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ORGANIZATION AND OPERATION OF A NATIONAL
STANDARDIZATION BODY

by

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CONTENTS

	Page
1. PRELIMINARY CONSIDERATIONS	3
2. GROUPS OF COUNTRIES	3
2.1 The group of industrially developed countries	3
2.2 The group of industrially developing countries	4
3. ROLE OF THE STATE IN THE STANDARDS INSTITUTION OF A DEVELOPING COUNTRY	6
3.1 Participation in the institution's policy-making	6
3.2 Participation in the financing of the institution	6
3.3 Action to make observance of the standards advantageous or compulsory	7
3.4 Participation in the application of standards	7
4. THE STRUCTURE OF A STANDARDS INSTITUTION	8
4.1 Management block	8
4.2 Auxiliary administration block	9
4.3 Standardisation block	10
4.4 Auxiliary information block	12
5. SUMMARY	12
CHART	13

1. PRELIMINARY CONSIDERATIONS

Standardisation questions play a leading role in a country's over-all development, which means that, when drawing up and deciding on a national development policy, they have to be taken into account and brought into harmonious relationship with such factors as ideology, the legal structure and the situation in the various branches of national life. There can be no question, therefore, that a body responsible for the functions related to standardisation - more or less closely linked with central government organs in accordance with the requirements - must be regarded as an important element in the national infrastructure.

It would be rather difficult to establish a model for a standards institution having general validity in the sense of being applicable to countries with different ideologies and at different stages of development, etc.; we believe, however, that if countries are first classified into groups according to their characteristics it will then be possible to devise an organisational plan capable of efficiently meeting the needs of the countries in each group.

2. GROUPS OF COUNTRIES

In our view, the characteristics of decisive importance for such a classification are those relating to the level or degree of industrial development. In this respect, and ignoring finer distinctions, we can identify two main groups: the industrially developed and the industrially developing countries.

2.1 The group of industrially developed countries

Among these countries we find a number of more or less common characteristics which distinguish them from the other group. These characteristics include:

- (a) Advanced technological development;
- (b) Availability of scientific and technical information;
- (c) A certain degree of economic stability;
- (d) Comparatively high per capita income;
- (e) Availability of financial resources for industrial investment.

This combination of characteristics enables these countries to establish a number of undertakings to exploit a given industrial sector, and even within that sector they can devote themselves to manufacturing the same type of product.

This potential proliferation of competitive industrial firms provides a favourable climate for struggles for the capture of the market which are won and lost on the basis of two decisive factors, price and quality, which are themselves closely interrelated.

If we now consider the characteristic of comparatively high per capita income, which means relatively high consumer purchasing power, we are led to the conclusion that the importance of the "price" factor tends to fall and that of the "quality" factor to rise, the latter being understood as conformity between the actual characteristics of the product and those required to meet the consumer's needs efficiently. We thus arrive at a situation which can be described as critical for all those firms which fail to take due account of quality, and it becomes essential for them, if they are to survive, to ensure that the characteristics of their products improve in relation to the quality standards established.

This means that while, in this group of countries, a standards institution may be responsible for establishing such norms or standards, the drive for developing them comes from the productive sector. As a general rule, the consumption sector plays a role which may be described - perhaps with some exaggeration - as passive.

If now we consider the role of the State or the central Government in protecting the consumer, we will conclude that, in this group of countries, State intervention in the sense of providing pressure or incentives to ensure the observance of the standards is not really essential and that therefore a standards institution may find its place amongst those elements of the national infrastructure which are more closely linked to the private than to the public sector, since government participation will be reduced to a minimum.

But of course, if national policy excludes free enterprise, the standards institution will obviously have to become a State body.

2.2 The group of industrially developing countries

In general, most Latin American countries can be regarded as belonging to this group. As more or less common characteristics, we may distinguish the contraries of those which we listed in the case of the industrially developed countries, with the addition of the fact that in these countries there is an irrational distribution of wealth, since more than 95 per cent of the economic resources which might be devoted to industrial investment are in the possession of less than 0.5 per cent of the population, and, moreover, more than 60 per cent of the inhabitants play no significant part as consumers in the process of the marketing of industrial products.

The combination of characteristics is reflected in the small number of people investing in the manufacture of a given product, within a limited and easily saturated market, with the corollary that industries tend to be characterized by an absence of competition and enterprises acquire market monopolistic features.

Monopolistic industry tends to have negative results in respect of the two basic factors in marketing: price and quality. We shall confine ourselves to the question of quality, since prices can be considered within the framework of a control policy based on tax or protective measures according to the different political systems, without reference to the question of technical standardisation.

