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ECA/UNIDO Regional Training Workshop for
Industrial Administrators in English-
speaking African Countries

Addis Ababa, 9 to 28 October 1972

**SUMMARY OF DISCUSSIONS, CONCLUSIONS
AND RECOMMENDATIONS**

TABLE OF CONTENTS

	<u>Page</u>
1. INTRODUCTION.....	1
2. SUMMARY OF DISCUSSIONS AND CONCLUSIONS.....	1
3. RECOMMENDATIONS.....	11

INTRODUCTION

1. In the context of Africa's Strategy for Development in the 1970s and in particular, the targets set for achievement in the field of industry, African Governments face new and increasing responsibilities for industrial development and promotion. Their activities aimed at effective mobilization and utilization of resources include the development of national skills in many disciplines and their efficient deployment for project management.
2. Personnel development is a key policy objective in the strategy in order to be able to deal effectively with the whole range of problems of industrial development. Industrial administrators share a large part of this responsibility inasmuch as their function include planning and programming for industrial development; formulation and administration of industrial policies; selection of industrial projects and investment follow-up and the promotion of institutions, extension services and training programmes.
3. In recognition of the crucial role played by industrial administrators in improving the quality of the management of industrial development, ECA and UNIDO jointly organized a Regional Training Workshop for Industrial Administrators from 9 to 28 October 1972 in Addis Ababa, with a view to examining the field of industrial administration; the functions performed by the industrial administrator; modern concepts and methods of management which may be useful to his work; the resources available to industrial administration; the problems of industrial administration and future needs for research, consultation and training in the field. Experimentally, the Workshop was confined to representatives from English-speaking African countries.
4. This document is a compilation of the discussions, conclusions and recommendations which emerged from the Workshop. It is hoped that in due course these may lead to adoption of actions at national, multinational and regional levels in pursuance of the objective of the Workshop.

SUMMARY OF DISCUSSIONS AND CONCLUSIONS

The Field of Industrial Administration

5. Industrial administration is a field that is still in the process of being identified and established. Economic development authorities have generally discussed the field in broad terms such as the need for stable government and efficient administration as an essential foundation for economic development. The fact is that the field is now taking shape with developing countries. Accordingly, the Workshop felt it was now appropriate to establish definitions of the following terms:

Industry - Manufacturing and associated productive interests including agro-industry.

Industrial Development - The process by which industry is initiated, expanded and improved.

Administrator/Manager - One who makes a systematic use of means in the achievement of objectives.

Industrial Administrator - An administrator of industrial development working with industry.

Industrial Manager - A manager within industry.

Objectives - The purpose/goal to which effort is directed.

Project - A set of related activities with a scheduled beginning and end and measurable objectives.

Service - A set of related activities with measurable objectives.

6. The Workshop agreed on the importance of the Industrial Administrator's taking a systematic approach to his work. This involves looking at the traditional elements of administration - planning, organizing, delegating, leading, and controlling - as an integrated whole. This perspective enables the administrator to think through each of his major work responsibilities in advance. For each, he considers the goals, the work programme, the planned use of resources, and the measures by which he will evaluate results and take frequent corrective action.

7. The Workshop examined four aspects or "dimensions" of Industrial Administration as part of the process of identifying and establishing the field.

The vertical "dimension" established that the range of Industrial Administrative positions goes from individual administrators who approach their work as a system for accomplishing planned objectives, to the Principal or Permanent Secretary of a Ministry of Industry or Head of a National Development Authority. It was agreed that administrators who take a traditional bureaucratic approach are below-the-line of Industrial Administrators. Ministers of Industry are above-the-line, since they deal primarily with industrial policy while Industrial Administrators deal primarily with implementation.

The horizontal "dimension" established that the industrial administrator's work is generally based on industrial sector strategy established by industrial economists and on studies made by planners/economists. At the other end the industrial manager takes over the planning, construction and operation of specific industrial projects. However, the Industrial Administrator may participate in project identification and project promotion, depending on how his national industrial machinery is organized. He may also facilitate and monitor planning and construction of specific projects.

A performance "dimension" established that the highest level of performance is either directing a major part of the industrial development machinery or co-ordinating the machinery in such an effective way that objectives are attained. Other levels of performance involve actively co-ordinating and stimulating, providing services efficiently, and controlling or regulating positively - down to the level of co-ordinating/monitoring.

