



TOGETHER
for a sustainable future

OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.



TOGETHER
for a sustainable future

DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org

07708

United Nations
Centre for Industrial Development

Original: English

Inter-regional Symposium on Industrial
Project Evaluation

CID/IPE/D.18
Survey of Country Experience

Prague, Czechoslovakia
11 - 29 October, 1965

IRAN'S EXPERIENCE IN INDUSTRIAL PROJECT EVALUATION

Prepared by:

KHANBABA IRAVANI, I
Chief, Industrial Project Evaluation
and Preparation Division
IRAN.

for:

The Centre for Industrial Development
Department of Economic and Social Affairs
UNITED NATIONS

This paper cannot be reproduced without permission from the Centre for Industrial Development, United Nations, New York. The views expressed in this paper are those of the author.

OUTLINE

1. Background Information
2. Institutional Aspects
3. Criteria for Project Evaluation
4. Financial Allocation
5. Financing Institutions
6. Data and Other Information

Appendix: List of Bankable Projects Recommended
by a UN Industrial Survey Mission
in Iran, 1964 - 65.

1. BACKGROUND INFORMATION

1.1. A vigorous programme of industrial investments was started by Reza Shah the Great about 35 years ago, as a part of his ambitious plan for modernizing Iran. The overall level of Government investment during the fifteen-year period 1926-41 (1305-20) was surprisingly high^{1/} and the investment in industry and mines was estimated as 35% of total allocation.

1.2. The first industrial installations, during the early period of 1926-30, were the sugar, fruit processing and cement plants. In those days, the foreign firms which supplied the equipment generally carried out surveys and project evaluation. Turn-key contracts were given to them, including training of personnel and management of plants for the initial years.

1.3. During the period from 1930-39, many plants, such as textiles, sugar, mining, chemicals, cement, armament factories, etc., were established. This programme was realized with the assistance of foreign technological services under the guidance of foreign firms of repute and in cooperation with a number of competent Iranians.

1.4. During the period of the Second World War (1939-46), there was a set-back in the progress of industrial development work. However, in 1946, Bank Melli of Iran negotiated with the Overseas Consultant Inc. of America to undertake the necessary surveys and prepare an industrial development programme for Iran.

1.5. Early in 1948, a law was passed by the Majlis (Parliament) approving the implementation of the first Seven-Year Plan (1948-55) and the office of the Plan Organization was established to implement the Plan. The Majlis modified the Overseas Consultant's proposals and approved an integrated Seven-Year Plan to include the development of education, agriculture, communication, industry, mining, petroleum, postal system and social affairs.

^{1/}Review of the Second Seven-Year Plan, March 1960. According to estimates, \$750 million was the Government's investment during 1926-41; \$260 million of this amount in then-current values was invested in industry and mines.

1.6. The second Seven-Year Plan for 1955-62 (1334-41) was drawn up by the Plan Organization and was reviewed in the year 1960 for the following purposes:

- a) To evaluate the actual and potential contribution of the Plan to the economic and social growth of Iran;
- b) To provide a basis for re-programming the remaining half of the Second Plan period,
- c) To explore the possible lines of approach for the preparation of the third development plan for Iran.

1.7. The period of the third Plan was changed to five years from 1962-67 (1341-46). In 1954 the Government decided to transfer the responsibility for working out the detailed programme by the individual ministries concerned. Accordingly, the Ministry of Economy organized the Research Centre for Industrial and Trade Development, under supervision of the Under Secretary of Economy. The expenditure for the Centre is being financed by the Plan Organization.

2. INSTITUTIONAL ASPECTS

2.1. The Research Centre for Industrial and Trade Development has four separate divisions:

- a) Industrial Statistics;
- b) Industrial Policies;
- c) Trade Development,
- d) Industrial Project Evaluation and Preparation.