So far as quality is concerned, a monopoly industry presents a potential problem in that the manufacturer may sacrifice the quality of his products in order to increase his profits, a danger which is often increased by various mechanisms designed to protect him from the competition of imports, usually from developed countries, and ranging from increased customs duties to prohibiting the import of similar products.

In these circumstances, it is essential to set up machinery which, by means of pressure or incentives, ensures that the quality standards are observed because if no such machinery exists these standards will remain mere documents which will serve no purpose but to adorn the institution's archives or library. If such machinery is to be truly effective, it requires the participation of entities having real authority - that is to say, of bodies forming part of the public sector.

From these considerations we are forced to conclude that, in developing countries, the State must play a leading part in matters of standardisation.

We should like to add to the above considerations that, even in the formulation of national plans and programmes with regard to foreign trade, State participation is essential in the promotion of national industry, in particular from the standpoint of standardisation.

In this connexion, we should like to refer to specific factors such as the following. At the present time, the industrially developing countries constitute part of the market for goods produced in more developed countries, and when considerations of standardisation are left on one side this allows the import of a variety of types and models of products all intended for the same purpose, which makes it difficult, and often impossible, for national industry to play any part in manufacturing

parts or accessories. Thus there are industrial concerns working at 40 per cent of their installed capacity, while at the same time products or parts are imported whose manufacture involves no technical or other difficulties except for those resulting from the small number of units of each model which these concerns would have to manufacture, as they easily could with their idle capacity.

We therefore conclude that it is desirable for the State to intervene in matters of standardisation in the developing countries.

3. ROLE OF THE STATE IN THE STANDARDS INSTITUTION OF A DEVELOPING COUNTRY

3.1 Participation in the institution's policy-making

The various measures adopted by the executive body of an organisation are guided by the institutional policy worked out at top management level, and consequently, since the activities of the standards institution must meet the country's requirements and be in harmony with the national development programme, we think that one of the levels at which the State should participate is the top management level in the formulation of institutional policy.

The form of State intervention in this field will be determined by how far the standards institution is dependent on the central Government. The system adopted may vary from the inclusion of government representatives in the board of directors to the direct dependence of the institute, as a subsidiary organ, on a government department.

3.2 Participation in the financing of the institution

We stated in section 2.2 above that one of the common characteristics of the developing countries is their lack of economic resources for investment in the private sector and the excessive concentration of such resources among a small number of persons. In addition, an analysis of the behaviour of the private sector vis-à-vis government bodies leads to the conclusion that, in many cases, there is a somewhat reserved attitude reflected in a certain coolness towards anything involving joint action. While we do not say that this is universal, we think it is necessary for State participation in the financial side of the standards institution.

The forms of such participation may vary, from direct State subsidy to the indirect method of adopting legal provisions which compel or encourage the private sector to contribute to the institution's financing.

3.3 Action to make observance of the standards advantageous or compulsory

We think that State intervention in this field is of very great importance. In the light of the considerations that we set forth in regard to the developing countries, the problem arises as to whether conformity of the products sold within the country with the standards laid down is to be made obligatory.

We think that, while compulsion may be prejudicial to the success of standardization, the desired result may be attained by measures which avoid the drawbacks inherent in any form of compulsion.

Compulsion may be maintained in the case of technical standards which are directly connected with public health and food supplies, as well as in regard to anything related to public or State security. This is easily understandable and acceptable. Compulsion might also be extended to those products which play an essential role in the national economy; but we think that better results are obtained by measures offering incentives.

Remembering that, in this group of countries, the State is the major consumer, we can suggest that incentives might take the following forms:

- (a) The purchase by the State of products meeting the national standards;
- (b) Official recognition of a quality seal or mark indicating conformity with the standards through the granting of preferential treatment to products which possess it;
- (c) The development of a policy of protection for national industry based on the prohibition of imports when, in addition to the traditional considerations of price and ability to supply the market, etc., domestic industry manufactures products which conform to the standards laid down.

3.4 Participation in the application of standards

In the previous section (3.3), we considered State participation from the standpoint of the adoption of measures designed to enforce or to promote the application of standards. Another field of activity which might be regarded as complementary to the above is that of checking the observance of standards.

For the same reasons as those we outlined in the previous section, it is the State's responsibility to adopt measures for the protection of the consumer, a very weak factor in the marketing equation. Thus the State should take action in regard to verifying the quality of products, primarily within the framework of the provision of technical advice. This function of the State can, and we think it should, be delegated to the standards institution, and this strengthens our view that that body should be an official organ, either a government department or a decentralised public body.

We thus find ourselves led to give the institution an additional function, involving the introduction of control machinery, alongside its basic function of fixing standards.

4. THE STRUCTURE OF A STANDARDS INSTITUTION

In a standards institution we can distinguish a number of functions inherent in the role that it has to play as an element in the national infrastructure; these may be arranged as follows:

- (a) Management functions;
- (b) Auxiliary administration functions;
- (c) Standardisation and control functions;
- (d) Information functions.

