sector remains essential.

The experience of the South Asian countries during the program periods confirms that restrained financial management plays a major role not only in improving the balance of payments but also in facilitating structural adjustment. The cases of Bangladesh and Sri Lanka demonstrate that, in the absence of financial stability, it is difficult for the authorities to focus their attention on structural adjustment. In addition, financial instability tends to exacerbate existing cost-price distortions, resulting in inappropriate investment patterns and inadequate savings. In view of the dominant role of fiscal operations, success in demand management will inevitably require bold actions to reform the tax systems and limit the excessive expansion in current expenditure.

The slower-than-expected progress in undertaking structural adjustment was primarily attributable to delays in policy implementation. These delays were associated both with long and careful preparations required for most of the structural measures and with weaknesses in administrative capacity for effective policy implementation. These technical and adminstrative constraints were compounded by social and political resistance to structural reforms. In view of the lengthy process of forming a political consensus for reform, the required measures were implemented only gradually in these countries.

In conclusion, our review of the structural adjustment experiences of Bangladesh, India, Pakistan, and Sri Lanka suggests that successful reforms require considerable preparation so that they can be implemented swiftly when the conditions are ripe. Further structural adjustment can only be successful if the momentum of economic reforms that are initiated under a Fund-supported program is sustained beyond the period of the program. Ultimately, it is the commitment of governments to reforms that determines the pace and intensity of structural adjustment. It is, therefore, encouraging that in all four countries structural efforts have been continued and, in some areas, intensified following the Fund-supported adjustment programs.

THE NEW WORLD OF ARTIFICIAL INTELLIGENCE

Domenico de Gregorio

New developments are taking place in the field of "artificial intelligence" research and the horizons being opened up by the development of the fifth generation computer appear astonishing. In this article in the UNESCO 'Courier' Domenico De Gregorio, a specialist in mass communication and managing editor of the Italian edition of the Courier discusses the surprising and inspiring consequences from the advances in the field of artificial telligence.

Gregorio raises the fundamental questions now being asked of how soon robotics will take the place of man; and ultimately will man be rivalled, if not completely outstripped by machines

The days may soon be past when a pessimist could say that a computer, for all its capacity for rapid calculation, was a "high-speed idiot" because it could not "reason". We are now moving into the age of "intelligent machines" and of "artificial intelligence a discipline that has an important place in informatics.

Artificial intelligence is a branch of informatics which studies the theoretical bases, methodologies and techniques which make it possible to design hardware and software systems capable of performing tasks which to the non-expert would seem to belong exclusively to human intelligence. The aim of artificial intelligence research is to produce systems which behave intelligently and interact with the world outside them just as human beings do.

In practice, the results of research into artificial intelligence are now becoming part of our everyday lives. Artificial intelligence systems are acting as advisers and experts in such fields as lexicological analysis, medical diagnosis and genetic engineering. There are robots which have the power of perception and visual recognition and the ability to behave rationally in unfamiliar circumstances, terminals which converse in natural languages, either in speech or writing (though there are limits to their abilities in this sphere), systems that solve problems and demonstrate theorems.

Every two years, specialists meet to exchange information at the International Joint Conference on Artificial Intelligence (IJCAI), which is usually held in a leading world centre for study in this field. The first conference was held in Washington, D.C., in 1969, and since then conferences have taken place in London, Stanford, Tbillisi, Cambridge, Tokyo, Vancouver, Karisruhe and Los Angeles. This year the Conference is being held in Milan, in recognition of work done in Italy in this field of advanced research.

The philosophy of IJCAI is based on the belief that contemporary thought has succeeded in unfying the concept of culture; the old idea that scientific culture and humanistic culture are two different things has been discarded. The culture of our day should therefore be characterized by the synthesis of these two forms of mental activity.