An entities/resources aspect The typical entities (Organizations and institutions) in which Industrial Administrators generally work were identified as:

Ministry of Industry
National Development Authority
Development Finance Institutions
Statutory Boards
Industrial Research Institutes
Industrial Training Institutes
Industrial Co-operatives
Industrial Information and Statistics Organizations
Consulting Groups
Fédération of Industries - Chambers of Commerce -
Professional Associations
Standardization, Testing and Quality Control Organizations
Special Industrial Institutions (Design and Development Centres,
Small-Scale Industries)

The internal resources typically available to Industrial Administrators include:

Other Ministries
Legislative Bodies
Educational Institutions
Trade Unions
Banking System

The principal external resources available to Industrial Administrators include:

Industrial Information
Technical Assistance
Finance Sources
Training Institutions
Consultants

8. The Workshop agreed that it would be useful in improving industrial administration if elements common to the work of all Industrial Administrators could be identified. The use of modern management methods and concepts could then be considered as they apply to improving the performance of each element. The following elements were agreed upon:

Elements common to the work of the Industrial Administrator -

- (a) Planning and Programming the work of industrial development organizations/institutions
- (b) Co-ordinating efforts among industrial development organizations/institutions
- (c) Emphasizing staff development.

- (d) Administering projects
 - (e) Providing other industrial services
 - (f) Drawing on national and international institutional resources for industrialization
 - (g) Furthering national goals and Pan-African goals
 - (h) Effecting change
- } Means for carrying out elements 1, 2 and 3

9. Elements 4 and 5 - administering projects and providing industrial services - were further examined to identify the functions performed. These were classified into four categories and specific functions listed under each. The following listings are typical of the African countries represented at the Workshop, but are not intended to be exhaustive.

(a) Assisting existing industry through:

(i) Consulting (extension services)

The Workshop noted that Industrial Administrators perform advisory services themselves, as well as calling on outside advice

(ii) Fostering linkages and service industries

(iii) Industrial information

(iv) Industrial research

It was noted that some institutes do research in marketing and management as well as on technical aspects

(v) Training facilities

The importance of including specific training programmes in investment negotiations was noted, although this was not considered a substitute for legislation and/or levies with regard to training

(vi) Improving the investment environment

This covers such varied services as standardization and testing programmes, promotion and protection of individual property rights, and licensing arrangements

(vii) Appropriate legislation and controls

- (b) Attracting private investment (mixed economies) by:
- (i) Promoting opportunities for investment (assuming pre-feasibility studies have been made). The potential cost and time saving in shifting detailed project development to the interested participants was noted;
 - (ii) Adequate financial incentives

This covers direct and indirect assistance to domestic investors as well as foreign investment incentives;
 - (iii) Availability of suitable plant sites at reasonable cost.
 - (iv) Full information on the investment environment
 - (v) Providing data for investors' feasibility studies
- (c) Assisting implementation of new ventures (mixed economies) by:
- (i) Conducting negotiations with domestic and foreign partners
 - (ii) Assisting in arranging finance
 - (iii) Co-ordinating and expediting government approvals

It was noted that ease of doing business with the government is one of the most important elements in the investment environment;
- (d) Generating and managing public investment (assuming a feasibility has been made):
- (i) Funding
 - (ii) Design
 - (iii) Construction
 - (iv) Management
 - (v) Providing supporting services [see Item (a), (i)-(vii), above]

Application of modern management concepts to industrial administration

10. The Workshop took up each element of the work of the Industrial Administrator, examining modern management concepts which might find application. The results may be summarized as follows:

Element 1 - Planning and Programming the Work of Industrial Development Organizations/Institutions

Following the theme established by the Workshop - that a systematic, integrated approach should be taken in industrial administration work - a methodology of

administration-by-objectives was examined. This called for the administrator to analyze his work assignments to determine the inputs (resources to be applied), the outputs (specific items to be produced) and the objectives (what conditions are to be attained as a result of the effort). In addition, the administrator establishes, in as specific terms as possible, how the outputs and objectives are to be measured. The Workshop felt this system would be a useful start in organizing and planning the work of an industrial administration organization, and could also be used in carrying out other work elements.