Each of these groups of functions must be carried out by an organ or major unit ("block") located at a particular hierarchical level within the structure of the institution.

4.1 Management block

In the management block, we can distinguish various management units responsible for carrying out specific functions. Possible management units are:

4.1.1 High-level management unit

Basically, this would be responsible for the formulation of institutional policy and appraisal of the activity carried out by the units and organs located at lower hierarchical levels.

As far as its structure is concerned, we consider it desirable that organisations representing the national economy in the public and private sectors should participate, taking into consideration of course the fundamental policies characterising the various systems of government.

4.1.2 Executive management unit

The functions of this unit could centre round the establishment of provisions regarding the carrying out of operations within the framework of the guidelines of institutional policy established by the high-level management unit, with subsequent verification of their implementation.

It is considered highly desirable that the chief of the executive management unit should be a member of the high-level management unit, with or without power of decision therein, as established by the statutory provisions or regulations of each institution.

4.1.3 Advisory unit to the executive management unit

Although, in view of its advisory nature, this unit would lack any power of decision, it could have a preponderant influence on the decisions taken by the executive management unit.

We consider that it should have an advisory capacity and be responsible to the executive management unit.

It might consist of representatives of the other blocks, supplemented by staff drawn perhaps from outside the central structure of the institution, according to the nature and scope of the matters calling for their participation.

4.2 Auxiliary administration block

This unit would be responsible for carrying out the auxiliary administrative functions necessary in any organisation that has the nature of an enterprise - since a standards institution can be considered as a service enterprise.

Within it we can distinguish two types of organs in terms of hierarchical levels:

- (a) Chief administrative office;
- (b) Executive organs of the administration.

4.2.1 The chief administrative office

This would be directly responsible for administrative management within its field of action.

4.2.2 Executive organs of the administration

These would be located on a second hierarchical level and would be responsible for those administrative matters within their specific areas.

At this level would be located: executive organs related to the budget, personnel, printing and publications, supply, etc., according to the degree of complexity of each institution.

4.3 Standardization block

This block is the essence of the institution since it bears the responsibility for carrying out the action to be taken on standardisation.

Its structure should correspond to various criteria defined in advance. Among these we shall mention first the criterion of division into sectors.

It is obvious that the scope of standardization is very wide, which consequently suggests that, in order to make co-ordination simpler and more effective, it is necessary to establish sectors grouping together areas within which there is a certain degree of relationship or affinity.

According to the criterion adopted for their determination, these sectors may vary in number and scope; relatively large sectors may be established, as when the subjects are grouped by scientific discipline (mechanical engineering, electrical engineering, education, etc.), or smaller sectors, such as those based on considerations of similarity of products (household electrical appliances, textiles, paints, agricultural products, etc.).

Another criterion on which the structure of the standardisation block would depend is the scope of its participation in verifying the application of standards.

Various types of machinery can be established with the specific purpose of verifying the application of standards. Among these we shall mention the system of certification, the granting of a quality seal or mark indicating conformity with standards, the weights and measures system, etc.

These various types of machinery would require, according to their complexity, the establishment of organs responsible for the functions concerned, although we consider that the functions of verification of the application of standards could be a complementary task of the organs set up as a consequence of the division into sectors made for the purpose of the study and formulation of standards.

By the advance determination of these criteria and others we shall obtain a clear conception of the most suitable structural model for the unit that we wish to design; however, we shall now consider its composition on the basis of the levels of its constituent organs, as follows:

4.3.1 General co-ordination level

This level is known in some organisations as that of technical direction or management - more or less separate from the administrative and other aspects of the institution, and basically confined to standardisation proper.

The quality seal committee and the standardisation council would be included at this level as supporting and advisory organs, the former being responsible for proposing regulations with regard to the quality seal and the latter for advising the technical management on the process of formulating and establishing technical standards.

4.3.2 Level of co-ordination within each sector

Once the sectors referred to in paragraph 4.3 have been determined, it would be necessary to assign action on each sector to a responsible organ with co-ordinating functions, but this time with a more restricted scope and with the aim of maintaining the unity and uniformity of the sector.

4.3.3 Level of co-ordination within sub-sectors

This level would be that of direct responsibility for the study and formulation of technical standards, and consequently the various specialised committees would belong to it. In line with what has been said above, it would be responsible for directly verifying the application of standards.

4.4 Auxiliary information block

This block would be a supporting element responsible to the executive management unit and carrying out strictly auxiliary functions in relation to the fundamental activities of the institution. It would be responsible for collecting, storing, registering and distributing scientific and technical information and all types of documents or other data.

