

SCIENTIFIC AND TECHNICAL INFORMATION SERVICES FOR INNOVATIVE INDUSTRIES & BUSINESS INFORMATION PRODUCTS WITH SPECIAL REFERENCES TO INDONESIA

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ABSTRAK

To support and motivate industrial growth as well as to keep up industries with global change in economy, trade and technology, there should be an applicable system of collection of information and monitoring of changes that will easily be retrieved by industrial users. The availability of Information network on Industry, such as Industrial Information System Network (SINAS), many important databases centres, as well as standard and patent information also play important role in providing appropriate information to develop better industrial products in Indonesia.

INTRODUCTION

The objectives of industrial development in Indonesia are to strengthen the national economy by creating forward and backward linkages between sectors, improving the resilience of the national economy, expanding employment and business opportunities, and promoting the growth of all sectors of the economy. Industrial development in the Sixth of the Five Years Development Plan (Repelita) VI will be geared towards self-reliance and improved competitiveness, both the domestic markets and in foreign markets, while preserving the environment.

The objectives of industrial development in repelita VI are to achieve a sufficiently high growth rate so that industry can become the main vehicle for stimulating economic development, and so that a stronger and more diversified industrial structure can emerge supported by increased technological capabilities and optimum utilization of economic resources. Additional objectives are to improve industrial competitiveness and the ability to produce high quality products capable of penetrating international markets; to promote the growth of small and medium

size industries, including rural industries; and to broaden the regional distribution of industry, particularly in the eastern part of Indonesia. By depressing industry to the regions, centres of economic growth and potential can be developed in the outer islands.

In Repelita VI, manufacturing, includes oil and non-oil/gas manufacturing, is expected to grow at an average annual rate of 9.4%. Non-oil/gas manufacturing will grow at an average rate of 10.3% per year. At this rate of growth, the contribution from manufacturing as a whole to GDP will increase from 20.8% at the end of Repelita V to 24.1% at the end of Repelita VI, and the contribution from non-oil manufacturing will increase from 17.6% to 21.3%.

Along with increased industrial production, exports of manufactured products are expected to increase by an average of 17.8% per year, and to reach US\$ 54.8 billion by the end of Repelita VI.

Non-oil/gas manufacturing consists of agroindustry, basic metals, capital goods, chemicals, and other important industries. Agroindustry, including processed food, processed timber, leather goods, goods made of rubber, and paper, is expected to grow on average of 8.2% per year. Basic metals and capi-

tial goods, including industrial machinery and equipment, transportation equipment, electronics and telecommunications, is estimated to grow on average of 12.6% per year.

In addition, the chemical industry, including chemicals, plastics, and non-metallic minerals, is expected to grow by 9.7% per year. Other manufacturing industries, such as textiles and garments, are estimated to grow on average by 13.0% per year.

Manufacturing as a whole is expected to create additional employment for about 3 million people. At this level of absorption, industry should account for 25.3% of the additional employment created during Repelita VI.

To accomplish these objectives, a range of policies are required for developing industry, by using the following strategies: (1) developing broad-spectrum industries orientated towards the international market, national resource-intensive industries with a rising technological level, labor-intensive industries which become more skilled-intensive over time, and technology-intensive industries; (2) developing industries by accelerating technological mastery in order to solidify the base for producing superior industrial products; (3) developing industries which rely on the markets mechanism, with the private sector in the lead; and (4) developing industries which emphasize growth and income distribution by giving priority to those industries capable of fast growth and improving the participation of the broader community.

Priorities for industrial development during Repelita VI will include: (1) agroindustry, which is developed through the network of agroindustrial activities and agrobusiness; (2) mineral processing industries; (3) the machinery, capital goods and electronics industries, including industries which produce components and engage in sub-assembly; and (4) export-oriented industries which become increasingly skill-intensive and diversified over time, including textiles and textile products.

INFORMATION NETWORK ON INDUSTRY

To speed up the industrial growth, and to enable organizations to keep up with global change in economy, trade and technology, a system of speedy collection of information and monitoring of changes is essential.

