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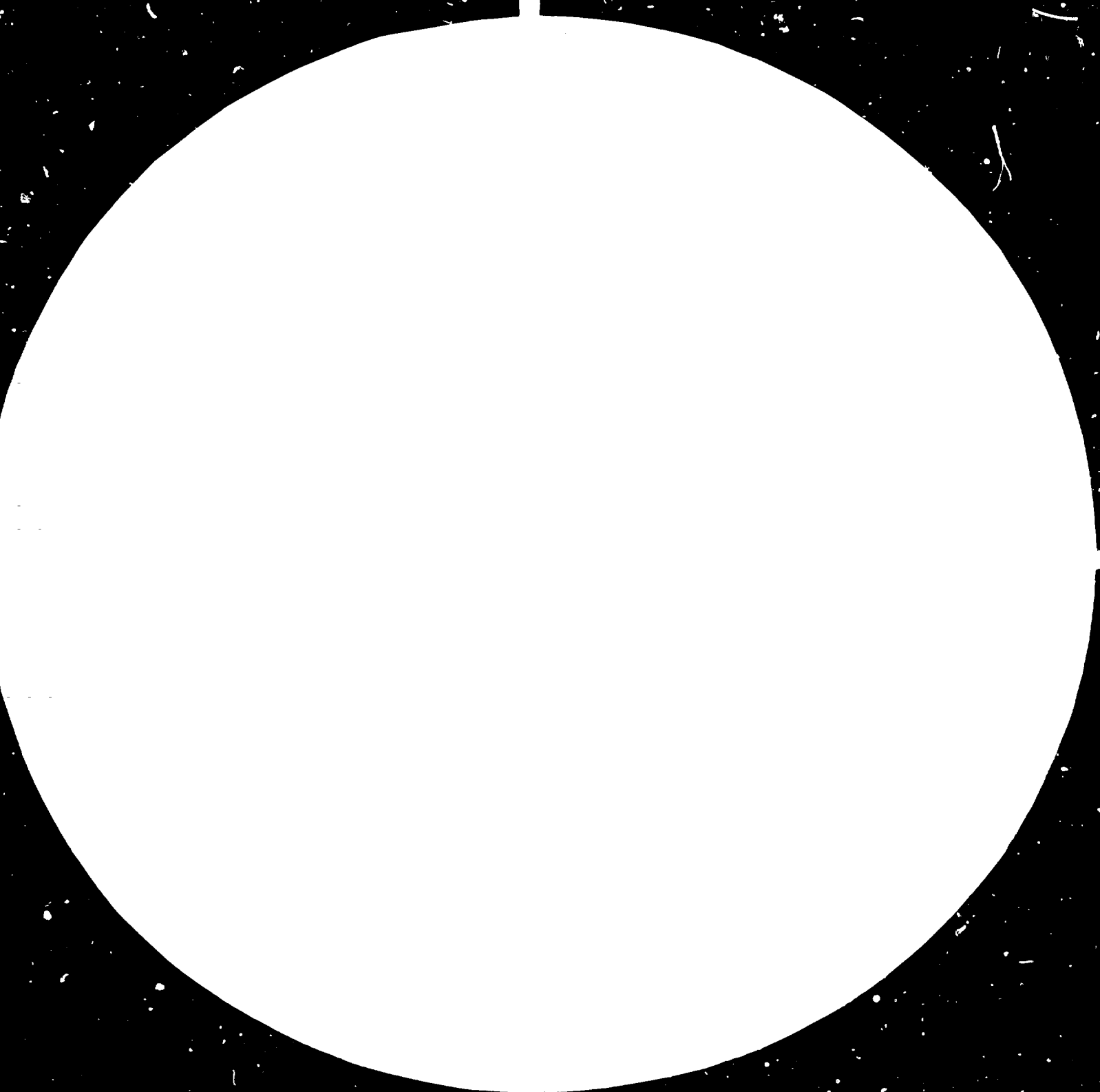
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UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

INDUSTRIAL STATISTICS FOR RESEARCH PURPOSES*,

Methodologies and a Data Inventory of Production Indexes and Base Weights

Prepared by the

Regional and Country Studies Branch
Division for Industrial Studies

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FOREWORD

All experienced users of industrial statistics are acutely aware
of the deficiencies of industrial data, and references to this fact
are abundant in the literature. To cite a few examples, a recent
analysis of the textile industry acknowledges the usefulness of
examining "global trends in output, employment and trade" but "not
in value added or profits where data are too fragmentary."[1] In a
survey of the extent of these problems, V. Prakesh warns that "many
structural changes which seem to emerge from the (value added) data
or from an econometric analysis of these data, may be spurious as
they may result from the statistical or conceptual problems in data
comparability rather than from a genuine shift in the industrial
structure."[2] The general situation has been succinctly described
in a World Bank statement: "Although industry statistics are not in
a pre-World War II state, they are definitely in a 'buyer beware
state.'"[3] However, UNIDO's experience has been that existing
data, whatever their defects, have not been fully exploited. In
addition, and perhaps of greatest importance for the long-term
development of industrial statistics, UNIDO perceives a need for
more systematic descriptions of both the nature and location of the
problems associated with industrial statistics, to facilitate
positive discussion and exchange of information on the relative
merits of various solutions. These factors have been a primary
impetus for the present document.

1/ Geoffrey Shepherd, Textile-industry Adjustment in Developed
   Countries, published by Trade Policy Research Centre, London,
   1981, p.4.

2/ Vinod Prakesh, Statistical Indicators of Industrial
   Development: A Critique of the Basic Data, World Bank working
   paper No.189, September 1974, p.22.

3/ World Bank, World Bank Research Program, Washington D.C., 1980,
   p.77.

I. OVERVIEW OF THE STATISTICAL PROGRAMME

A. INTRODUCTION

The UNIDO Data Base (UDB) contains statistics for 149
countries. These concern 9 economic variables that are commonly
reported and used for analyses of the process of industrial
development in the manufacturing sector. This data base was
developed and is maintained by the Regional and Country Studies
Branch (REG) of the Division for Industrial Studies. REG and other
branches within the Division are the main users of the UDB, but
requests from other parts of UNIDO and from other international
organizations are also numerous.

Although the primary source of statistical information for the
UDB is the United Nations Statistical Office (UNSO), data from a
widening range of other sources are also examined and used to
increase country coverage and improve international comparability,
resulting in a considerable refinement of the UNSO data.

Screening and transformation of the basic data, an on-going
process, form the core of REG's statistical programme. The task, of
course, is enormous but, because statistical treatment of individual
variables has been scheduled on a priority basis, work is quite far
along with respect to two variables, the index numbers of industrial
production and their 1975 base weights. The main body of this
report describes the methods by which REG has transformed these data.

This publication is divided into four parts. The remainder of
part I outlines the institutional framework and priorities which
form the basis for REG's statistical programme, provides a critique
of the original UNSO data, and describes the contents of the UNIDO
data base. Parts II and III document the treatment of value added
(base weight) data and the production indexes, respectively.
Finally, as an aid to the user, the appendices in Part IV contain
inventories of the base weight data and production indexes, country

by country and for several country groupings, according to selected
criteria which hopefully will indicate the suitability of the data
set for specific applications.

Institutional framework and UNIDO priorities

Given UNIDO's research mandate, the deficiencies in quality and
quantity of industrial statistics were of more than passing
concern. Indeed, a large portion of the funds and staff resources
allocated to individual in-house projects have been tied up in
preparation of the supporting empirical inputs, and many of these
activities have been (some still are) redundant. Therefore, with
the creation of UNIDO's Division for Industrial Studies in 1975, the
need for centralizing statistics in machine-readable form was
obvious and a UNIDO data base, comprising several fields in addition
to industrial statistics, was developed. During the early phases of
UNIDO's statistical programme, considerable attention was given to
the collection and screening of data for those countries that carry
a large weight in the various country aggregates. However, this
emphasis was gradually extended, over the years, to countries having
a small weight in most statistical aggregates but having
considerable importance in terms of UNIDO's mandate and orientation.

The nature of UNIDO's internal research programme dictated that
the initial choice of data files where statistical work was to be
concentrated should be particularly relevant to the development
goals expressed in the Lima Declaration.$\underline{1/}$ This meant that
information on value added should receive the highest priority,
while other data files such as gross output, employment or wages and
salaries were of secondary importance. At the same time, the

1/ Lima Declaration Plan of Action on Industrial Development and
Co-operation, adopted by the Second General Conference of UNIDO,
Lima, Peru, 12-26 March 1975.

emphasis on cross-country studies, whether at the sectoral (i.e.
ISIC 300) or branch levels (3-digit ISIC) meant that international
comparability of the country data was also of primary importance.
Accordingly, these two considerations led to the decision that the
first project's objective should be the improvement and extension of
the available information on value added in 1975 dollars - that is,
the base weights and production indexes referred to above.

Regarding the level of industrial detail, the 4-digit level of
the International Standard Industrial Classification (ISIC)
obviously would have been highly desirable for many applications.
UNSO collects almost no data at this level of disaggregation. REG,
itself, has begun to search for and collect these detailed
statistics, where available. However, this exercise is a long-term
project, and good country coverage of 4-digit data is not a
realistic hope for the forseeable future. Because the ability to
provide full international perspective is a central objective of the
UDB, immediate needs dictated that the desire to extend the
industrial detail of the statistics be subordinated to that of
maximizing country coverage, comparability and consistency.
Therefore, the bulk of the work within REG's statistical programme
has been confined to the 3-digit (branch) level of the ISIC.

It should be noted at the outset that REG's work, even with
respect to the two variables which are the main focus of this
document, is not complete. The base weights, of course, refer to
one period in time, and therefore the process of screening and
adjusting them was generally a single effort that has virtually been
accomplished (except for a few cases where more complete information
is anticipated). However, treatment of the production indexes is an
endless process, in which more recent and better information must be
continuously incorporated into the data base. For this reason, the
following brief review of the evolution of the production index data
may be of value to users.

To date, development of the production index file can be
described as consisting of three distinct stages. In the first
stage, production indexes were supplied by UNSO for the period
1960-1977 (1970=100). However, the country-branch coverage in this
data set did not identically match with that available from the
previous UNSO version for 1960-1971 (1963=100). A comparison of the
two files of production indexes showed that the earlier version
contained some observations that were reported to be missing in the
later set. In these instances REG converted the original production
indexes to a 1970 base and included them in the UDB.

A second stage in the development of this data file was
necessitated with the changing of the base year by UNSO to 1975.
The latest time series of production indexes, which still retain the
1975 base, began with the year 1968; UNSO did not extend the series
back to 1960. Thus, the present series was linked by REG to earlier
versions in the year 1968 thereby yielding a time series applying to
most of the 1960s and 1970s.

A third stage began with an exhaustive search for supplementary
data - e.g. the general industrial statistics in YIS, vol. I, YIS,
vol. II, published and unpublished statistics from the regional
commissions, other UN bodies and international organizations that
compile statistics and national statistical publications. This
information was used to extend or to improve the coverage of the
basic data provided by UNSO. Equally important, these sources
provided valuable information concerning country practices,
concepts, definitions, etc. that enabled REG to adjust the data to a
more standardized form.

With regard to the outcomes of these efforts, the reader should
bear in mind several facts. First, as of the end of the 1981 round
of UNIDO's statistical programme, not all of the methods described
in connection with the stage three work on production indexes had
been fully implemented for all countries in the UDB. Second, the
quality of the basic data tends to deteriorate as the time series

are extended backward. In fact, this consideration led to the decision to begin the time series with 1963, thereby excluding from the UDB all data for 1960-1962. The potential weakness of some data for the early years is unavoidable and should be viewed within the context of the historical development of industrial statistics programmes. Finally, additional revisions and refinements of the production indexes are scheduled as part of UNIDO's 1982 statistical work programme.