2.2. The main function of the Industrial Project Evaluation and Preparation Division is to deal with the following types of project evaluation and preparation work:

2.2.1. Private Sector Industries

- a. Licensing. Evaluation of projects received from private investors for granting licence. These projects are generally reviewed to ensure that the demand for the products is sufficient; no duplication and over-production of same item by existing units; dispersal of industry according to regional need; and, finally, their national economic profitability.

- b. New Investors. On many occasions, the prospective investors cannot make a definite decision about the selection of products to be manufactured. This is due to the incomplete knowledge of the particular manufacturing process, estimate of fixed and working capital required, and the present and future trend of the market. In these cases, the Division assists the private investors by preparing project reports with economic details for feasibility study. Advice is also given regarding suitable location and size of the proposed plant, in consideration of the funds available to the prospective investor and the extent to which borrowed funds could be used.
- c. Scrutiny of Offers. There is another group of private investors who have made their own feasibility study and have obtained offers from different countries for the supply of equipment. At this advanced stage of the project, the Division tries to assist the parties involved by scrutinizing the productive capacity of machines offered for each operation of the whole plant and sees to it that each of the components has a balanced production capacity to ensure maximum machine efficiency performance of the whole plant.
- Economic study reports are also prepared to examine the commercial and national economic profitability of the project.

2.2.2. Public Sector Industries

- a. Basic Industries, such as steel, aluminium, petrochemical, fertilizer, viscose rayon, paper, machine tools, etc., development of which are of national importance, and for which large capital may not be invested by the private entrepreneurs, are generally included in the development programme of the public sector of industries. Project

evaluation and survey work for the above group of industries are either entrusted to foreign consulting firms of repute or carried out through the assistance of United Nations experts. In the latter case, experienced Iranian technicians of the Division work closely as counterpart of UN experts to follow up the individual project through its execution stage. A list of the type of industries for which project evaluations were prepared with the assistance of UN experts is given in Appendix "A". This list also includes projects in light industries.

- b. Expansion of Existing Industries for which sufficient experience and technical knowledge have been acquired in the country is being undertaken by Iranian technicians. Preparation of project reports for new installations of sugar and cement plants comes under this group of Public Sector industries.

2.2.3. Regional Development Programme

- a. During the third Five-Year Plan period, the Government has given special importance to the execution of an integrated Regional Development Programme. To accelerate execution of the said programme, the Ministry of Economy entrusted the Industrial Project Evaluation and Preparation Division with undertaking surveys and drawing up detailed industrialization programmes for each region.
- b. The work on regional industrialization programmes was launched by the Division in June 1964, with the assistance of UN experts supported by a team of experienced Iranian technicians. During the past twelve-month period, plans were completed with detailed project reports on suitable industrial units for the following three regions:

- Azarbaizan Region;
- Semnan Region,
- Kordestan, Zanjan and Kermanshahan Region.

- c. Feasibility studies for a large number of industries were worked out before recommendation of their implementation in the provinces. A large variety of industries, mostly based on agricultural products, were recommended for the three regions. It was foreseen that most of the recommended industries are to be promoted by private entrepreneurs, while a few of them are to be initiated, helped or operated under the public sector. Cement and sugar industries are to be initiated by the Government. In order to accelerate a rapid growth of organized light industry units under the private sector, recommendation had been made for the creation of an industrial estate at Azarbaizan providing public funds for the initial investment.

3. CRITERIA FOR PROJECT EVALUATION

3.1. It is needless to mention that commercial and national economic profitability are the main considerations for promoting any industrial enterprise. However, the degree of profitability depends directly on the position of supply and availability of raw materials, labour, servicing facilities, etc. Proper management, planning and maximum utilization of the costly equipment and manpower are essential for the commercial success of any industry. But, in the ultimate analysis, it is the consumers who decide the success or failure of an industry. Thus, the quality of products and their presentability are the dominating factors.