11. The Workshop concluded that the administration-by-objectives (a-b-o) methodology had two major advantages over traditional bureaucratic administration.

(a) In bureaucratic administration, there is the strong tendency to emphasize the procedures in the administrative process. In a-b-o, the emphasis is on results. (Inputs leading to outputs, etc.).

(b) The traditional bureaucracy spends more time on detailed supervision and in solving specific problems. The a-b-o approach to administration devotes more time to selecting, defining and communicating objectives and in evaluating alternative means of achieving them.

12. The Workshop also examined the decision-tree methodology to be used in preparing work programmes following the establishing of an a-b-o framework. It was agreed that Industrial Administrators often needed to prepare such programmes based on general statements in economic development plans or other policy documents. The methodology calls for breaking the work down, level by level, and for each level, systematically examining the alternative courses of action and choosing one course on objective grounds.

Element 2 - Co-ordinating Efforts Among Industrial Development Organizations/Institutions

13. The Workshop agreed that since there is usually no single organization in charge of all aspects of industrialization, the industrial administrator must have special skills as a co-ordinator.

14. The Workshop examined a particular co-ordination problem in one country which involved inter-ministerial effort, and the solutions which were designed to solve it. It was noted that co-ordination problems require different solutions, depending on the formality or informality of the organizational procedures, the frequency of contacts, the nature and duration of the effort, and the personalities involved. It was stressed that whatever co-ordination means were adopted, techniques of holding meetings should be developed, and clear and prompt follow-up of the results of meetings be maintained.

15. The subject of programme budgeting was introduced as part of co-ordination since it is a new means of harmonizing the economic development plans and national budget of a country.

16. The basic contribution of programme budgeting is changing traditional line item (men, materials, equipment, etc.) budgets into budgets based on programme objectives. It reports physical accomplishment as well as money

spent. It was noted that this type of budgeting has much in common with economic development which is also goal-oriented. Its adoption, on a pilot project basis, and phased with other administrative reforms, should therefore be encouraged.

Element 3 - Emphasizing Staff Development

17. Staff development is an inherent and primary part of an Industrial Administrator's work in Africa. The Workshop felt that new means of creating an environment for individual growth in an organization should be carefully examined.

18. The first means examined was manpower planning as employed in a number of African countries. This process measures existing skills against the human resources requirements of the country's development plan and then designs programmes to fill the needs. The programmes involved education and training on and off the job, and improving the utilization of existing staff. The Workshop felt that manpower planning provided the necessary data base for comprehensive staff development.

19. A second means examined was the use of administration-by-objectives between an individual employee and his supervisor through face-to-face discussion. In this process, they mutually translate the plans for the forthcoming period into objectives which the employee is to accomplish.

20. A third means examined was based on the acceptance of studies which demonstrate that employees are motivated by factors such as achievement, recognition, responsibility, advancement and the work itself rather than factors such as company policy and administration, supervision, work conditions, even salary. The means consist of changing specific job content and removing unwarranted controls, thus enabling the motivating factors to take effect.

21. The importance of job ladders or schemes of service which tied in educational and training requirements to job advancement, were noted.

Element 4 - Administering Projects

22. The Workshop agreed that much of the industrial development work under Elements 1, 2 and 3 can be organized on a project basis. The advantages are that objectives are set over a fixed time period, and that results are therefore more controllable and measurable. Also, projects carry more sense of urgency which is relevant in development work. There is also more reliance on individual problem solving by the project team and thus less red tape.

23. The elements of the project cycle and the close relation between project administration and administration-by-objectives were noted. The contribution of network analysis to project planning and to improving allocation of resources during project administration was illustrated. The elements of a project control document were discussed. It was pointed out that numerous changes were to be expected during the project cycle, and that the proper response is to quickly establish and attempt to maintain new control points.

Element 5 - Providing Industrial Services

24. The administration-by-objectives concepts already introduced were held to be applicable in providing the services used to carry out Elements 1, 2 and 3. Administrative concepts in relation to the industrial development machinery were reviewed. Special emphasis was placed on new approaches in cost analysis and cost calculation as well as on the implementation of supply management.