It may be of interest to mention that a second statistical project has been recently initiated for the screening and adjustment of other industrial data, specifically, the number of establishments, employment, wages and salaries, gross output and value added at current prices. The scope and coverage of this second project is comparable to that of the first. Clearly, as this work progresses, the number of date sources and conceptual difficulties will multiply. Clarification of potential inconsistencies, particularly with regard to 'information about the data', will make REG increasingly dependent on UNSO and/or national statistical offices.

This document focuses on REG's work in connection with the 1975 base weights and the third stage of development of the production indexes. It addresess not only the methods used to screen and adjust base weights and production indexes, but also summarizes the present status of these files, both in terms of quantity and, insofar as it can be measured, quality. It is hoped that the manual will stimulate considerable response from users, which would be particularly valuable for the second project. Those with a detailed knowledge of data for specific countries are urged to share their information, especially regarding errors and omissions.

B. DATA PROBLEMS AND UNIDO'S ADJUSTMENTS

The quality of data in any field of economic statistics is a function of the relative priorities and the resources made available to statisticians (at both the national and international levels).$\frac{1}{}$ Thus, the following description is not intended to be a criticism of the work carried out by UNSO or others but, rather, a confirmation of the inevitable consequences with regard to the prevailing pattern of resource allocation.

It is self-evident that the ideal country data to be used for monitoring international patterns in the development of manufacturing activities should satisfy three basic conditions:

1) The branch-level industrial classification on which the data are based should be uniform for purposes of data aggregation;

2) Concepts and definitions should be standardized;

3) Statistical information should be complete, both in terms of country coverage and in the array of manufacturing industries accounted for.

Of course, these represent goals rather than achievements, even with the enormous investment of computer and staff resources such as REG has brought to the task. Nevertheless, as one example of what is possible, the following discussion will briefly describe these problems and will track REG's progress toward improvement of the base weights and production index data. Further details are available in later parts of this report.

1/ Of course, the problem of data quality is not unique to industry; statistics pertaining to other types of data including trade, agriculture, labour, national accounts, etc. suffer from many of the same difficulties. However, it is arguable that the magnitude and extent of the problem is somewhat more severe for industrial statistics than is encountered in other fields.

Classificational discrepancies

Country reporting practices often deviate from standard ISIC definitions of industrial branches or the manufacturing sector, and these are simple enough to identify. The most frequent instance is the practice of reporting 'combined data' for two or more branches.[1] Such deviations may occur either for the production indexes only, or alternatively, among both the indexes and base weights. A second common problem occurs when reporting countries include, within the manufacturing sector, a significant portion of activity which statistically is regarded as the domain of another economic sector (e.g. mining, agriculture or services). The reverse case may also occur. A related problem is that countries may not distinguish between zero, or negligible value added, and 'not available'.[2] Because the practice of 'combined reporting' means that at least one 'not available' observation also appears, the user may face a further dilemma if he is required to distinguish between the following possible interpretations of 'not available':

(i)   the reporter can not uniquely distinguish between figures
       for two or more branches but is confident of the combined
       total;

1/   Many countries do not always report unique observations for each
     branch. For example, value added data for wearing apparel (I IC
     322) and textiles (ISIC 321) may be combined. UNSO denotes this
     discrepancy by attributing the combined total to an artificial
     branch 321A (=321+322) For a complete list of the branch
     combinations appearing see appendix table C-3.

2/   Another form of aberration results from differences in the
     various revisions of the ISIC. Countries were first requested
     to provide information according to REV. 2 in 1969, beginning
     with data for 1967. Prior to 1963, Rev, 1 was not extensively
     used. These considerations pose more serious problems when
     dealing with time series developed from the Yearbook of
     Industrial Statistics, vol. I.

(ii) the reporter is assured that information on the branch is
      not available and that it is not included in the total for
      another industrial branch;

(iii) the reporter had a lower degree of certainty and simply
      assumed that information on a specific branch was not
      available but was included in the data reported for
      another branch.

The figures in table 1 provide an overview of the extent to
which classificational discrepancies occur in the UNSO data. In one
sense, the problem is of greater significance for the production
indices than for the base weights. The percentage of missing
observations is roughly the same in the case of the base weights and
the production indexes for each year shown. However, the frequency
with which combined observations appear in the data files is
decidedly greater for the production indexes than the base weights;
the percentage of affected observations in the former case ranges
from 30 per cent in 1963 to 39 per cent in 1977. In another sense,
the classificational deviations in the base weights series have the
most serious consequences for the general reliability of the data;
discrepancies in this file can eliminate the entire time series for
a given country-branch for some purposes.

The general conclusion to be drawn from table 1 is that the
quality of the data, when examined according to the above standards,
has not improved over time. The proportion of uniquely reported
indexes actually declined slightly while the frequency of combined
reporting rose over time.

1/ Although 1979 was the latest year available on the most recent
    UNSO tape, 1977 was chosen as the ending year for this
    comparison. This was done to ensure that late reporting by
    countries did not further exaggerate the trends described here.

TABLE 1. DEFINITIONAL DEVIATIONS AT THREE-DIGIT LEVEL (ISIC, Rev.2)
AS PROVIDED BY UNSO, SELECTED YEARS

	Base weights 1975		Production index 1963[a]		Production index 1968[b]		Production index 1973[b]		Production index 1977[c]	
	Actual count	As % of theoretical maximum	Actual count	As % of theoretical maximum	Actual count	As % of theoretical maximum	Actual count	As % of theoretical maximum	Actual count	As % of theoretical maximum
Number of countries	138		56		69		71		69	
Uniquely reported observations	2 735	72	951	61	1 095	57	1 119	56	1 079	56
(Single observations combining branches)	(140)	(4)	(137)	(9)	(193)	(10)	(203)	(10)	(215)	(11)
Observations covered by combinations	364	9	331	21	481	25	517	26	535	28
Missing observations	715	19	286	18	356	18	352	18	318	16

a/ Count based on United Nations Statistical Office's tape (1970=100) received in 1975.

b/ Count based on United Nations Statistical Office's tape (1975=100) received in 1980.

c/ Count based on United Nations Statistical Office's tape (1975=100) received in 1981.

Conceptual problems

Deviations of a conceptual nature, either within the time series for a particular country or, more significantly, among the reporting practices of different countries at various points in time, also detract from the usefulness of industrial statistics. These are discussed in more detail elsewhere in this publication. A short list of such practices which may have implications for cross country studies would include the following:[1]

(i) The omission of cottage industry and household establishments: Few of these enterprises are engaged in factory-type activities although they may account for a significant portion of value added in non-industrialized countries.

(ii) The exclusion of industries for strategic considerations: Examples would be manufacturing activity in defense establishments or in the government sector.

(iii) Different definitions of value added: Most countries follow a 'census' concept although some adopt a 'national accounting' concept. Similar variations in methods of deriving value added can be noted.

(iv) Differences in coverage by size of establishments: Country practices vary widely and may change from year to year. In particular, no standard definition of small establishments is employed by reporting countries and available estimates for output (or other measures) are of a poor quality.

(v) Varying degrees of non-response: The nature and extent of non-response differs among country, between branches and over time.

UNSO, of course, has little or no control over the actual reporting practices of member countries.

1/ The discussion is directed to how these practices impact on value added data. Their consequences for other fields, e.g. employment or wages and salaries, may be even more dramatic.

The net effect of conceptual variations in country practices is unclear. A rough impression may be gained by comparing the sum of the base weights (i.e. total value added in manufacturing) with corresponding figures reported by national accounts sources. Such a comparison can only be 'approximate' because the two data sources differ in the following respects:

(i)   National accounts usually cover all industrial establishments. Although the same approach may be followed in the case of the UNSO data, UNIDO has no precise information on this point. Country notes in YIS, vol. I, would suggest other possibilities.

(ii) National accounts data frequently include certain repairs, services and trading activities. Base weights, like industrial census data, may not.

(iii) National accounts are sometimes net of depreciation. Industrial data would be gross of depreciation. Again, the country notes would imply that UNSO data such as the base weights may sometimes reflect census practices.

The first two qualifications would reduce the sectoral estimate of MVA derived from censuses, and possibly the base weight total relative to the national accounts figure. The third has the converse effect.

The expectation is that the national accounts figure would exceed, or at least be equal to, the total of manufacturing value added obtained by summing the base weights. Given the conceptual distinctions between the two data sets, base weight totals that

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1/ United Nations, Yearbook of Industrial statistics, vol. I, introductory notes, various issues.

deviated from corresponding national accounts figures by $\pm$ 15 per cent or more were regarded 'inconsistences'. Using this criterion, the data for 1975 reveal 59 instances (from a total of 118) where the industry totals were not 'consistent' with DRPA's national accounts figures (for details by country, see table A-1). In the majority of countries (47), divergence was in the expected direction, i.e. the DRPA figure exceeded the sum of corresponding base weights. The salient impression is that there is a somewhat surprising degree of 'inconsistency' between the base weight totals and the national accounts figures; almost 50 per cent of the original set of observations fall outside the $\pm$ 15 per cent range.

Turning to more straight-forward issues such as data coverage, table 2 summarizes the 'before' and 'after' effects of REG's adjustments. With respect to the base weights, country-branch coverage increased significantly and the relation between industrial data and national accounts data appear to have been improved. A related point is that most of the missing values are now concentrated in a small number of countries (see Table 5). In terms of the countries' relative weight in their respective country groupings, full base weight coverage was achieved for those developed market economies accounting for 99.8 per cent of the total GDP originating in manufacturing for their economic grouping. The corresponding figure for developing countries is 95.6 per cent, although the coverage for the least developed countries - 71.7 per cent - is less impressive. However, for the developing and least developed countries, these figures represent a notable improvement over the original UNSO data, where the corresponding figures were 83.3 and 0.0 per cent, respectively.

The results of REG's revisions of the production indexes also show dramatic improvements in both country coverage and the number of available observations. Although when measured on the basis of base weight shares, [1] REG's relative contribution would be

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[1] REG is currently in the process of tabulating such a comparison, but results are still incomplete.

Table 2. A COMPARISON OF UNSO AND UNIDO DATA ACCORDING TO VARIOUS CRITERIA

Base weights

Criteria		UNSO	UNIDO
I.	Country coverage		
	– countries with complete branch coverage	52	90
	– countries with incomplete branch coverage	86	48
	– total number of observations	3149	3346
II.	Single observations combining branches	140	83
III.	Country exceptions to DRPA criterion[a]	57	20

Production Indexes

Criteria/Years	UNSO	UNIDO
I. Number of countries covered		
1963	56	128
1968	69	134
1973	71	136
1977	69	134
II. Number of available observations[b]		
1963	1282	2700
1968	1576	2754
1973	1636	2838
1977	1614	2379

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[a] The comparison used was (DRPA-UNSO)/UNSO and (DRPA-UNIDC
A deviation of at least $\pm$ 15% was treated as an exceptio

[b] The count includes 'combined indexes'. For UNSO data, a 'combined index'
is always treated as more than one observation, the count being equal to
the number of branches covered by the index. For UNIDO data, a combined
index is treated in the same way only if the base weights are
disaggregated. When the base weights, as well as indexes, are combined
the latter are counted as only one observation. This procedure slightly
underestimates the number of observations in the UNIDO data set relative
to the UNSO data set.

smaller, these additions to the original data set are extremely
important if viewed within the context of UNIDO's mandate and
orientation toward the developing and least developed countries.

The statistical estimations and adjustments on which REG has
embarked are not only costly but entail a certain amount of risk.
Moreover, previous efforts to develop an internationally comparable
set of industrial statistics are few. REG has met the challenge to
the full extent of its existing capability, and will continue to
broaden the scope of its statistical programme, as resources allow.
The attendant costs and potential risks will have been justified if
these efforts can generate a greater commitment to the field of
industrial statistics, at both the national and international levels.