Artificial intelligence is thus claimed to be the supreme example of an interdisciplinary subject, as was made clear at a symposium to prepare for the IJCAI Conference in Milan, held at the St.Vincent Cultural Center (Italy) on 21 February last. The work of the symposium, entitled in an allusion to Beckett's play, "Waiting for Robots: the immediate future of artificial intelligence", could perhaps be summarized by saying that two fundamental questions are being asked in in this field: how far and how soon will robotics be able to take the place of man; and will man ultimately be rivalled, if not completely outstripped, by machines.

Mr.Basillio Catania, the director of the Turin Telecommunications Research Centre and Laboratories, a leading Italian research institution in the field of artificial intelligence, pointed out that man possesses muscle power, faculties of perception, and intelligence. Over the centureis, man has constantly aimed to extend these capacities. His first success in enhancing his muscle power, the invention of the wheel, was followed by many others and culminated in the harnessing of the atom. He enhanced his faculties of perception by inventing increasingly efficient tools, leading to the development of the electron microscope, the radio telescope , and television.

In the sphere of human intelligence, one of the most significant steps forward was the invention of the pocket calculator, the prototype of the complex modern machines which make it possible to increase man's mental capacity and will do so to a still greater degree in the future. Artificial intelligence simply enables man to 'extend'his own intelligence, as it were, by providing a "prosthesis" to help him perform various functions.

We must, however, beware of thinking of the future of these "prostheses of intelligence" as a collection of anthropomorphic robots: a car may be regarded as a prosthesis of legs, but it is not the same thing.

One of the most advanced fields of artificial intelligence research has led to the construction of what are known as "connection machines", in which a large number of tiny calculations, instead of working sequentially, work on various pieces of information at the same time which is what happens in the human brain and combine the results. This was the field selected for the EEC project on "Basic research in adaptive intelligence and neurocomputing".

The great scientific discoveries of the twentieth century, such as the splitting of the atom and, more recently, genetic engineering, have conferred on man enormous powers which can be used for good or ill. Artificial intelligence, too, may be used for good or ill. The availability of vast amounts of information which can be analysed in a fraction of a second can be a source of financial and political power and can thus be open to all kinds of abuse. But artificial intelligence can also bring many advantages. It may help

help to provide more rewarding occupations for millions of people, increase productivity and take some of the drudgery out of work.

Advances in the field of artificial intelligence will soon produce "fallout" which may have surprising and awe-inspring consequences such as giving sight to the blind. A project now under way at Rockville, Maryland, is currently examining the possibility of using about a hundred thousand micro-electrodes, associated with nerve cells in the embroyonic phase of the visual cortex, to connect with the visual structures of the brain and give sight even if only rudimentary sight thanks to a microscopic telecamera implanted in a pair of spectacles, completely by-passing the eyeballs and the optice nerve.

While the opportunities opened up by artificial intelligence can be expected to create new and more satisfying kinds of work, problems are bound to arise, ranging from the revaluation of certain categories of work and those who do it, to problems connected with privacy and the security of information, which may have important legal implications.

Coutesy: The UNESCO Courier

Some key words in artificial intelligence

The expression **artificial intelligence** was formulated for the first time in 1956 by John McCarthy of Stanford University (United States).