3.2. The above-mentioned describes the fundamental criteria which are to be considered in formulating schemes, particularly when planning for a new industry. Apart from the above-mentioned, there are some special considerations, such as:

- a. Social benefits;
- b. Utilization of waste products;
- c. Utilization of existing skill for better marketable products;
- d. Introduction of short-term, labour-intensive programme with less mechanization, to bridge over the transition period from the present to the modernization stage.

3.3. In the regional development programme the above factors had to be given special consideration.

4. FINANCIAL ALLOCATION

4.1. The total financial allocation envisaged for the third Five-Year Plan was Rls. 200 billion (\$2,666 million), as given below:

Third Plan Allocation
(September 1962-March 1968)
(Billion Rls.)

<u>Section</u>	<u>Allocation</u>	<u>Percent</u>
1. Agriculture and Irrigation	45,000	22.5
2. Industry and Mines	21,900	11.0
3. Power and Fuel	27,000	13.5
4. Communication and Transport	50,000	25.0
5. Education	17,950	9.0
6. Health and Sanitation	13,900	6.9
7. Labour and Manpower	8,000	4.0
8. Urban development	8,000	4.0
9. Statistics	800	0.4
10. Housing and Administrative Buildings	7,450	3.7
TOTAL	200,000	100.0

4.2. The major objective of the third Plan was to achieve a growth rate of 6% per annum of gross national product throughout the Plan period. For the sector of Industry and Mines it was estimated that private investment during the Plan period would be in the order of Rls.41.2 billion (\$ 550 million). A considerable amount of public fund allocations, noted in the above statement, are to be transferred to the private sector, through different agencies.

5. FINANCING INSTITUTIONS

5.1. There are about 25 banks operating in Iran. Of these, 17 are commercial banks and 8 special banks supported by public funds. Total paid-up capital of the two groups of banks are:

17 Nos. Commercial Banks	- Rls. 9,520 million
8 " Special Banks	- Rls. 5,447 "

25 Nos. Banks	Rls. 14,967 million (\$200 million)
---------------	--

5.2. A brief description of some of the specialized banks, supported by public funds and offering long-term credit facilities for promotion of industries is given below:

- a) Industrial and Mining Development Bank of Iran (IMDBI)
Paid-up capital Rls. 400 mil. (\$5.33 mil.). This bank was established in 1959 and administered as a joint stock company with the object to develop and encourage private industrial, productive, mining and transportation enterprises in Iran. The bank is financially assisted by the Government of Iran, the World Bank and US Aid loans totaling \$47.1 mil. Generally, this bank deals with loans of Rls. 5 mil. (\$0.66 mil.) and above.
- b) Industrial Credit Bank (ICB)
Paid-up capital Rls. 1,152 mil. (\$15.36 mil.). This bank was established in 1956, for granting medium and long-term credit for the establishment of new industrial enterprises or expansion of existing ones. The bank also participates in share capital and buys and sells stock of companies. Individual loans from this bank do not exceed Rls. 5 mil. (\$0.66 mil.).
- c) Mortgage Bank of Iran (MBI)
Paid-up capital Rls. 2,180 mil. (\$29 mil.). Established in 1938, this bank was designed to facilitate home ownership, particularly for people of low incomes.
- d) Agricultural Credit and Rural Development Bank of Iran (ICIMBI)
Paid-up capital Rls. 5,101 mil. (\$68 mil.). This bank was established in 1933 to provide long-term credit and technical assistance for the promotion of agriculture.
- e) Industrial Guarantee Funds
This is a special institution established in 1960 with financial assistance from US Aid. It works in cooperation with commercial banks to provide long-term loans of up to Rls. 5 million (\$0.66 mil) to promote a selected number of industries.