Contents of the adjusted fields

At the end of 1981, REG's base weight file contained a total of
3,346 observations covering 138 countries, and the production index
file contained 44,960 observations covering 136 countries over the
period 1963 through 1979. Table 3 shows, by country, the number of
observations currently available for these two variables. The unit
of observation is a figure for one ISIC (3-digit) branch, for one
year. Because the base weights refer only to 1975, the maximum
number of observations in that column is 28 per country.   :ause
base weights which have been assigned a zero value (i.e. where it
has been ascertained that industrial activity for a particular
branch is nil or negligible) are also counted among the
observations, any figure of less than 28 indicates that base weights
for some industrial branches are missing and unknown. However, many
of the branch base weights designated as missing should probably
also be classified as nil, and virtually all missing values are
thought to be insignificant. It is for this reason that the
contents of the UDB's base weight file is probably much more

Table 3. UNIDO Data Base: Available Observations for 1975 Base Weights (BW) and Production Indexes (1975 = 100), 1963-1979 (PI), by Country[a/]

Cod	Name	BW	PI	Code	Name	BW	PI	Code	Name	BW	PI
012	Algeria	28	400	340	Honduras	28	466	512	Oman	1	c
024	Angola	25	322	344	Hong Kong	28	359	586	Pakistan	28	413
032	Argentina	28	476	348	Hungary	28	476	590	Panama	28	466
036	Australia	28	470	352	Iceland	22	130	600	Paraguay	28	474
040	Austria	28	468	356	India	28	472	604	Peru	28	420
048	Bahrain	16	106	360	Indonesia	28	394	608	Philippines	28	462
050	Bangladesh	28	236	364	Iran	26	412	616	Poland	28	476
052	Barbados	26	265	368	Iraq	28	367	620	Portugal	28	464
056	Belgium	28	470	372	Ireland	26	389	630	Puerto Rico	26	182
204	Benin	15	75	376	Israel	28	476	638	Reunion	1	17
068	Bolivia	28	386	380	Italy	28	477	642	Romania	23	359
072	Botswana	12	44	384	Ivory Coast	23	316	646	Rwanda	9	25
076	Brazil	28	459	388	Jamaica	26	415	682	Saudi Arabia	16	111
100	Bulgaria	27	438	392	Japan	28	474	686	Senegal	18	304
104	Burma	26	423	400	Jordan	28	404	694	Sierra Leone	19	128
108	Burundi	1	2	116	Kampuchea	27	120	702	Singapore	28	461
124	Canada	28	476	404	Kenya	28	468	706	Somalia	27	260
140	Cent. Af. Rep.	27	371	410	Korea, Rep.	28	476	710	South Africa	28	446
148	Chad	10	58	414	Kuwait	27	109	724	Spain	28	467
152	Chile	28	462	418	Laos	22	65	144	Sri Lanka	28	434
170	Colombia	28	457	422	Lebanon	22	110	736	Sudan	27	406
178	Congo	19	217	426	Lesotho	9	27	740	Suriname	18	182
188	Costa Rica	28	356	430	Liberia	19	134	748	Swaziland	6	52
192	Cuba	20	287	434	Libyan Arab. J.	28	349	752	Sweden	28	476
196	Cyprus	28	474	442	Luxembourg	21	323	756	Switzerland	27	457
200	Czechoslovakia	27	459	450	Madagascar	28	407	760	Syrian Arab Rep.	28	465
208	Denmark	28	476	454	Malawi	24	360	764	Thailand	28	392
214	Dominican Rep.	28	447	459	Malaysia W.	28	461	768	Togo	9	36
218	Ecuador	28	458	466	Mali	5	21	780	Trinidad TBG	28	436
818	Egypt	28	441	470	Malta	28	403	788	Tunisia	28	460
222	El Salvador	28	380	478	Mauritania	6	22	792	Turkey	28	455
230	Ethiopia	28	358	480	Mauritius	25	330	800	Uganda	28	396
242	Fiji	25	350	484	Mexico	28	462	810	USSR	24	408
246	Finland	28	476	496	Mongolia	16	237	784	United Arab Em.	1	0
250	France	28	472	504	Morocco	28	451	826	United Kingdom	28	476
266	Gabon	21	114	508	Mozambique	28	401	120	United Rep. Cmr.	28	337
270	Gambia	1	16	516	Namibia	15	84	834	United Rep. Tanz.	28	399
278	German Dm. Rep.	28	444	524	Nepal	14	43	840	United States	28	476
280	Germany, Fed. Rep	28	476	528	Netherlands	28	460	854	Upper Volta	10	57
288	Ghana	28	369	532	Neth. Antilles	1	16	858	Uruguay	28	456
300	Greece	28	476	554	New Zealand	28	452	862	Venezuela	28	448
320	Guatemala	28	347	558	Nicaragua	28	420	852	West. Samoa	6	19
324	Guinea	2	17	562	Niger	10	36	886	Yemen Arab Rep.	14	42
328	Guyana	11	92	566	Nigeria	28	391	720	Yemen, Dem.	24	99
332	Haiti	27	368	578	Norway	28	476	890	Yugoslavia	28	471
								180	Zaire	28	430
								894	Zambia	28	455
								716	Zimbabwe	28	446

a/ The unit of observation is a figure for one ISIC (3-digit) branch, for one year. Status as of 31.12.1981.

complete than the figures in Table 3 would suggest.[1]

The count of index numbers of industrial production shown in Table 3 covers all available years after 1962. Thus, the maximum possible number of observations per country (through 1979) is 476. If the country data do not include base weights for all 28 branches, the maximum number of production indexes is the number of base weights times 17 (the number of years in a complete time series). The ratio of the number of production indexes to the number of base weight observations (not shown, but easily calculated) provides a rough indication of the average number of years for which data are available in each country.[2] However, not all the series cover an identical time period in every branch. Information for the latest years is frequently incomplete owing to a time lag in the reporting of production indexes for some branches and specific countries. In other cases, there may be a non-zero base weight but no available production index. It is not possible to distinguish between these various conditions on table 3.

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[1] This problem illustrates some of the realities and difficulties in dealing with industrial data, many of which are avoidable. A simple "yes" or "no" to the question, for example, of whether any transport equipment (ISIC 384) is manufactured in country A, is a valuable piece of information, although sometimes difficult to obtain. This is an area where better communication between national statistical bureaus and international agencies could be mutually beneficial.

[2] If the base weight value is zero, the figure "100" is entered in the production index file for each year where indexes covering other branches are available. This is a purely artificial device, created to deal with the special case of zero base weights (and, by extension, zero production) in the data base, and was instituted for technical reasons. However, it also has the advantage that it maintains a balance between the count of base weight observations and that of production index observations.

II. BASE WEIGHTS

Base weights showing the composition of manufacturing value
added (MVA) among industrial branches are compiled by UNSO from data
provided by national statistical offices. Those currently in use
refer to 1975, and are available for a total of 138 countries.[1]
In principle, the base weights refer to value added for all
establishments in a given branch although, in practice, countries do
not always report according to this standard. Consequently, each of
the weights has been reviewed and, where necessary and practicable,
adjusted. The conceptual approach adopted to address deficiencies
in the UNSO data, and the actual methods used in adjusting the base
weights, are described in the following sections.

The limitations of industrial data for comparative analyses are
well known. At the branch level the major data problems are: (i)
missing base weights when supplementary evidence suggests the
existence of industrial activity, (ii) under-estimation of base
weights[2], or (iii) combinations of different industrial branches
in the base weights. Presumably, if all such weaknesses were
accurately resolved, the sum of the base weights for each country
should be a very good approximation of total manufacturing value
added in 1975. According to this line of reasoning the general
course of work consisted of three phases. First, at the branch
(i.e. 3-digit) level, the base weights were examined. Where
appropriate and practicable, adjustments were made according to
methods described below. Second, the sum of the base weights was

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1/ Countries are listed in Appendix A, Table A-1.

2/ Over-estimation is a second, less likely, possibility.

compared with an independently derived indicator of total net output in manufacturing, available from the United Nations Office of Development Research and Polciy Analysis (DRPA). Finally, statisticians turned their attention again to the branch level data and, where necessary, attempted to resolve any remaining discrepancies that became apparent as a result of the DRPA comparison. The following sections provide a description of the work for each of these three phases.

A. DATA CLEANING AT THE BRANCH LEVEL

Missing base weights. Although UNSO does not distinguish between those branches with missing but non-zero base weights and those where industrial activity is nil or negligible, close examination of this aspect was regarded as an extremely important step for improving international comparability of the UDB. Extensive efforts were made to resolve ambiguities for every country-branch where no UNSO base weight value was provided and, if possible, either to estimate the base weight or to establish (with reasonable confidence) that industrial activity in the missing country-branch was virtually non-existent. In the latter case, zeros were entered in the UDB.

Table 4 shows that, among the 86 countries for which the UNSO data contained one or more missing base weights (a total of 715 missing country-branches), a complete search[1] has been made for evidence of industrial activity, and in 38 countries (containing a total of 123 missing country-branches) it was possible either to

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[1] Published sources used include YIS, Vols. I. and II; The 1973 World Programme of Industrial Statistics: Summary of Data from Selected Countries, United Nations, N.Y., 1979; Unpublished sources include UNSO base weight data for earlier base years and information supplied by United Nations regional economic commissions.

Table 4. Comparison of UNSO Data and the UDB, According to the Distribution of Missing Base Weights

	Countries with Complete Base Weight Data		Countries with Incomplete Base Weight Data		All Countries	
	No. of Countries	No. of available observations	No. of Countries	No. of available observations	Total no. of available observations	Per cent of theoretical maximum
UNSO	52	1456	86	1693	3149	81.5
UDB	90	2520	48	826	3346	86.6

estimate a base weight or to assign a zero value to every branch in question.

Of the remaining 48 countries with missing base weights, it was possible either to assign zero values or to estimate base weights for 74 additional country-branches. However, among these 48 countries there is still a residual of 518 country-branches for which the proper base weight value remains unknown. These are cases where, because of the paucity of information, it was not deemed prudent either to indicate (by a zero value) that industrial activity in a country-branch is nil or very insignificant or, alternatively, to estimate a non-zero value for the missing base weight. The latter situation refers to country-branches where the only statistical evidence of industrial activity available was in the form of commodity production data which could be assigned to the branch in question, but where there was no acceptable possibility of deriving a reasonable value added figure.

Actually the picture is not as bleak as would appear on the basis of a straight count of missing observations. Table 5 shows that missing base weights are concentrated in a small number of countries. Viewed within the context of the relative weight of those countries in their respective country groupings, full base weight coverage has been achieved for those developed market economies accounting for 99.8 per cent of the total GDP originating in manufacturing for their economic grouping. The corresponding figure for developing countries is 95.6 per cent also acceptable although coverage for the least developed countries - 71.7 per cent - is less impressive. However, in interpreting the data, it should be kept in mind that industrial activity in many missing branches is probably also nil or insignificant; in assigning zero values REG has chosen to be extremely conservative.

After a complete review of the missing UNSO base weights using all available sources, it was determined that zero values could be assigned to 160 country-branches. For an additional 37 country

Table 5. Inventory of the UDB: Distribution of Countries According to the Number of Missing (1975) Base Weights in Each, by Economic Grouping[a]

Number of missing base weights	Developed Market Economies		All Developing Countries		Least Developed Countries	
	No. of countries	% wt.[b]	No. of countries	% wt.[b]	No. of countries	% wt.[b]
0	23	99.77	61	95.71	7	72.44
1 - 5	2	0.21	9	3.52	2	3.34
6 - 10	1	0.02	7	0.27	3	7.71
11 - 15	-	-	4	0.20	2	6.77
16 - 20	-	-	6	0.19	4	5.73
> 20	-	-	5	0.11	3	4.01
Total	26	100.00	92	100.00	21	100.00

a/   The comparison could not be made for centrally planned economies, because comparable national accounts data from DRPA are not available.

b/   Percentages in each economic grouping are based on GDP originating in manufacturing, in 1975 US dollars, at market prices.

branches, non-zero values were estimated as follows:

    (a)   If value added in current national currency for 1975 was
available:e for a missing branch (usually from YIS, Vol.I)
In a few cases, unpublished data from ECLA were used. The
.igure was converted to US dollars and entered in the data
base.