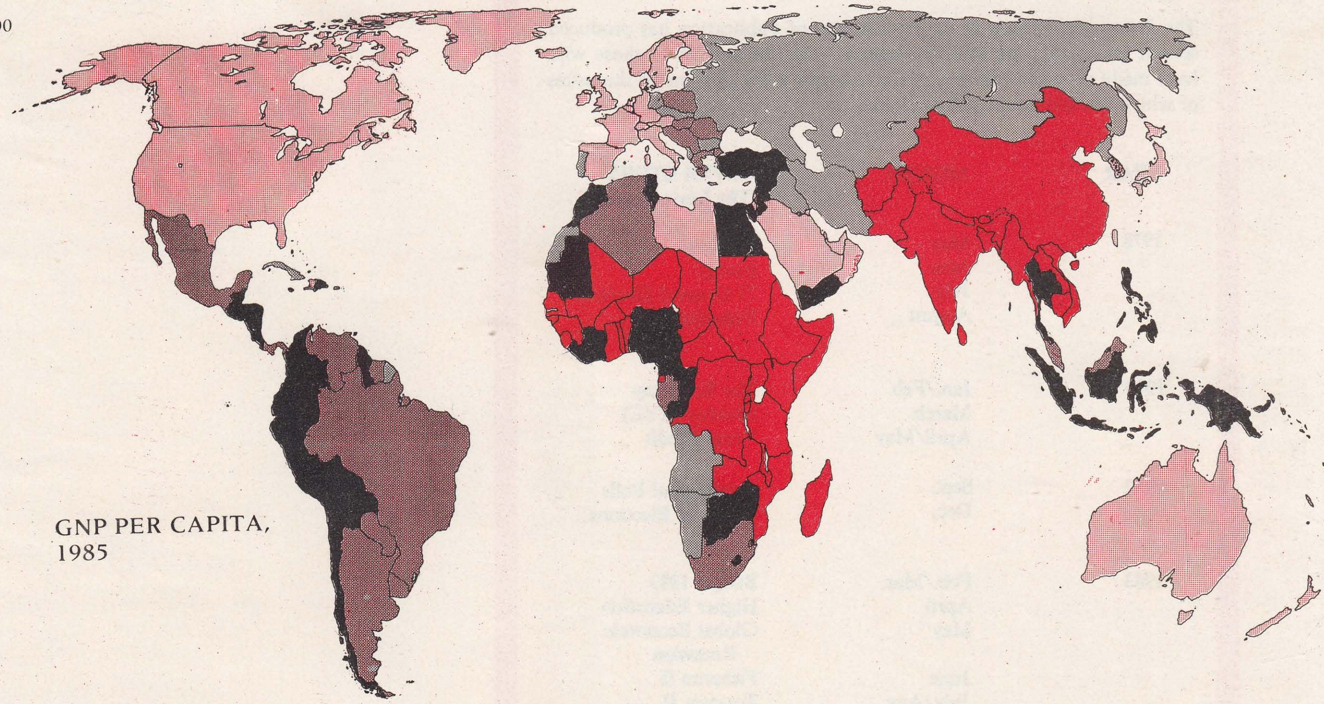
This new discipline proposes to overcome the current limits of informatics in certain areas, improving and extending the performance of computers. Its purpose is not to "simulate" human intelligence but to "emulate" it, since there is no basis for excluding the possibility that some manifestations of human intelligence, problem-solving, for example, can also be provided by adopting methodological approaches that are not necessarily anthropomorphic.

Within artificial intelligence, an **Expert System** is a system capable of automatically solving problems of a certain type, proposed by the users of the system. An Expert System is the result of the collaboration of two designers, the "knowledge engineer" who develops the algorithms (the sequences of instructions for solving a particular problem) necessary to construct the solution and the structures suitable for receiving the base information, and the "problem expert" who furnishes the body of facts and deductive rules, called the knowledge base of the Expert System.

Industrial exploitation of Expert Systems will increase with the use of **fifth generation machines** (see article page 16) which are currently the subiect of intensive research. The Expert System is directly embedded in the electronic architecture of these machines, which are created with the most advanced technologies of microelectronics, such as Very Large Scale Integration circuits, which present a million transistors on a single silicon chip.