6. DATA AND OTHER INFORMATION

- 6.1. Census statistics prepared in 1335 (1956) are the most important guide used for consideration of any kind of development scheme. Population statistics, area, urban and rural population, etc., are available there.
- 6.2. Import and Export Statistics are basically used to estimate present and projected demands of commodity for which industrial projects are prepared. In many cases, the tariff code numbers are not properly given and more than one industrial item is shown together. This presents difficulty in estimating demand of a particular item.
- 6.3. Industrial Statistics collected for existing units are being used to assess the demand and supply position.
- 6.4. Agricultural Statistics prepared periodically by the Ministry are used in preparation of industrial projects in those localities where sufficient agricultural raw materials are available.
- 6.5. Transport. Statistics on roads and railways are also used to estimate the transport facilities.
- 6.6. Market Prices. Bank Nelli issues periodical bulletins giving market prices and index of costs of living which are also referred to in some cases.
- 6.7. Meteorological statistics are invariably used in planning any basic or large-scale industries.
- 6.8. Water and electricity. Statistics on water resources, including seasonal flow in the rivers and sub-soil waters are supplied by the Ministry of Electricity and Waters. The future development programme of electric grid lines is also taken into consideration in planning the industrial development programme.
- 6.9. Geological and Cartographical Data. There are two separate organizations which supply the above data. The soil geology data is obtained through the Agricultural Ministry.

Appendix

LIST OF BANKABLE PROJECTS RECOMMENDED BY A UN INDUSTRIAL SURVEY MISSION
IN IRAN, 1964 - 65

A four-member UN mission, supplemented by six experts in specialized fields, worked for a total period of 57 man-months and recommended the implementation of the following economically feasible industries:

A. CHEMICAL INDUSTRIES.

	<u>Industry</u>	<u>Location</u>	<u>Size of the Unit</u>	<u>Raw materials</u>	<u>Capital Cost \$</u>
1.	Sulphur recovery plant	Khark	100 tons per day	IPAC Stripper gas	2,048,000
2.	Sulphuric Acid	Ahwaz	300 tons per day	Sulphur from Khark	2,688,500
3.	Ammonia	Ahwaz	600 tons per day	Gas from Ahwaz	16,235,000
4.	Phosphoric Acid	Ahwaz	100 tons per day	Imported Phosphate rock	4,217,500
5.	Granular Triple Super- phosphate	Ahwaz	200 tons per day	Imported P. Rock and locally made Sulphuric acid	2,669,500
6.	Ammonium Sulphate	Ahwaz	150 tons per day	Sulphuric acid and Phosphoric acid produced locally	2,023,500
7.	Di-Ammonium Phosphate	Ahwaz	100 tons per day	Sulphuric and phosphatic acid	1,273,500

B. <u>TEXTILE INDUSTRY</u>					
	Industry	Annual Capacity	Raw Materials	Invest. \$1000	Annual Product Value \$1000
8.	Viscose Rayon (4 alternatives)	25,000T. Sta fibre 3,300T. filament	50% local timbers and 50% imported pulp	45,574	20,940
9.	Woollen textile at Semnan	500,000 m. fabric 45 tons yarn for lining cloth.	Local wood with imported wool and fibre	3,280	2,200
10.	Woollen textile at Isahabad	1 millimeter worsted cloth 48 tons knitting yarn.	-ditto-	8,000	6,000
				<u>56,874</u>	<u>29,140</u>
C. <u>METAL PROCESSING INDUSTRY</u>					
11.	Streight welded steel pipe	25,000 tons (6" - 20" dia.)	Imported steel	2,373	3,000
12.	Black and galv. ware product	4,000 tons	-ditto-	600	1,000
13.	Horizontal centrifugal pump Vertical turbine pumps	300 pumps 15 "	-ditto-	425	375
14.	Gigs and Dies factory	-	-ditto-	133	150
15.	Electric lifts factory	120 lifts	-ditto-	225	360
16.	Manufacture of meters.	10,000 Elec. 5,000 water	-ditto-	280	333
17.	Bicycle factory	24,000 Nos.	Imported steel	440	500
18.	Building hardware	-	-ditto-	308	310