    (b)   If a 1970 base weight (1970 was the UNSO's preceding base
year) was shown for the missing branch, and this weight was
relatively small in 1970, the 1970 value was directly
brought forward as an approximation for 1975.

    (c)   If the 1970 base weight was amounted to significant portion
of manufacturing value added in that year, the same, 1970,
base weight share was assumed for 1975.

Frocedures (b) and (c) are, admittedly, rather crude. Neither
takes into account changes in price. The f rmer approach totally
ignores the issue of growth and the latter assumes no change in the
relative share of the branch since 1970. Considering the time
period involved, both probably underestimate the 1975 base weight,
and the resultant estimates were only regarded as superior to a
missing base weight for branches in question. In every case where a
non-zero base weight was estimated for a branch, the total of the
base weights was increased accordingly.

Regarding the implications of the problem of remaining missing
base weights for the over-all quality of the data base, the effect
is probably very small, whether the user is concerned with data for
an individual country or is interested in the data for a group of
countries. UNIDO will continue to monitor data availability in such
branches, and it is anticipated that the 1980 base weights currently
in preparation by UNSO will include data for most of those that
should be assigned a non-zero value.

Underestimation of base weights. Base weights for individual
branches may be underestimated because national statistical offices:
(i)exclude the activities of major firms (e.g. petroleum refineries
or other firms whose activities are regarded as confidential for

reasons of national security), (ii) omit selected activities normally classified as components of the given branch, or (iii) exclude small scale establishments such as those employing less than 20 persons. Every effort has been made to identify and to account for these discrepancies, in so far as available data, and REG's interpretation of the data, would allow. In this connexion, one rule generally followed was that if any figure for value added at the 3-digit level of ISIC was found to be higher than the UNSO base weight value, the higher figure was used to replace the original base weight, on the assumption that over-reporting in an industrial census would be unlikely.

The differential effects of incomplete census/survey coverage at the branch level have also been taken into account whenever supplementary data at the 2-digit level of ISIC would permit. However, in the absence of adequate supplementary information, UNSO base weights have often been adjusted proportionately. For a complete description of procedures used, see section C below.

Base weight combinations. Among those cases where the original UNSO base weight was combined, it was sometimes possible to find data on value added in current national currency [1] at the branch level, which could be used to distribute the combined figure to the constituent branches. This was obviously the first step and preferred method. It is a policy of UNIDO's statistical programme that even a rough disaggregation of combined base we hts is preferable to the combined reporting of different branches, specially if it has been possible for REG to estimate disaggregated production indexes. To this end, certain proxy variables[2] were

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1/ Sources include YIS, vol. I. and The 1973 World Programme of Industrial Statistics: Summary of Data from Selected Countries, UNited Nations, 1979.

2/ The most commonly used proxy variables include gross output, the number of employees, and wages and salaries.

used to apportion combined base weight estimates to the constituent
3-digit branches.

Table 6 shows that the original UNSO data contained 140 combined
base weights, and that these have now been reduced to 75. However,
close examination of the data by REG has required that 8 additional
ISIC base weight combinations be created. The combinations
"created" by REG represent cases where there was reason to believe
that value added (i.e. the base weight) for a missing branch was
included with the base weight for another, related branch, although
the combination had not been identified as such by UNSO.

For those base weight combinations (83) that remain in the UDB,
the chief conceptual consideration relates to the treatment of
combined base weight data by users. At UNIDO, for most standard
computer runs where country data are aggregated, the convention is
that, if a combined base weight is shown for a developed country,
the weight is divided evenly among all branches in the combination;
if the combined base weight appears in a developing country, the
entire weight is assigned to the sector originally designated by
UNSO in reporting the combined base weight.

This treatment of the data is guided by the assumption that, in
developed countries, all branches surely deserve a significant
(although unmeasurable) share of the combined weight, and therefore,
in the absence of any other information, allocation of the combined
weight equally among constitutent branches probably represents the
best approximation of each branch's "true" base weight. In
developing countries, on the other hand, the branch structure of
base weights is often very uneven and one would expect one branch of
the combination to predominate. Assuming that UNSO has identified
(by the ISIC code attached to the branch combination) this
predominant branch, it would appear closer to "reality" to assign
the entire combined base weight to the predominant branch. This
convention is a standard feature of the SLANG System, a system for
data retrieval and elementary data analysis, specially designed by
REG for in-house users.

Table 5. Distribution of Base Weight Combinations, Before and After Adjustment

ISIC Combination Code	Number of Base Weight Combinations			
	Contained in UNSO data (a)	Of which: removed by UNIDO (b)	New combinations created by UNIDO (c)	Total in UDB (a-b+c)
311B	12	2	-	10
313A	1	1	1	1
321B	1	-	-	1
321C	1	-	-	1
322B	7	2	-	5
322F	8	4	-	4
323A	7	2	-	5
331A	15	2	-	13
341A	1	1	-	-
351A	15	6	-	9
351C	5	4	-	1
351P	-	-	1	1
353A	10	8	1	3
355A	5	3	-	2
361B	28	21	-	7
361F	-	-	1	1
371A	13	8	1	6
381C	6	1	-	5
381D	4	-	-	4
382A	-	-	1	1
382F	-	-	1	1
382G	1	-	-	1
385A	-	-	1	1
Total	140	65	8	83

B. COMPARISON OF THE BASE WEIGHT SUM AND AN INDEPENDENTLY DERIVED
    MEASURE

Comparison standard. At the 1-digit level of ISIC, that is, for
total manufacturing, the salient decision to be made in the initial
phases of the project was the nature of the reconciliation process
that was to guide the work. With respect to the base weights, the
following statistical limitations on comparability,[1] listed in
descending order of importance, are most relevant:

   (i) differences in the definition of the manufacturing sector;

   (ii) differences in the treatment of public and national defense
        activities;

  (iii) discrepancies in the definition of value added;

   (iv) differences in establishment coverage by size of firm; and

   (v) variations in the reference period used.

This list would probably be appropriate for most institutions (other
organizations as well as UNIDO) that carry out studies related to

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[1] There are, as well, a number of economic or policy circumstances
     that detract from the use of the data base for cross-section or
     time series analysis. Examples are: excessively high levels of
     effective protection; extensive price controls; and other forms
     of market intervention. It is, however, the user and not the
     statistician who should take account of such possible
     discrepancies.

industrial growth, trade-industry relationships, structural change, etc.[1]

Bearing in mind the priorities dictated by the nature of UNIDO's study programme, a general decision was made that work would begin by focusing on the relationship between value added in manufacturing (in 1975 U.S. dollars) as available from industrial statistics sources and GDP originating in that sector as reported in national accounts data. Among researchers who have need of sectoral data, national accounts sources are generally preferable to census data. In a cross-country comparison of the MVA totals from the two sources, most of the statistical limitations referred to above would be lessened by utilizing national accounts data. For example, the practice of excluding public and national defense activities is probably less prevalent for national accounts than when census data are compiled at the branch level; the number of divergent definitions of the manufacturing sector are reduced; and country practices in defining value added are generally more uniform. The obvious limitation of national accounts data is the lack of industrial detail.

On the other hand, industrial census/survey data normally cover only relatively large establishments. Even those censuses that describe coverage as "all establishments" may still exclude the activities of cottage and certain small-scale industries, while national accounts data, by definition, are expected to cover all

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1/ However, reconciliation of one or more such discrepancies does not ensure that cross-country comparability in other terms is achieved. Preparation of data for other types of studies, for example those dealing with employment, would require a different set of priorities. In this case variations in establishment coverage by size of firm (iv) might receive a higher priority, because many countries conduct surveys/censuses covering only those establishments with 10, 20 or more employees. Subsequent work by UNIDO will take this aspect into account when transforming and cleaning data for variables such as the number of employees, man-hours worked, wages and salaries, etc.

manufacturing activity irrespective of the size of the manufacturing
unit. Thus, the alignment of census value added with national
accounts data, if practical, could be an important step in the
development of a data base to service users engaged in cross-section
or cross-country studies.[1]

When making the decision to concatenate these data sets, REG was
fully aware of important conceptual differences between the two.
The value added concept used for census purposes includes the cost
of non-industrial services and excludes receipts from this source.
The national accounting concept of value added excludes these costs,
although it includes receipts for non-industrial services.

However, the decision to accept this form of inconsistency was
based on three factors. First, a review of country practices in
industrial statistics indicated that the census concept was not
always used; some countries followed a national accounting concept
in reporting their census results.[2] Second, the significance
of these conceptual differences is far outweighed by differences
resulting from other sources of incomparability between the two data
sets.

Finally, the decision to reconcile the UNSO figures for MVA with
the national accounts totals for manufacturing was also guided by
general views on the relative quality of the two data sets. Work
toward an internationally comparable set of national accounts
statistics is probably more advanced than industrial statistics. At

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1/ It should be noted that the alignment of census value added with
national accounts data was not a blanket process, automatically
applied for all countries. Indeed, a discrepancy between the
two data sets of ± 15 per cent was accepted as reasonable, given
the conceptual differences mentioned above. Moreover, for those
countries where the two data sets differed by more than 15 per
cent, the discrepancies were first examined, country-by-country,
and explanations sought prior to adjustment. In many cases, it
was possible to identify specific branches where the adjustment
would be most appropriate. For a complete discussion of the
procedure, see section C.

2/ For example, based on a count of the origins of value added data
as shown in the 1978 edition of YIS, Vol. I, twelve of the 79
countries included in that publication report their value added
to be derived according to the national accounting concept.

the country level, the national accounts generally receive a higher priority, are better funded operations and are compiled at more frecuent intervals than industrial statistics; at the international level, the work of DRPA, UNSO, the regional U.N. commissions and other institutions (IMF, the World Bank, etc.) has also focused more heavily on the development of national accounts data. Consequently, the national accounts are thought to be more reliable (or less unreliable) than industrial statistics.

Screening of the base weight totals. The screening process began with a comparison of the sum of the 3-digit base weight values as supplied by UNSO (i.e. the total for manufacturing or MVA) and the corresponding DRPA figure for GDP originating in manufacturing,[1] where both refer to 1975 and are stated in US dollars and according to the same concept of valuation, i.e. either at factor cost or producers' values.[2] Close agreement between the two data sets was thought to be a good basis for confidence in the accuracy of the UNSO base weights, while poor agreement was regarded as a signal that the original UNSO base weights should be examined for possible error.

1/ The DRPA data are published in the Handbook of World Development Statistics, 1980: Major Economic Indicators Showing Historical Development Trends, Office for Development Research and Policy Analysis, United Nations, New York, March 1981. For details on how the DRPA data are derived, see Documentation for the DRPA Data Bank of World Development Statistics, 1980: Major Economic Indicators Showing Historical Development Trends, published by the same office in September 1981.

2/ Most developed countries measure value added and gross output at factor cost - that is, they exclude indirect taxes on production and include all subsidies to production. Most developing countries record these concepts in producers' values which include indirect taxes but exclude production subsidies, if any. A limited number of countries report data according to both systems of valuation and, for these countries, the difference has been shown to be variable. See A.H. Amsden, 'An international comparison of the rate of surplus value in manufacturing industry', Cambridge Journal of Economics, No.3, 1981, p.244.

Because there was no documentation to indicate the valuation used in the original UNSO base weights, an initial assumption was that the valuation attributed for value added or gross output, as reported in the U.N. Yearbook of Industrial Statistics (YIS), Vol. I, was also applicable to the base weights. In many cases, it was possible to verify (and sometimes reject) this working assumption, using other sources.

After reconciliation of the valuation concept, the ratio between the two totals was calculated for each country (the results are shown in Appendix A, Table A-1), and a difference between the DRPA figure and the sum of the base weights exceeding $\pm$ 15 per cent of the base weight total was arbitrarily defined as an "inconsistency". Using this criterion, 59 countries out of a total of 118[1] were identified as having base weight totals that were not consistent with the DRPA's national accounts figures. In most instances (47 of the 59 countries) the DRPA figure was greater than the sum of the corresponding weights. This is in the expected direction, given the conceptual and practical differences between national accounts statistics and census/survey results discussed earlier, [2] although a discrepancy of such magnitude would not be expected.