Gnp per capita, 1985

- $400 and less
- $401 to $1,635
- $1,636 to $4,300
- More than $4,300
- No data

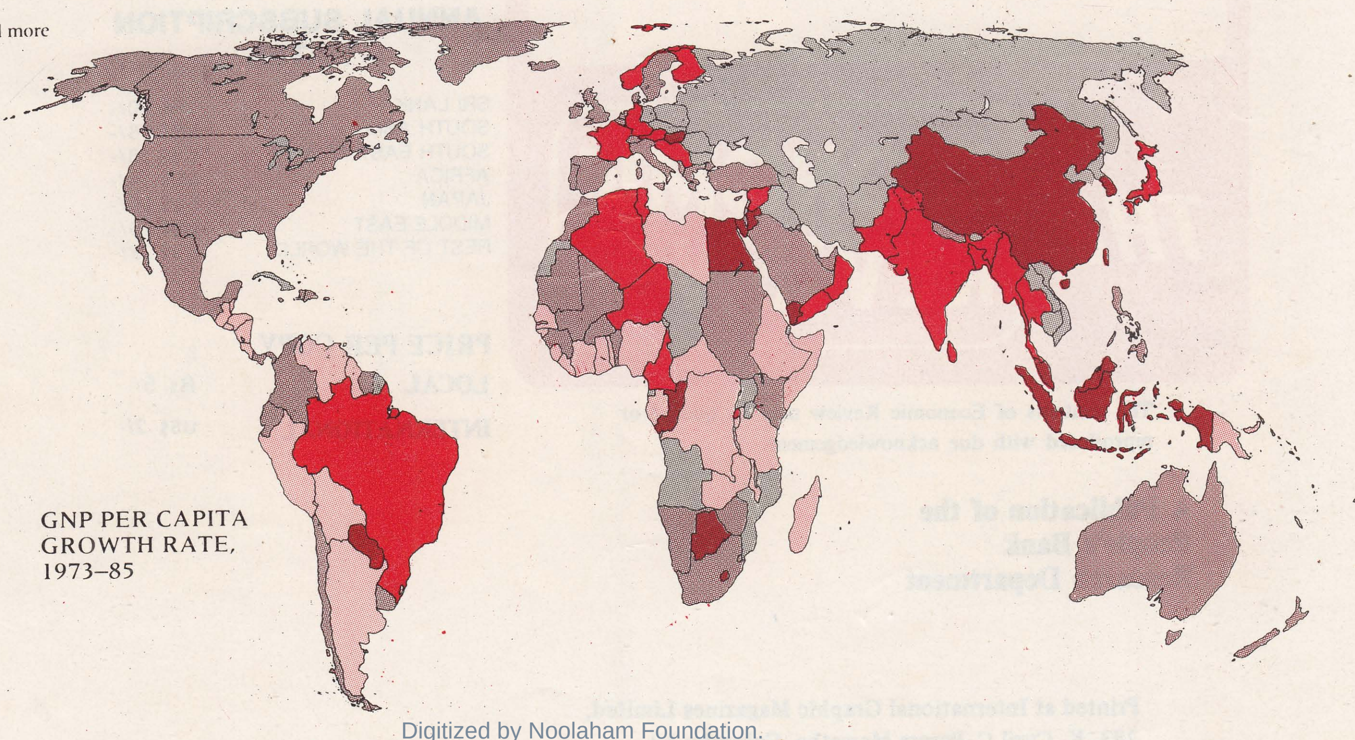


GNP PER CAPITA, 1985

The maps here and on the back (inside) cover are reproduced from the World Bank Atlas 1987. The Atlas, now in its 20th edition, reveals a widespread pattern of rising per capita income in most countries over the past decade, contrasted with frequent instances of falling per capita incomes in recent years, notably in 1985. Relative income levels reflect contrasting experience with real growth, but they are also influenced by currency fluctuations, which have been sharp in recent years. In particular, the four year rise of the U.S.dollar brought it in 1985, to its highest level in decades. The rise held down the dollar gnp estimates of many countries. But, the dollar's subsequent decline is reflected only gradually in gnp estimates, and the relative levels and the ranking of per capita gnp estimates will change in future editions.

Gnp per capita growth rate, 1973–85 (per year)

- Less than zero
- Zero to less than 2 percent
- 2 percent to less than 4 percent
- 4 percent and more
- No data



GNP PER CAPITA GROWTH RATE, 1973–85

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