Element 6 - Drawing on National and International Institutional Resources for Industrialization

25. The reason for the inclusion of this element is that an industrial administrator can greatly increase his usefulness by keeping his knowledge of institutional resources current. This means being aware - within feasible limits - of the activities and capabilities of domestic and foreign entities involved in industrialization, and of significant economic trends. No additional new management technique was noted.

Element 7 - Furthering National Goals and Pan-African Goals

26. Various goals, the means of attaining them and the problems encountered, were discussed. The important responsibility of the Industrial Administrator to consider the total costs and benefits of projects was stressed. It was noted that many new techniques and approaches are being developed in the attainment of various national goals.

Element 8 - Effecting Change

27. Industrial Administrators live in an environment of change, since change is inherent in development. The Workshop took note of new techniques called Organization Development (O.D.) which may help administrators to bring about desired changes and to learn to manage the process of change. Organization Development pays close attention to relationships between people in organizations. It brings about change by working directly with the people who are to be affected, facilitating them in focusing their energy towards specific, desired objectives, and improving the quality of relationships in the organization.

28. The participants made no judgement on the techniques, but previous workshop discussion had brought out that total group participation in reaching a consensus was in the African tradition.

Joint Ventures

29. The Workshop examined various approaches to establishing joint ventures. It approved the concept of taking sufficient time for each partner to understand the other's "business style".

30. It was agreed that joint ventures should work towards adopting a philosophy of non-control of local operations by a foreign partner.

Training Facilities

31. The participants examined the innovative training programmes of one country, and felt that many of the ideas should be considered for wider application. These ideas included: design of training programmes by national personnel with operating experience; reviewing the content of training, and by making training more relevant, to eliminate qualifications; use of engineers as training managers, reporting to top managers of industry; establishing training facilities within plants, in insisting that expatriate trainers work to local training plans; recognizing individuals whose performance indicates management potential and giving them special training.

32. The Workshop approved the idea of training of the African partners' staff in the foreign plant. It noted that both on grounds of cost element and effectiveness of development of practical skills, were greater advantages in providing training facilities to African nationals in the industrial plants in foreign countries than arranging training facilities in African countries with the services of expatriates.

Finance

33. The Workshop examined the range of financial alternatives available for investment projects. These could be classified on the basis of severity of terms, and then be related to the internal rate of return on projects, in the following manner:

<u>Industrial Projects</u> <u>Internal Rate of Return (r)</u>	<u>Financial Alternatives</u>
1. High r	1. Commercial loans
2. Medium/high r	2. Export credits
3. Medium r	3. Standard development loans
4. Low r	4. Grant-like loans
5. Long term economic or social value only	5. Grants

34. This perspective enables the industrial administrator to tap the full range of alternatives, and to be more selective in his choices.

Institutions and Services

35. The Workshop noted with concern a tendency to provide too many uncoordinated institutions in certain countries. The problem has been made severe in some cases by providing institutional buildings and equipment out of phase with the human resources and the administrative base. International agency programmes and projects should be conceived in the context of the country objectives, needs and priorities.

36. The Workshop also expressed the view that the structure, authority and functions of parastatal industrial development organizations should be well-defined. For reasons of expeditions, decision-taking and implementation,

efficiency of functioning and continuity of approach, avoidance of frequent changes in their top management personnel, non-interference in their day-to-day operations and availability of full time chairmen are desirable.

37. In processing proposals from African countries for industrial finance and consultancy assistance, international institutions should adopt an objective approach and not subject their decisions to the procurement of equipment and services from specified sources.

38. African countries need negotiating help from Africa-based expert teams for expeditious settlement of industrial disputes. The establishment of suitable African machinery for this purpose is recommended.

39. African countries need market intelligence and market co-ordination assistance as a means of stimulating the establishment of industries.

40. ECA project descriptions are a useful service for stimulating African industrial development. Elaboration of raw material and market aspects is suggested.

41. Concepts of management accounting and audit constitute an increasingly important field and an understanding of these concepts is necessary in institutions dealing with questions of industrial administration and management. It was considered specially important that financial report be provided more promptly than at present as the report is a vital element in management control.

42. The Workshop emphasized that modern concepts and tools were as relevant to industrial administration as to industrial management.