Many of these discrepancies were thought to be due to inappropriate definitions or to incomplete coverage of the sector in the census/survey data used.[3] The method of reconciliation of each base weight total with the DRPA figure varied according to the precise nature of the coverage problem. For example, base weights

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[1] A total of 138 countries are listed in the table; however, comparative data were not available for 10 of them, and because the national accounts figure for another 11 countries was estimated by UNIDO, these countries are also excluded from the comparison.

[2] See also V. Prakesh, Statistical Indicators of Industrial Development: A Critique of the Basic Data, World Bank Working Paper no. 198, September, 1974.

[3] A smaller number of inconsistencies are probably due to incomplete coverage of small-scale establishments although this is a lesser problem for value added than for other data such as employment.

for the Central African Republic are described as referring only to
"enterprises keeping modern accounting records", but cover all types
of industrial activity. Data for Mexico are based on coverage of
selected industries only.[1]

When the DRPA figure for MVA was accepted as the preferred total
(which was almost always the case), the adjustment process amounted
to an alteration of the existing base weights for industrial (ISIC
3-digit) branches so that their sum equalled the DRPA value. In
certain instances the adjustment was applied only to selected
branches; in other cases, all branches were adjusted proportionately.

The choice of alternative weights to reconcile inconsistencies
among the various industrial branches was governed, in the first
instance, by the likely explanation for the inconsistency. Thus, in
the example of the Central African Republic, the inconsistency could
be att.ibuted to poor coverage of small firms, since these
enterprises would be least likely to maintain modern accounting
records. In the case of Mexico the inconsistency is due to the fact
that entire industrial branches were excluded.

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[1] Descriptions were taken from the country notes and table
footnotes given in the 1978 edition of the YIS, vol. I, which
was a major source of basic information. Other sources used in
the screening of data include the 1977 Supplement to the
Statistical Yearbook and the Monthly Bulletin of Statistics,
published and unpublished data from the regional commissions,
country studies carried out by nationals of the country and
financed by UNIDO, and published or unpublished information from
national statistical sources. Valuable supplementary data could
sometimes be derived from the composition of GDP in 1975
according to major divisions of manufacturing, i.e. at the ISIC
2-digit level of disaggregation, that are published in the
United Nations' Yearbook of National Accounts Statistics
(YNAS). However, an important precondition for using this data
was that, the YNAS figure for GDP originating in manufacturing
should be reasonably close to the corresponding total from DRPA.

Following this line of thinking, various approaches were developed to deal with these 44 countries where total MVA was significantly less than the national accounts figure. Of the remaining 12 countries - where the base weight total exceeded the national accounts figure - the task was to identify those factors that led either to an over-estimation of census MVA, an under-estimation of GDP originating in manufacturing, or both. Each of these approaches is described in the following section.

C. RESOLUTION OF DISCREPANCIES

The actual procedures used to resolve differences between the sum of the base weights and the DRPA figure for GDP originating in manufacturing (DRPA total) varied owing to differences in national statistical practices and the limitations of available information. In several cases, information remains incomplete despite diligent searches and results are regarded as tentative and subject to revision. A detailed description of each adjustment would entail a country-by-country discussion and cannot be undertaken here. The following represents a general outline of the main alternatives, and indicates the principles employed and the lines of reasoning adopted.

Adjustment to the national accounts total using supplementary weights. This approach was considered the most desirable, but was practical only in those instances where extensive additional information was available. It consisted of the following three steps:

a) Weights, representing additional output among those industrial branches that were not adequately covered in the original set of base weights, were derived from supplementary sources.

b) Using the branch distribution of these supplementary weights, the _difference_ between the DPRA total and the sum of the base weights was allocated to the various branches.

c) The increments were added to the original branch weights.

Adjustment using weights for major divisions. This approach was employed for those countries where information on specific supplementary weights was not available, but where a breakdown by ISIC 2-digit major divisions was shown in YNAS, and data on GDP originating in manufacturing, as shown in YNAS, were in reasonable agreement with the DRPA total. In this case:

a) Shares of the weights for each major (i.e. ISIC 2-digit) division of industry were calculated from the national accounts data.

b) The DPRA total was then distributed at the 2-digit level of ISIC according to these shares.

c) The new estimates for each major (ISIC 2-digit) division were then further distributed according to the original branch (ISIC 3-digit) weight shares as reported by UNSO.

This procedure involved the assumption that, in the absence of detailed supplementary data, the problem of under-reporting across branches could best be accommodated by using divisional (ISIC 2-digit) weights as a first proxy. Step "c" involved the assumption that the relative share of each 3-digit branch within a given major (2-digit) division was accurately reflected by the original base weights. In other words, the direction of bias was assumed to be the same for related branches e.g., ISIC 311/2 (food processing), 313 (beverages) and 314 (tobacco manufactures), within each major division, e.g. ISIC 31.

Adjustment using original weights. In several instances, insufficient supplementary data were available to permit the use of the supplementary weights approach, and data (from YNAS) at the major division level of disaggregation were either not available or not suitable for use as described above. For these cases, there was no choice but to accept the DRPA total as the correct sum for the base weights, and to distribute this total according to the original base weight shares at the branch level.

Reconciliation between larger base weight totals and DRPA. In those twelve instances where the difference between the sum of the base weights and the national accounts figure was in the unexpected direction, the task was to determine whether (i) manufacturing value added had been over-estimated, (ii) GDP originating in manufacturing had been under-estimated, or (iii) both. However, if an explanation for the discrepancy could not be found, the larger UNSO base weights were retained on the assumption that under-reporting in census/survey data is more probable than over-reporting.

Incomplete documentation of both the UNSO base weights and the DRPA national accounts data necessitated the use of indirect routes to determine which alternative was preferable. Indirect investigation entailed three exercises. One was to extend the comparison of the two data sets beyond the manufacturing sector, usually by examining mining, and electricity, gas and water, as well. Another was to compare UNSO base weights for 1975 with the corresponding figures for 1970. The third approach involved a comparison of the base weights with national accounts sources other than the DRPA, as well as with earlier DRPA estimates which had been subsequently revised. (The purpose of this last step was to explore the possibility that the UNSO base weights, which by definition are never revised, may at one time have been consistent with the national accounts data.)

Probable explanations for the discrepancy were found for six of the twelve countries. In two countries, Angola and Togo, it was determined that the 1975 base weights for total manufacturing were

questionable, because they were derived from shares of manufacturing value added in total industry (i.e. mining plus manufacturing plus electricity, gas and water), relating to 1970 ard 1972, respectively. On the basis of supplementary data, it was determined that the mining sector in both countries had grown significantly during the interim up to 1975, and therefore the DRPA figure for GDP originating in manufacturing was thought to be more reliable.

In one country, Congo, census value added data from different sources were not consistent and confid ice in the UNSO base weights was diminished. Thus, the national accounts total from DRPA was taken as the preferred figure. Reunion was an interesting case where, in comparing recent DRPA data with an earlier DRPA print-out, it was observed that a drastic downward revision of GDP originating in manufacturing had been accompanied by an upward revision, of almost equal magnitude, in the agricultural sector, while total GDP remained the same. Because the UNSO provides only one base weight for Reunion, a combined weight for food products, beverages and tobacco, it was assumed that some agricultural activities had formerly been incorrectly classified as food processing. Therefore, the single base weight for Reunion was adjusted downward to conform to the DRPA figure. For Hong Kong and Jordan, the DRPA Handbook[1] indicated that "data for GDP by producing sector should be regarded as notional," and it was arbitrarily decided to retain the UNSO base weights.

In six countries - Chad, Chile, Iran, Libyan Arab Jamahiriya, Somalia and Swaziland - the discrepancy was due either to inconsistencies in the DRPA data or to other factors that could only be surmised and not firmly documented. Here, the original UNSO base weights were retained, pending further information.

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[1] Handbook of World Development Statistics, 1980: Major Economic Indicators Showing Historical Development Trends, Projections and Perspective Studies Branch, Office for Development Research and Policy Analysis, Department of International Economic and Social Affairs, United Nations, New York, March 1981.

Thus there were four instances - Angola, Congo, Reunion and Togo - where the UNSO totals for manufacturing were rejected and the lower DRPA figure was used instead. When the latter figure was adopted, the original UNSO base weight shares were used to estimate new base weights at the branch (ISIC 3-digit) level. Although every available item of information has been brought to bear on these problems, there can be no certainty that the major or over-riding explanation for differences between the two data sets has been correctly identified and/or remedied in every case. To explore these circumstances in more detail would require extensive work within the country by experienced statisticians - a luxury which no organization could afford.

An overview of the results of these procedures is provided in the following section. For country details on the remaining discrepancies between the two data sets, see Appendix A.

D. RESULTS OF THE BASE WEIGHT ADJUSTMENTS

Table 7 provides an indication of the extent of REG's adjustment of the UNSO base weights, comparing both sets of base weight data (i.e. before and after adjustment) with the DRPA totals. The table shows the distribution of the two data sets in terms of their deviation from the DRPA standard. The "number" column refers to a simple country count and the "per cent weight" column indicates the accumulated share of these countries' GDP originating in manufacturing, at producers' values,[1] compared to the sum for all

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1/ Although the per cent deviation between the sum of the base weights and DRPA has been calculated from data at factor cost or at producers' values depending upon the valuation of the original base weights, the per cent weights shown in Table 5 are all based on GDP originating in manufacturing, 1975, at market prices.

Table 7. Comparison of the 1975 Base Weights and DRPA Data, by Country Grouping,
Before and After Adjustment of Base Weights by KEG [a]

DRPA-UNSO UNSO (per cent)	Developed market economies				All developing countries				Least developed countries			
	Before		After		Before		After		Before		After	
	No.	% wt [b]	No.	% wt [b]	No.	% wt [b]	No.	% wt [b]	No.	% wt [b]	No.	% wt [b]
> 100	–	–	–	–	5	2.68	3	0.14	2	4.81	2	4.81
+51 to +100	–	–	–	–	5	0.45	1	0.03	1	1.70	–	–
+31 to +50	2	2.89	–	–	14	4.35	3	0.05	4	21.60	2	2.48
+21 to +30	1	2.07	–	–	9	31.62	1	0.39	–	–	–	–
+16 to +20	5	34.46	3	6.93	4	3.47	1	10.73[d]	–	–	–	–
+11 to +15	1	0.45	1	0.45	11[e]	5.55	11	7.15	5	34.39	5	34.39
+6 to +10	5	43.76	5	43.76	7	24.86	7	24.86	1	2.07	1	2.07
+1 to +5	3	3.85	3	3.85	9	11.13	8	11.02	1	6.68	–	–
0	2	1.26	6	20.32	5	1.25	38	30.86	2	13.39	6	40.89
–1 to –5	4	10.81	4	10.81	3	2.35	3	2.35	1	9.16	1	9.16
–6 to –10	2	0.40	3	13.83[d]	5	1.78	6	5.03[d]	2	1.97	2	1.97
–11 to –15	1	0.05	1	0.05	3	4.39	2	3.41	–	–	–	–
–16 to –20	1	–	–	–	1	0.04	1	0.04	1	2.59	1	2.59
–21 to –30	–	–	–	–	7	2.47	6	2.45	1	1.64	1	1.64
–31 to –50 [c]	–	–	–	–	4	3.61	1	3.49	–	–	–	–
Total	26	100.00	26	100.00	92	100.00	92	100.00	21	100.00	21	100.00

a/ The comparison could not be made for centrally planned economies, because comparable national accounts data are not available.

b/ Per cent weights in each grouping are calculated on the basis of GDP originating in manufacturing, 1975, at market prices.

c/ In no case did the original UNSO base weight exceed the DRPA figure by more than 50 per cent.

d/ These very large shifts are due to changes in position of a few countries with a sizeable share of the MVA of their respective groupings. For example, prior to adjustment, the DRPA/UNSO comparison for Japan showed a discrepancy of +18.8 per cent; after adjustment the corresponding figure was –6.4 per cent. Similar shifts occurred in the figures for the Republic of Korea and Mexico.

e/ Includes Bolivia and Turkey, for which the discrepancies before adjustment were +15.2 and +15.1 per cent, respectively.

countries included in the economic grouping being addressed.[1]
Very large shifts in the per cent weight for some categories shown
in Table 7, which might appear to be anomalies, are actually due to
a change in position of a few countries which happen to have a large
weight.[2]

REG's initial criterion was to regard a deviation of more than
15 per cent as unacceptable. The results indicate that, in the
original data set, 8 developed market economies and 51 [3]
developing countries (9 of which were least developed countries)
failed to meet this criterion.   After adjustment, the corresponding
count was respectively: 3 developed market economies and 17
developing countries, of which 6 were least developed countries.
The table also indicates that the base weight totals for some
countries still fall outside the acceptable range. These are
countries for which no reasonable explanation or basis for changing
the base weights could be found.[4] With a very few exceptions,
REG does not expect that there will be any notable future change in

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1/ For the centrally planned economies, no breakdown of GDP by
    industrial origin is available from DRPA. Therefore, this
    comparison excludes those countries. REG has estimated a
    breakdown of GDP for these countries, and in some cases the
    deviation, which is shown for individual CPE's in Appendix A, is
    quite large. However, due to lack of an acceptable comparison
    standard, no adjustment of the base weights for centrally
    planned economies has been attempted.