The demand for information includes such fields as export, business and investment opportunities, tech-

nology, and monitoring of the business environment. Therefore, data and related information have been considered as strategic commodities which are necessary in developing and extending export markets and industrial growth. In order to be able to provide the necessary information, the Ministry of Industry (MOI) has established an Industrial Information System Networks (SIINAS) and Database Centre.

Industrial Information Network

SIINAS is a computerized industrial information network service that provides the government and the industrial business community with strategic information. Data and information are available from domestic and international network.

Domestic network: link with various centres such as Indonesia Centre for Scientific Documentation and Information; Metal Industry Development Center; Material Testing and Development Center; Ceramic Industry Development Center; Cellulose Base Industry Development Center; Leather Products Industry Development Center; etc. and through international network: INTIIS-UNIDO; GATT; World Trade Center; INPADOC; etc.

Data base center in MOI

This center develops and provides an on-line in-house database services on:

1. Directory of Industrial Enterprises, consisting name and addresses, licence numbers, type and capacity of products produced, and capital investments of industrial enterprises.
2. Directory of Small Scale Industry Enterprises, consisting of names and addresses, type of products produced, employment and capital investment.
3. Directory of Producers-Exporters consisting of names and addresses, type of products exported and contact persons.
4. Capital investment consisting of information on foreign and domestic investment enterprises names, addresses, investment, sectors and types of product.
5. Data on Installed National Capacity consisting of data on installed capacity, real production and demand of Updated Yearly.
6. Data on selected domestic production capability consisting of data on type of products, names of producers, and addresses. Updated semi annually.
7. Indonesian Export consisting of information on

volume and value classified by Harmonized System (HS) and Standard International Trade Classification (SITC), and Country of Destination. Updated monthly.

8. Indonesian Import consisting of information on volume and value classified by Harmonized System (HS) and Standard International Trade Classification (SITC), and Country of Origin.
9. List of Indonesian Custom Tariff rate classified by Harmonized System (HS).
10. Information on Regional Resources, consisting of area and production of agricultural estates & forestry and other raw material resources, energy, population and workforces (in developing countries).
11. Technology information processes, production technology, design & engineering, chemical and electronic engineering, new material, source of technology, technology brokers, patent, standard, etc.

STANDARDS AND PATENT INFORMATION

Standards Information

In the national development, standardization plays an important role in optimizing the development of resources exploitation and activities. Standardization plays an important part in the aspects of economic development as increasing productivity and efficiency, simplifying the process, optimizing use of resources, lowering production costs and maintaining quality controls, besides its role in health, safety and the environment.

Dewan Standardisasi Nasional - DSN (Standardization Council of Indonesia) was established by a Presidential Decree in 1984, and functions as the national coordinating body through which organizations concerned with standardization may operate and cooperate to recognize, establish and improve standardization and metrology in Indonesia. The structure within which the DSN carries out its responsibilities is known as National Standardization System.

Pusat Standardisasi LIPI (Institute of Standardization, Indonesian Institute of Sciences) acts as the Secretariat of DSN. One of the functions of DSN is to have an active role in problem-solving among the relevant institutions and to be the information center of standards. This is an indication that the government itself recognizes that information is indispens-

able element in any national standardization system. The establishment of the Standardization Council provides members of the standards community, the users of standards, with central sources on standards and standards-related documents. In response to these concerns, Pusat Standardisasi LIPI and the DSN Secretariat are setting up a standard information documentation service.

The Standard Information Service assists users in identifying the existence of standards, technical regulations, certification systems, and other related standardization activities.

The document service offered can be classified as follows:

- information on the availability of documents
- provision of the actual documents
- providing information compiled from documents.

In anticipating the needs of users, the Standard Information Service is preparing secondary information i.e. list of library accession, bibliographies, and special indexes. As the Indonesian focal point of standards, DSN is responsible for the indexing of Indonesian standards and updating the information. For this purpose, DSN published *Indonesian Standards Catalogue* which provides a reference for all standards and standards type documents published by standards formulating institutions approved by DSN such as Indonesian National Standards.