5. SUMMARY

What has been said in this paper can be summarised in the following points:

5.1 A series of factors should be taken into account for the purpose of establishing an organisational model for a standards institution, among which we can mention: State policy with regard to business activity, national development policies and plans, the degree to which the observance of standards would be mandatory, etc.

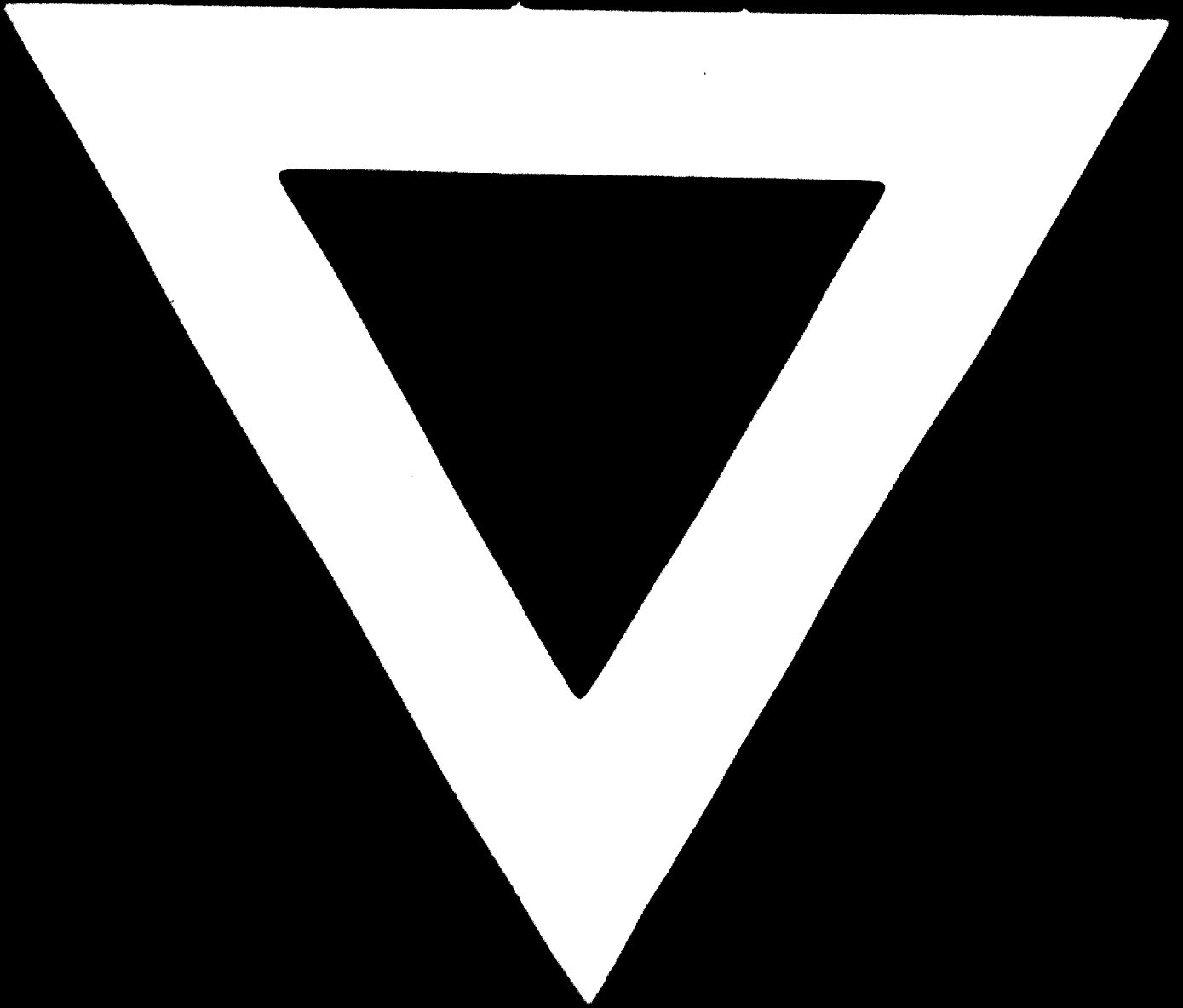
5.2 Conditions in the industrially developing countries favour the establishment of monopolistic enterprises, which might be a determining factor in regard to State intervention in the field of standardisation.

5.3 State participation could most advantageously be manifested in the formulation of the institution's policy, in financing, in enforcing or encouraging compliance with standards and in control of their application.

5.4 The organisation of the standards institution could be based on the concept of functional "blocks", clearly differentiated according to the primary functions that each should carry out. For this purpose it is considered that there are four basic blocks.

5.5 The operation of the standards institution would be governed by the considerations outlined in the present paper, under the responsibility of its various constituent organs.





3 . 12 . 73