2/ For example, in Japan the difference between DRPA and UNSO
    before adjustment was +18.8 per cent; after adjustment it was
    changed to -6.4 per cent. Similarly, for Republic of Korea, the
    difference was +26.3 per cent before adjustment and -6.7 per
    cent after, and for Mexico the corresponding difference was
    +27.7 per cent and +19.8 per cent.

3/ Two of the 51, Bolivia and Turkey, are included in the category
    +11 to +15 before adjustment, because they deviated by more than
    15.0 per cent, but less than 15.5 per cent.

4/ Remaining deviations are quite large in some cases. However,
    there simply was not enough information on these countries to
    suggest a proper course for adjustment.

the 1975 base weight file. Therefore, beyond this point, problems
of international comparability in the base weight data belong to the
province of user discretion. A country-by-country list of
differences between the base weight totals and the DRPA data is
provided in Appendix A.

III. PRODUCTION INDEXES

Production indexes and annual updates at the 3-digit level of ISIC (currently on a 1975 base year) are supplied to UNIDO in machine-readable form by UNSO. Apparently, many of these indexes are prepared by national statistical bureaus and submitted to UNSO in final form; others are derived by UNSO using national data of various types.[1/] The data, as received, are often not suitable for research purposes, due either to missing observations or to differences between national reporting practices and the recommended definitions and standards on which the United Nations' reporting system is based. In the case of production indexes, the most significant differences relate national deviations from the ISIC. The redressing of these deficiencies has constituted the bulk of REG's work with regard to this particular data set.

It should be emphasized that these goals have not been pursued at the expense of discreteness of the national data. That is, every item of data for country A has been derived exclusively from some form of information relating to country A alone; no substitutions based on assumed similarities between country A and countries X or Y have been included in the UDB. This is not to deny that such similarities exist, and indeed their use is a common practice among researchers. However, substitutions have been rejected by REG as inappropriate for a set of "basic" data. Moreover, they can easily be derived by data users who, at the same time, can fully define and control the underlying assumptions most suitable for a particular application of the basic data.

1/ For a description of the UNSO production indexes and the sources on which they are based, see the 1977 Supplement to the Monthly Bulletin of Statistics and Statistical Yearbook.

A. ESTIMATIONS FOR MISSING DATA

One of the hazards of working with production indexes is that it is possible to create an index from any time series. The challenge is to find a reasonable indicator of real change in net output. The highest priority was given to published or unpublished supplementary sources, either from national statistical bureaus or from UN offices (e.g., regional economic commissions). Another potential informational source was production indexes for earlier years, i.e. those appearing in the UNSO data when the base year was 1970 or 1963, but later omitted when earlier years were dropped from UNSO publications. Because new sources of production indexes at the 3-digit level of ISIC were in practice rare, it was generally necessary to weigh and choose among a number of imperfect alternatives.

There are two widely available indicators of change in industrial output over time. The first consists of commodity output series expressed in quantities at the 6-digit level of ISIC.[1] The second indicator is annual data on value added, in current national currency, at the 3-digit level of ISIC.[2] Theoretically, a set of ISIC 6-digit commodity series which represent the major output of the corresponding branch could be weighted by base-year (1975) prices to form a highly reliable index of industrial production. Similarly, value added data in current prices could be used to form a production index with the simple application of a deflator to adjust for price changes through time. The problem

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[1] YIS, Vol.II is the most comprehensive source of such data, but commodity output series from World Bank publications, regional U.N. commissions, and national publications are also readily available. Data exchanges with other organizations are under discussion.

[2] Many of these series are published in YIS, Vol.I, but some unpublished data have also been provided by UNSO.

is that, in most cases, neither base-year price weights[1] nor
appropriate deflators are available.

The paucity of data on prices and price deflators presents a
very serious limitation on the utility of these indicators for
estimation purposes. Nevertheless, in the interest of developing
the branch coverage of production indexes in the UDB to the fullest
extent possible, certain methodological concessions have been made
to allow their use. However, these methods have been accepted only
with the condition that the resultant production indexes be
subjected to careful scrutiny and evaluation. Details on the
concessions made are provided in the remainder of this section. The
evaluation procedure is described in section III.C.

Use of commodity output data. The most common source of commodity
production data was YIS, Voi.II. In the absence of good price
weights for combining the series, unweighted geometric means were
calculated. Each quantity series was converted to an index (base
year 1975 = 100) for all appropriate 6-digit ISIC groups which
represent part of the output of the 3-digit ISIC group being
estimated. Unweighted geometric means of the commodity series were
then calculated to form the production indexes, and linked to
existing production index data.

Commodity-based indexes were linked wherever the number of
commodity production series increased or decreased over time, or
where production of a commodity commenced at some time during the
period for which estimations were being made. In the latter case,
the new commodity series was not incorporated until the year after
its greatest period of growth. Of course, no new commodity series
was included after 1975, because the industrial

1/ Some commodity retail prices from the ILO Bulletin of Labour
    Statistics, 1976, 2nd Quarter, are available for selected
    consumer goods, and these have been used where possible.

activity from which such output would be derived would not be covered in the 1975 branch base weight.

The choice and treatment of commodity data are somewhat subjective, in that some series were rejected if the absolute figures were small or if interruptions in many of the primary series would require too many links in the combined series. (Price data, if available, would have eliminated some of these problems.) Use of the commodity approach has generally been contingent upon a certain degree of consonance (i.e. parallel movement through time) among the individual series themselves, thereby reducing the dangers of combining quantity data without weighting.

<u>Use of current-price value added data</u>. Because the absence of appropriate price deflators is a serious impediment, several restrictions have generally governed the use of value added data in current prices as a basis for estimating production indexes. Specifically, this approach was regarded as acceptable only if two conditions were met. First, production indexes for the most important industrial branches (defined by the relative size of the 1975 base weights) must have been readily available from more reliable sources. such as national statistical bureaus (through UNSO), regional UN commissions, etc. A second condition was that a reasonable[1] estimate of <u>total</u> value added in constant prices should be available for all manufacturing industries.

1/ The definition of what constituted a "reasonable" estimate of total value added at constant prices depended upon the per cent coverage of available production indexes. If branch base weight coverage of available indexes was good, i.e. 80 per cent or more, then it was assumed that industrial production (and therefore value added in constant prices) in those branches <u>not</u> covered by an index would follow a pattern similar to the average experience of those branches covered by a production index. If the coverage of available indexes was poor, i.e. less than 80 per cent, it was assumed that an "implicit" index of GDP originating in manufacturing, in 1975 prices, would provide a more accurate estimate of the average experience of all branches.

With these two conditions satisfied, there was some basis for confidence that the difference between total manufacturing value added (MVA) in constant prices, and the portion of MVA that could be generated using existing production indexes, represented a good approximation of the residual value added attributable to those branches for which production indexes were to be estimated. The calculation of this residual was therefore the core of the estimation procedure. The total procedure can be outlined in three main steps:

   a. An estimate of value added in constant (1975) prices for manufacturing total manufacturing (ISIC 300) was calculated;

   b. The difference between the estimated total (derived in step a) and the sum of all available constant price values (generated by applying existing production indexes to their respective base weights) was distributed among those branches for which production indexes were missing, using current price shares;

   c. Production indexes for each missing branch were calculated from the constant price distributions (derived in step b).

Each of these steps is elaborated below.

   a. <u>Manufacturing value added in constant prices.</u> For each country with missing production indexes for one or more branches, total value added for manufacturing, in 1975 U.S. dollars, was calculated in one of two ways, depending upon the degree of non-coverage. (Non-coverage is defined as the difference between the estimate of value added and the corresponding sum derived from production indexes times base weights in each of the years where specific indexes are missing).

   (i) If remaining non-coverage was <u>less than</u> 20 per cent, then total value added (in 1975 U.S. dollars) was estimated for each year, using the following formula:

$$\sum \left[(va_o)_i \ \text{x} \ \left(\frac{pi_1}{pi_o} \right)_i \right] \text{x} \ \frac{VA_1}{\sum (va_1)_i}$$

where $(va_o)_i$ = Value added, 1975, in U.S. dollars (the base
weight) for each branch (i) covered by a production
index;

$\dfrac{pi_1}{pi_o}$ = Ratio of the production indexes, current year and
base year, for each branch (i);

$(va_1)_i$ = Value added, in current national currency, for each
branch (i), covered by a production index;

VA_1 = Total manufacturing value added in current national
currency.

This formula combines two elements: at __constant__ prices, the change
in value added among those branches covered by a production index;
and at __current__ prices, the share of those branches covered by a
production index, compared to total manufacturing value added.
Use of the first element assumes that when coverage of existing
production indexes is greater than 80 per cent, changes over time in
a production index for total manufacturing - i.e. including those
branches for which a production index is missing - will be roughly
parallel to the average pattern observed among industrial branches
covered by an index. Use of the second element introduces an
adjustment for structural shifts in the relative importance of those
branches not covered by a production index.

(ii) If remaining non-coverage was __greater than or equal to__ 20
per cent, total value added (in 1975 U.S. dollars) has been
estimated for each year using an index (1975 = 100) of GDP
originating in manufacturing, at constant prices. Unlike the case
described above, where non-coverage was lower, there usually has not
been any adjustment for structural shifts, i.e. for changes in the

share of those branches not covered by a production index, compared
to total MVA. This is because the only possible source of data for
such an adjustment would have been current price shares, and use of
current price value added distributions was regarded as too risky if
applied to a large segment of manufacturing industries (i.e., 20 per
cent or more).

   b. Residual. The difference between tne estimated total MVA
and value added for those branches covered by production indexes was
then distributed according to either the branch shares of value
added in current national currency for each year, or (when shares
were not available year-by-year) the arithmetic mean of the shares
in surrounding years for which data were available.

   c. Estimated production indexes. Finally, the new
distributions of value added in 1975 U.S. dollars at the 3-digit
level of ISIC were converted to indexes (1975 = 100).

   Use of this value-added approach yields fairly good results when
industrial activity in a branch is firmly established. However,
among branches that account for only a small portion of total MVA,
small annual changes in current price shares can result in large
relative fluctuations in the yearly estimates of value added
attributed to the branch. This result, in turn, yields an erratic
(and unacceptable) production index.

   Although these were the two primary methods for estimating
production indexes, other approaches were occasionally employed.
Their results were accepted, if, at the evaluation stage, the
estimated index appeared to be reasonable. For example, data on
gross output or wages and salaries were sometimes used to
approximate a production index, as described above, but with the
branch shares of these variables serving as a substitute for value
added in current national currency.