The DSN Standard Information Service maintains a reference collection of more than sixty thousand standards issued by standard formulating institution in Indonesia, foreign national standards, regional and international standards. At present there are about 3.500 standards formulated by standard formulating institutions in Indonesia. Among these numbers there are 2.500 standards have been approved as the national standards by DSN.

Patent Information

Patent documents is one of the most extensive and most relevant sources of technical know-how could find. Nevertheless they were still limited used, especially the small and medium size enterprises rarely use this kind of information. Information founded which could find in patent documents is of an eminent importance, for only firms which have this knowledge can use the latest developments in research and technics. They can avoid double research, as well as

save time and money. Enterprises using patent information are more competitive on the market. So it is important to inform the industry about patent in a suitable manner. Special efforts must be projected at the small and medium sized enterprises, because they have great technical potential which must not be wasted because of a lack of information.

At patent, there are 3 features of the intellectual property systems consist of copyright, patents and trade mark which legally be protected in Indonesia. There are:

- a. The copyright law number 6, 1982, and number 7, 1987.
- b. The patent law number 6, 1989 that has been enforced from August 1, 1991.
- c. the trademark law number 21, 1961.

Indonesia acceded to the Paris Convention for the Protection of Industrial Property on May 10, 1979. And become a member of the World Intellectual Property Organization (WIPO) on January 1, 1990.

The Directorate General of Copyright, Patents and Trademarks has responsibility as the institute for administering the intellectual property system for the protection of the inventions, trademarks, and copyrights. This office provides patent information services and establish link with other government and private institutions, such as other Documentation and Information Centers, universities, and consultants.

There are some problems encountered in the implementations of patent system in Indonesia, some of them are:

1. The awareness as well as the dissemination of patent system is still limited.
2. Due to budget constraint, the dissemination of patent system can only be implemented in several limited cities/regions annually.
3. Only few experts can utilize the available patent documents this can result in the low quality of research and development activities since duplication of research works can not be eliminated, apart from wasting of time, energy, and money.
4. To cope with current needs, it is realized that the existing Patent Information and Documentation System has to be improved.
5. Lack of qualified personnel, especially for those with the major in the field of engineering.
6. The participation of private companies is still quite low. This can be seen from the small number of domestic patent application and limited opposition received.

WORLD TRADE CENTER JAKARTA

The World Trade Center Jakarta is a regular member of the New York based World Trade Centers Association. World Trade Centers are presently operation in more than 64 countries on every continent.

World Trade Center are non-political organizations providing facilities and services to foster international trade. They bring together executives and entrepreneurs, producers and consumers, sellers and buyers of goods and services. They are unique centers of information about international commerce and potential overseas markets.

World Trade Center Clubs offer reciprocal benefits and services to their respective members. A membership cards of World Trade Center Club Jakarta is honoured at all Clubs worldwide.

World Trade Center Jakarta provides some services which much related with industries and business development in Indonesia such as: Trade Information Services; Research & Studies Services and Reference Library.

Trade Information Services can identify overseas markets, provide trade leads and individual business contracts and recommend source of goods and services. It can also produce credit information and company profiles on individual companies, and advice on general markets trends. Research & Studies service provide market research, feasibility studies, statistical data on Indonesian economic indicators, hold seminars on Indonesian-international trade issues. Reference Library provides background data on commodities, traders, manufacturers of any product lines, markets research reports, project feasibility.

SCIENCE & TECHNOLOGY INFORMATION SERVICES

Besides the above centers and institutes which provide information for industries and business, there are some institutes/centers which more base on science & technology information. Those institutes/centers/libraries mainly provide traditional information services such as library services; current awareness services; retrieval information services; document delivery services and the latest services which really give more information is Industrial Technology Information Package (PITI). The last service (PITI)

is provided by Center for Scientific Documentation and Information (PDII-LIPI). Later the idea of this services (PITI) is followed by some of centers/libraries in Indonesia.

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