C. <u>METAL PROCESSING INDUSTRY</u> (cont'd)					
19.	Non-ferrous rolling mill	7,200 tons	local material	1,353	1,467
20.	Malleable cast iron fittings.	1,200 tons	Imported pig iron and local scrap	200	160
21.	Cast iron foundry at Tabriz.	2,000 tons	-ditto-	217	387
22.	Central finishing shop for hand tools	134 tons	Imported steel	67	309
				<hr/>	<hr/>
				6,621	8,351
D. <u>MACHINE TOOLS INDUSTRY</u>					
23.	Cast iron foundry for machine tools at Teheran	5,000 tons	Imported pig iron and local scrap	2,500	1,600
24.	Machine tools factory	250 Lathes 370 Drills 750 grinding m/c 300 polishing m/c 150 shaping m/c 100 milling m/c 350 Press.	Casting from above foundry	1,500	1,500
25.	Diesel engine factory	4,000 Nos. 2-15 HP	-ditto-	950	1,000
26.	Wood-working machines factory	198 machines	-ditto-	206	207
				<hr/>	<hr/>
				5,156	4,307

E. ALUMINIUM INDUSTRY

27. Professor Hans Dachmann, a member of the UN Survey Mission, considered it to be an economically feasible proposition to develop an aluminium industry in Iran. In this connection, he made the following two alternative propositions:

- a) Indo-Iranian joint project to import alumina from India and produce 20,000 tons of aluminium in Iran. Capital cost estimated for a 20,000 ton aluminium plant with a carbon plant was \$24 million. Product cost was estimated at \$514.90 per ton against the world price of \$537.
- b) Large-scale Project. The alternative proposal was to develop a large-scale industry based on imported ore and disposing of the product in the world market on a competitive basis. Promotion of such a project was proposed in cooperation with a reputed aluminium manufacturer. The estimated capital cost was as stated below:

200,000 tons Alumina Plant	- \$ 35 million
100,000 tons Aluminium Plant	- \$ 72 "
	<hr/>
Total Cost	\$107 million

The product value at world price - \$ 53.7 mil.

F. CERAMIC INDUSTRY

28. The basic information regarding the suitability of indigenous raw materials was investigated by a UN expert, Mr. H. Reitz. After carrying out laboratory tests, the expert recommended that the best quality porcelain ware could be manufactured from local raw materials. He recommended the installation of a porcelain ware factory as follows:

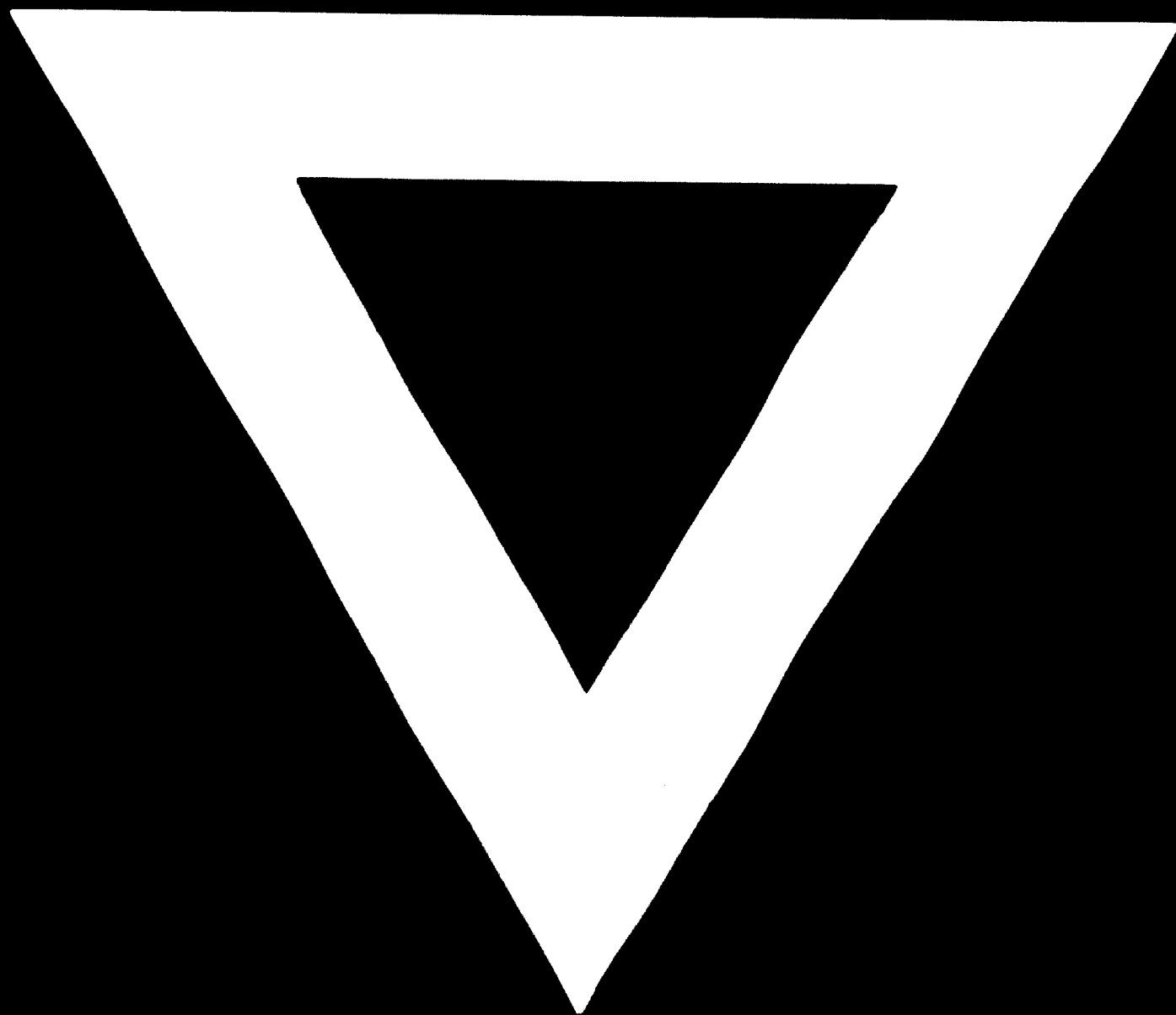
a) Production capacity	- 13,800 units per day or 1,460 tons/day
b) Fixed capital	\$1,477,000
c) Working capital	205,000
	<hr/>
	\$1,682,000
d) Approx. product value	\$ 779,000

G. MISCELLANEOUS INDUSTRIES

	Industry	No. of Units.	Total Yearly Production	Total Investment with working Capital \$	Total Product Value \$
29.	Plywood factory (walnut)	1	450,000 M ²	453,000	480,000
30.	Leather tanning	1	1,500 tons	407,000	1,066,000
31.	Wool scouring	1	1,100 tons	1,008,000	1,980,000
32.	Reinforced cement concrete spur pipes	4	430,000 M (1.2 to 0.15M dia)	788,000	1,264,000
33.	Industrial estate at Tabriz	1	46 small and medium tenaments	1,204,000	-
34.	Sewing factory at Semnan	1	50,000 pie one shift	110,000	290,000
35.	Shoe factory at Semnan and Sanandaj	2	50,000 prs.	100,000	180,000
36.	Fibre board factory — one at Zarjan and 2 in other areas.	3	1,738,000 M ²	2,112,000	1,071,000
37.	Bone Processing plants	54	Fertilizer 20,000 T. Glue 8,100 T. Oil 3,600 T.	4,862,000	3,832,000
				\$11,044,000	\$10,313,000



C-106



80.02.21