When these procedures could not be employed, no time series of production indexes could be developed. An effort was made to preserve the information for 1963 and 1970, i.e. the weights for former base years for the production indexes. The most common procedure for estimating a production index (1975 = 100) for these years was to apply the former base weight branch shares to the DRPA's constant (1975) price totals, and to calculate the ratio between these figures and the 1975 base weights.

Of course, the quality of estimates for missing data varies, depending upon available information. It should be emphasized that not all estimates were accepted for the data base, and it has been necessary to weigh the desirability of attaining full and internationally comparable coverage against the weaknesses of some of the available supporting data. The evaluation procedure described in the section below, served as the basis for individual decisions. For a detailed description of the results of these estimation procedures, see section D.

B. ADJUSTMENTS FOR NATIONAL REPORTING PRACTICES

Although there are a number of ways in which reporting practices will vary from country to country, the only one significantly affecting international comparability of the UDB's production index file involves differences in the industrial classification according to which indexes are reported. Approximately 15 per cent of the production index records supplied to REG by UNSO covered two or more ISIC 3-digit branches.[1] In terms of a count at the branch level, this means that for more than 25 per cent of the total UNSO file, production indexes were "tied". Methodologically, tied indexes represent a special case of missing indexes, the only difference being that the undistributed residual has been more precisely defined.

[1] To cite a few country examples: the data for France include six tied production indexes, covering ISIC 311 through 314, 323 plus 324, 331 plus 332, 355 plus 356, 361 plus 369, and 382 plus 385, respectively. The data for Australia include three tied indexes, covering ISIC 361 through 369, 371 plus 372, and 385 plus 390 respectively.

For this reason the procedures used for disaggregating tied
production indexes were very similar to those for missing indexes.

As in the case of missing indexes, the basic approach began with
a search for branch-level production indexes, which, again, were not
common. The second step was to review supplementary data, such as
commodity output series, that could be used to generate indexes for
one or more of the tied branches. After this stage in the
disaggregation procedure, it was of:en possible to estimate
separate, branch-level production indexes for many of the tied
series, although the decision to accept such estimates depended
ultimately upon the level of agreement between the weighted average
of the new estimates and the original tied index.

If a complete disaggregation of the tied index had not been
achieved, then value added in 1975 prices for all such branches was
calculated as the product of the tied production index and the sum
of the base weights to which it applied. Any portion of this value
added that had been allocated to one or more branches through either
of the steps described above was subtracted. If only one index
remained for estimation, it was calculated directly from the
residual; if two or more, the remainder was then distributed to the
constituent branches according to the branch shares of value added
in current national currency. Finally, implicit production indexes
for the remaining branches were generated from these constant-price
distributions.

C. EVALUATION OF INDEXES

The evaluation phase has been used, not only as a means for
rating the total effect of the numerous estimates and adjustments
carried out at the 3-digit level of ISIC, but also as a feedback
mechanism for guiding decisions on the most appropriate production
index. With several estimated (and sometimes rather different)
production index series to choose from, and with little basis for

choosing one estimation method above the other, evaluation was viewed as an integral part of the estimation process. For this reason, it is somewhat artificial to distinguish between estimation procedures and the evaluation process; the two are described separately only for convenience.

It is not possible to outline a simple path followed, because the approach varied according to the possibilities and limitations of the country data. However, in general, the indexes were examined from three perspectives, according to the following sequence:

1) By inspection and analysis of trends in production indexes at the 3-digit (branch) level of ISIC;

2) By a comparison, at the 1-digit level of ISIC, of the UDB composite index (i.e. the weighted average of 3-digit indexes) a. the national accounts data from DRPA in constant prices, taking into account the coverage of the UDB composite in terms of the 1975 base weights; and

3) By a similar comparison, where possible, at the 2-digit (division) level of ISIC, again using national accounts data in constant prices, as shown in the UN Yearbook of National Accounts Statistics (YNAS).[1]

1/ In setting up this sequence, the decision to move from the 3-digit level of ISIC to the 1-digit level before returning to comparison at the 2-digit level, was based on several difficulties attached to the utility of national accounts data at the 2-digit level. One problem was quantitative -- i.e. the poor country coverage of available 2-digit data -- but there were also serious problems of comparability that had to be taken into consideration prior to use of the data. Details are given later in this section, when evaluation of indexes at the 2-digit level is described.

i. Three-digit level of ISIC. At the branch level, all
production indexes in the data base (those provided through UNSO as
well as REG's estimates) were reviewed by inspection. Highly
erratic indexes were immediately viewed with suspicion, and were
often deleted if no explanation (historical or other) could be
found. Every time series that seemed questionable (for any reason)
was flagged and re-examined against the background of supplementary
information. Supplementary information might include:

    (i) production indexes from independent sources (these were
        rarely available, in practice);

    (ii) commodity production series, either from YIS, Vol. II or
         from other sources (national publications, mission reports,
         U.N. regional commission reports, and studies prepared by
         other organizations);

    (iii) variations over time in other indicators of industrial
          activity, such as wages and salaries, number of employees,
          man-hours worked, or gross output;

    (iv) international trends in real net output within a branch.

    It should be stressed that use of trends relating to other
countries was for comparative purposes only, although in some cases
this comparison lent credibility to indexes that had been questioned
as possibly aberrant. For example, the production index data for
Ireland and Norway covering ISIC 324 (footwear), had been queried
because of sharp decreases during the 1960's and until 1975, and
those for Hungary and the Netherlands covering ISIC 354 (derivatives
of petroleum and coal) were flagged as suspect because of sharp
decreases during the late 1960's However, because similar patterns
were observed among the corresponding indexes for other countries in
the respective economic groupings, the queried indexes were
accepted. Similarly, queried production indexes for Ghana and
Morocco, covering ISIC 331 (wood products) during the 1960s,

were retained after it was found that decreases in production in this branch were common among other African developing countries.

Based on an overview of all supplementary evidence, a decision was made to retain the existing index number, to replace it by an apparently better estimate, or, in some _ases, to delete the index without a replacement. When no conclusion could be reached from the supplementary sources, the decision was deferred pending review of the indexes at the 1-digit (and, where possible, 2-digit) level of ISIC. (This step also marks the beginning of the feedback cycle applied to new estimated indexes).

2. One-digit level of ISIC. Presumably, if the production indexes in the UDB at the 3-digit level of ISIC accurately reflect real change in manufacturing net output over time, there should be good agreement between their weighted average (the UDB composite index) and an index derived from GDP originating in manufacturing, in 1975 prices. This rationale was the basis for the 1-digit comparison.$\underline{1}/$

Of course, this comparison would be valid only if the weighted average of available production indexes in the UDB could be accepted as a true indicator of total net output in manufacturing. Because not all industrial branches are covered by a production index in the UDB for every country, it was necessary to define the following minimum coverage criteria for validity of the UDB composite:

1) Base weight coverage of the production indexes for a given year should be greater than or equal to 75 per cent of the corresponding sum of the base weights; and

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$\underline{1}/$ If the base weight for an invalid production index at the 3-digit level is very small, the composite index approach does not serve well as an effective test of the quality of the index. In these cases, more attention was given at the branch-level stage of evaluation.

2) the percentage of base weight coverage should be fairly
stable through time.[1]

If UDB base weight coverage was less than 75 per cent, there would
be no reason to expect the UDB composite to parallel the DRPA.
However, for each country and each year, where the base weight
coverage of the UDB index was at least 75 per cent, the comparison
between DRPA and UDB was considered appropriate.

Again, the primary standard for comparison was national accounts
data provided by the DRPA at the 1-digit level. A ratio of the two
series (DRPA/UDB) was calculated and examined within the context of
the 1975 base weight coverage of the UDB composite index. When the
coverage criterion was satisfied, a ratio within the range of 0.85
to 1.15 was arbitrarily defined as acceptable, thus allowing a
margin for conceptual and other differences between the national
accounts and census approaches.[2]

In countries where deviations between the UDB composite and DRPA
implicit index occurred frequently, the 3-digit indexes were
re-examined for possible causes of the discrepancy. Alternative
indexes, which at the 3-digit stage of estimation and evaluation
were for some reason rejected, were again reconsidered. If the

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1/ This latter criterion is of great theoretical importance, and
would be a significant factor for data users who wish to
generate 1-digit ISIC time series from the UDB's branch data.
It was not systematically applied during the evaluation phase,
because recognition of its importance is implicit in the high
(75 per cent) base weight coverage criterion. However, it is
probable that some of the variability in the ratio between the
UDB composite and the DRPA implicit index is a statistical
artifact resulting from year-to-year changes in branch coverage
(i.e. between 75 and 100 per cent) of those indexes used to form
the UDB composite.

2/ Table 9 shows, for each country, the number of years in which
both base weight coverage of indexes and the DRPA/UDB ratio were
in the acceptable range, as of the end of the 1981 round of
REG's statistical programme.

alternative production indexes produced a better fit between DRPA
and UDB at the 1-digit level, they were often used as replacements.

In some cases, there was no obvious solution at the 3-digit
level. However, based upon the presumed quality of the data and the
possibility of re-evaluating the problem also at the 2-digit level
of ISIC, these cases could be divided into three groups, each of
which required a different treatment.

The first group consisted of countries known to have a history
of good reporting practices, no production indexes had been queried
and no 2-digit national accounts series were available.
Explanations for the deviations in this country set were sought in
the descriptions of methods used to compile the respective data sets
(i.e. production indexes and base weights vs. GDP originating in
manufacturing).$\underline{1/}$

In the second group, comprised of countries for which data were
very fragmentary and deemed subject to possibly large but
unquantifiable errors, and no 2-digit national accounts data were
available. Here, there was little recourse but to accept or reject
the 3-digit indexes, as each case appeared to warrant.

Finally, there was a third group of countries, for which
national accounts data were available in constant (1975) prices at
the 2-digit level of ISIC. For this group, the national accounts
series were brought into the evaluation process, as outlined in the
following section.

1/ A general description of the production indexes and base weights
    is provided in the 1977 Supplement to the Monthly Bulletin of
    Statistics and Statistical Yearbook. For background on the
    national accounts data, a publication entitled National
    Accounting Practices in Seventy Countries: A Supplement to the
    Yearbook of National Accounts Statistics, U.N. Series F, No.26,
    was extremely valuable.

3. Two-digit level of ISIC. The basic approach and assumptions
at the 2-digit level were similar to those for the 1-digit
comparison, except that the exercise was much more restricted, due
to both limited availability of the 2-digit data and some problems
of comparability. For data at the 2-digit level of ISIC, it was
necessary to turn to the United Nations' Yearbook of National
Accounts Statistics (YNAS) because DRPA provides national accounts
data only for total manufacturing. Moreover, routine screening of
the 40 countries for which 2-digit data were available in the 1979
edition of YNAS indicated that, for eight of the countries, there
was no agreement between YNAS and DRPA at the 1-digit level. The
reasons for these differences are unknown, although REG has assumed
that the DRPA, while using the UNSO data as a basic source, has
often made adjustments, much as REG has done with respect to the
UNSO's industrial statistics data.

However, because the standard of comparison for the UDB at the
1-digit level of ISIC was the national accounts data from DRPA,
differences between DRPA and YNAS could not be ignored. Therefore,
the first step in using the 2-digit data from YNAS was to determine
how closely it agreed, at the 1-digit level, with the DRPA data. If
the two series moved fairly closely through time, it was assumed
that little adjustment of the YNAS data had been deemed necessary.
By extension, the 2-digit YNAS data was assumed to be sufficiently
consistent with DRPA to be reliable for use as supplementary
information in the evaluation of UDB indexes. (Conversely, if YNAS
and DRPA were divergent at the 1-digit level, the 2-digit YNAS
series were rejected as unsuitable for this purpose.)