RECOMMENDATIONS

43. The Workshop recognized that industrial administration is to be considered a distinct entity and profession and has an important role to play in fostering industrial development. After considering the administrative requisites of industrialization, the Workshop made the following recommendations:

- (i) The industrial administration machinery in African countries should be strengthened with necessary technical assistance services from international agencies such as UNIDO and ECA in order to fulfil its responsibilities for carrying out the programme of action outlined in the Addis Ababa Declaration on Industrial Development in Africa in the 1970s. (E/CN.14/INR/194).
- (ii) In order to accelerate African industrialization efforts, industrial administration should provide for effective inter-ministerial and inter-agency consultations and co-ordination services to examine general and specific operational problem areas, improve channels of communication, cooperation and relationships and help accelerate implementation of approved policy measures.
- (iii) The "Operational Industrialization System" outlined in the ECA document (E/CN.14/INR/200) provides a basic framework for devising, evaluating and strengthening the institutional arrangements for industrial investment promotion. Its adoption with modifications considered necessary in the light of country conditions is recommended.
- (iv) High priority should be accorded to the strengthening of the national facilities for undertaking long term and short term training programmes for development of various skills. To this end, legislative and administrative measures should be considered. African countries should be assisted by international agencies in setting up/strengthening of independent training institutions for specific vocations. UNIDO/ECA should assist in working out suitable arrangements for the introduction of training programmes.
- (v) A survey should be undertaken by ECA to assess the available resources of skills in various disciplines in Africa and a registry be kept and revised periodically in order to enable the African countries and international recruiting agencies to draw upon these resources for their industrialization programmes with a view to minimizing dependence on expatriate personnel from non-African countries.
- (vi) At the same time, it is necessary for African Governments to undertake a survey of the long term needs of managers, supervisors, operators and other project personnel so as to help evolve a concrete programme of personnel training and recruitment.

- (vii) African Governments should consider incorporation of specific conditions in the industrial investment/project approval and agreements to provide for training of African counterparts to expatriate personnel. It should include controls to ensure successful completion of training operations within the contract period.
- (viii) It is equally necessary on the part of all companies to initiate and document in-service training measures for nationals right from the project engineering and the construction stage of a project. In considering applications for work permits, governments should insist on the inclusion of training assignments in the job descriptions of expatriate personnel.
- (ix) To enable African countries strengthen their project formulation, evaluation and negotiation machinery, the establishment of institutional services in Africa to provide industrial intelligence on costs of technologies, machinery, intermediates, raw materials, marketing, etc., with UNIDO/ECA assistance is recommended.
- (x) African industrialization efforts are handicapped by the tendency on the part of developed countries to limit their industrial operations in Africa to assembly type of manufacture. Apart from being denied the opportunities for basic manufacturing operations, African countries are placed at an extreme and continuous disadvantage of having to buy the spare parts and components from proprietary sources abroad. Accordingly, adequate provision should be made in the Project Agreements for basic and improvisational manufacture.
- (xi) International agencies concerned with industrial development should take measures to facilitate easier availability of patents and licensing for specialized process know-how to African countries.
- (xii) In the technical assistance and supporting programmes of industrial development in African countries, short and long term measures should be included for rationalization of the activities of national agencies and institutions concerned.
- (xiii) Industrial administration should be included in the operational activities of the proposed African Institute of Management Development ^{1/} as well as in sub-regional and national institutions of this kind.

^{1/} Proposal submitted on 18 October 1972 by ECA to UNIDO for comments, endorsement and transmission to UNDP for its approval.

- (xiv) Special industrial administrative efforts are necessary for improving the developmental environments for the growth of the small-scale industry sector, rural industrialization and linkage industries. In particular, the establishment and/or strengthening of institutional technical services for undertaking feasibility studies and for making available detailed information on these sectors is recommended.
- (xv) Specialized industrial financing institutions in African countries should be assisted by UNIDO/ECA with technical services to enable them undertake project evaluation and consultancy as well as project management.
- (xvi) International organizations which sponsor industrial promotion meetings of African countries and potential investors/machinery suppliers/consultancy firms should check the record of participating foreign firms in advance, as a matter of assistance to African countries. Additionally, such organizations should help African countries, where required, in examining the details of joint venture proposals including quality and appropriateness of plant and machinery, raw materials and technology.