When the results of the 1-digit comparison suggested that the
2-digit data might be used (in 32 out of 40 countries), implicit
production indexes (1975 = 100) from YNAS were calculated and
compared to the corresponding 2-digit composite from the UDB. Of
course, the comparison process was considerably more complicated
than for the 1-digit comparison, because greater industrial detail

yielded nine 2-digit time series for each country. Moreover, the
degree of parallel movement between the two data sets at the 2-digit
level was much more variable, even among countries with a history of
good reporting practices. Therefore, these 2-digit series were used
with great caution in attempting to achieve a better fit between the
UDB composite and DRPA implicit index for total manufacturing.

The approach was first to examine all 2-digit indexes and
determine generally whether many of those based on accepted 3-digit
UDB data were parallel. If agreement was good, the 2-digit national
accounts data were accepted for adjusting queried 3-digit industrial
production indexes to achieve alignment of the two data sets, using
the same procedure as described for tied indexes in section B,
above. In a few cases, if the base weight for a queried 3-digit UDB
index was very significant within its respective 2-digit group, and
where no good alternative 3-digit index was available, the implicit
2-digit index from national accounts was used to actually replace
the queried 3-digit index.

REG, through its statistical programme, has made considerable
progress in extending and adjusting the original production index
file received from UNSO, and section D briefly summarizes these
results. Of course, many individual problems remain to be
resolved. Therefore, after the 1981 round of estimations had been
completed, the comparison between UDB indexes and the national
accounts implicit production indexes was repeated and used as a
major criterion for reviewing the quality of the UDB. Inventories
of the UDB, incorporating the results of this review, are provided
in a subsequent section.

D. RESULTS OF THE PRODUCTION INDEX ADJUSTMENTS

The goals of maximum international coverage and comparability
within the limitations of acceptable quality often represent
competing ends, and the task has been a constant process

of reconcilation. At the end of 1981, REG's index file contained a total of 44,960 observations $\underline{1}/$ covering 136 countries over the period 1963 through 1979. Measured in terms of branches, this represents 69 per cent of the theoretical maximum of 64,736 observations that could be attained if all 28 branches of industrial activity were accounted for in every year and every country. Measured by using the number of available 1975 base weights as a theoretical maximum, the figure is 82 per cent -- probably a more appropriate comparison because, as was indicated earlier, many of the "missing" base weights are thought to be nil or of negligible significance. In terms of actual base weight shares, total coverage is greater than 99 per cent in all but the last three years of the period, and even then it remains above 95 per cent.$\underline{2}/$

REG's contribution to this record is essentially complementary to the work of UNSO. Table 8 summarizes the relative contribution of each office to the contents of the UDB at four points in time: 1963, 1968, 1973 and 1977. An average of these four years shows that REG has doubled the number of countries included in the UDB, compared to the original UNSO tapes, and that more than 43 per

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$\underline{1}/$ Actually, the total branch coverage is somewhat greater than this figure suggests, because any tied index that was associated with a combined base weight for two or more branches has been treated as only one observation. The total number of branches excluded from the count for this reason is 134. However, because the number of years for which this condition applied will vary (the maximum possible is 17, but for some tied indexes the time period covered could be less), and because details are not readily available, no effort has been made to adjust the figure.

$\underline{2}/$ For further information on the coverage of production indexes according to base weight shares, see Appendix B.

Table 8. Inventory of Production Index Files: UNSO and UDB Compared, Selected Years

	Original UNSO Countries	REG Additions[a]		Total[a] in UDB	Original UNSO Countries	REG Additions[a]		Total[a] in UDB
		To UNSO Countries	Other Countries			To UNSO Countries	Other Countries	
	1963[b]				1973[c]			
No. of countries	56	–	72	128	71	–	65	136
No. of ISIC branches:								
Theoretical max.	1,568	–	2,016	3,584	1,988	–	1,820	3,808
Covered by an index[d]	1,282	241	1,177	2,700	1,636	284	918	2,838
Data missing[d]	(286)	45	839	884	(352)	68	902	970
	1968[c]				1977[e]			
No. of countries	69	–	65	134	69	–	65	134
No. of ISIC branches:								
Theoretical max.	1,932	–	1,820	3,752	1,932	–	1,820	3,752
Covered by an index[d]	1,576	296	882	2,754	1,614	130	635	2,379
Data missing[d]	(356)	60	938	998	(318)	188	1,185	1,373

a/ Status of the UDB as of 31.12.1981.

b/ UNSO count based on tape (1970 = 100) received in 1975.

c/ UNSO count based on tape (1975 = 100) received in 1980.

d/ For the UNSO data, a "tied" index is always counted as more than 1 observation, the count being equal to the number of branches covered by the index; for the UDB data, a "tied" index is counted in the same way only if the base weights are disaggregated. If two or more UDB base weights remain combined, the "tied" index is counted only as one observation. The net result of this difference in definition of the inventories of the two data sets is that the UDB's "missing data" is slightly overestimated, compared to UNSO, and the number of branches "covered" is underestimated.

e/ UNSO count based on tape (1975 = 100) received in 1981.

cent[1] of the production indexes in the UDB have been derived by
REG. Table 9 summarizes the number of years for which production
indexes are in the "acceptable" range, compared to DRPA, as of the
end of the 1981 round of REG's statistical programme. Acceptability
is defined by two criteria: 75 per cent of a country's 1975 base
weights must be covered by a production index, and the UDB composite
index must not deviate from the DRPA implicit index (derived from
GDP originating in manufacturing, at 1975 prices) by more than 15
per cent. It should be noted that the data in Table 9 are shown
separately for the 1960's and the 1970's because, among those years
(i.e. the 1960's) which are remote from the 1975 base year, some
distortion of the UDB composite should be expected (and is observed)
as a result of the use of 1975 base weights for the entire time
series.[2]

As might be expected, there was considerable variation from
country to country in the degree of congruence between the UDB
composite and the DRPA implicit index. According to Table 9,
agreement between the two is quite close for most developed market
and centrally planned economies, although comparability drops
slightly for the earlier period. Among the developing countries,
the data for the 1970's are in much better alignment than for the

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1/ This figure underestimates REG's total contribution, because it
does not take into account those original UNSO indexes that were
subsequently adjusted or replaced by REG as a result of
screening and analysis of the UNSO data. However, as a measure
of REG's unique contribution, this downward bias may be balanced
somewhat by the fact that some of REG's estimations are based on
unpublished UNSO information.

2/ This problem might properly be remedied by applying the 1970
base weights for the earlier years, and then linking the
composite index to the later series at, for example, 1971.
However, because the 1970 base weights did not receive the same
degree of screening and adjustment as the 1975 weights, they are
nc of suitable quality for use in such an exercise. Therefore,
the only solution was to show the 1-digit comparison separately
for two time periods, an alternative which at least acknowledges
the existence of this problem.

Table 9. Production indexes in the UDB: Number of years
in which the DRPA/UDB comparison is in the acceptable
range, a/ selected periods, by country

Country	UNIDO with DRPA Production indexes 1963-69 (number of years)	1970-78	Country	UNIDO with DRPA Production indexes 1963-69 (number of years)	1970-78
Algeria	7	4	Germany, Federal		
Angola	0	1	Republic of	7	9
Argentina	7	9	Ghana	4	5
Australia	7	9	Greece	3	9
Austria	7	9	Guatemala	3	6
Bahrain	-	-	Guinea	0	1
Bangladesh	-	5	Guyana	0	4
Barbados	0	2	Haiti	6	6
Belgium	4	9	Honduras	4	9
Benin	0	2	Hong Kong	5	4
Bolivia	0	5	Hungary b/	7	9
Botswana	0	1	Iceland	-	-
Brazil	7	9	India	7	9
Bulgaria b/	2	9	Indonesia	6	9
Burma	6	9	Iran	0	5
Burundi	-	1	Iraq	0	5
Canada	7	9	Ireland	7	9
Central African			Israel	4	7
Republic	5	9	Italy	6	9
Chad	0	7	Ivory Coast	0	6
Chile	7	9	Jamaica	6	9
Colombia	7	9	Japan	3	9
Congo	0	8	Jordan	0	2
Costa Rica	7	6	Kenya	7	9
Cuba	-	-	Kuwait	0	5
Cyprus	7	9	Lao People's Democratic		
Czechoslovakia b/	7	9	Republic b/	0	1
Democratic Kampuchea b/	0	1	Lebanon	-	-
Democratic Yemen	-	-	Lesotho	0	2
Denmark	7	9	Liberia	1	6
Dominican Republic	0	8	Libyan Arab		
Ecuador	3	9	Jamahiriya	0	3
Egypt	2	8	Luxembourg	6	9
El Salvador	7	7	Madagascar	0	8
Ethiopia	3	6	Malawi	4	9
Fiji	2	9	Malaysia	5	9
Finland	7	9	Mali	0	1
France	5	9	Malta	1	5
Gabon	0	1	Mauritania	3	5
Gambia	0	2	Mauritius	0	2
German Democratic			Mexico	7	9
Republic b/	7	9	Mongolia	-	-

Country	UNIDO with DRPA Production indexes 1963-69 (number	1970-78 of years)	Country	UNIDO with DRPA Production indexes 1963-69 (number	1970-78 of years)
Morocco	7	9	Swaziland	0	4
Mozambique	1	5	Sweden	7	9
Namibia	2	6	Switzerland	7	9
Nepal	-	-	Syrian Arab Republic	7	9
Netherlands	7	9	Thailand	0	8
Netherlands Antilles	-	-	Togo	0	1
New Zealand	7	9	Trinidad and Tobago	2	5
Nicaragua	7	8	Tunisia	0	7
Niger	0	1	Turkey	5	9
Nigeria	4	8	Uganda	0	3
Norway	7	9	Union of Soviet		
Oman	-	-	Socialist Republics b/	7	9
Pakistan	2	7	United Arab Emirates	-	-
Panama	7	8	United Kingdom of		
Paraguay	7	9	Great Britain and		
Peru	7	9	Northern Ireland	7	9
Philippines	6	9	United Republic of		
Poland b/	7	9	Cameroon	1	8
Portugal	5	9	United Republic of		
Puerto Rico	0	2	Tanzania	7	9
Republic of Korea	7	9	United States of		
Reunion	0	2	America	7	9
Romania b/	3	9	Upper Volta	0	3
Rwanda	0	1	Uruguay	7	9
Samoa	-	-	Venezuela	0	4
Saudi Arabia	7	9	Yemen Arab		
Senegal	6	9	Republic	-	-
Sierra Leone	0	2	Yugoslavia b/	7	9
Singapore	2	9	Zaire	2	5
Somalia	0	1	Zambia	4	9
South Africa	7	9	Zimbabwe	6	9
Spain	7	9			
Sri Lanka	0	4			
Sudan	3	4			
Suriname	0	7			

a/ For each year a total for manufacturing was first obtained by summing over the product of base weight times production index. This total was then converted to an index (1975=100) and compared to the corresponding national accounts index. The figures indicate the number of years for which: (i) production indexes are reported for branches which, in the base year, accounted for at least 75 per cent of total manufacturing value added and (ii) the ratio between UNIDO and DRPA indexes is within ± 15 per cent.

b/ Comparison is based on a UNIDO estimate of GDP originating in manufacturing.

Note: A dash (-) indicates that comparative data were not available during any year within the period.

1960's, and data for most of the developing countries with a
significant manufacturing sector are in good agreement. However,
for some developing countries, and even for the later period, care
in country selection is advised for users undertaking analyses that
would involve both data sets. Further details on the utility of the
production index file are provided in Appendix B.

APPENDICES

The purpose of these appendices is to provide background
information on the contents of the UNIDO data base, for the
convenience of users. They contain no basic data. Appendices A and
B are simple inventories of the base weight and production index
files, respectively; appendix C contains a numerical list of country
codes (no longer in alphabetical order due to changes in country
nomenclature), and keys to the ISIC branch codes and ISIC branch
combination codes.

Appendix A refers to the 1975 base weights, comparing the
original UNSO base weights (before adjustment) and UDB weights
(after adjustment) with the DRPA standard, i.e. GDP originating in
manufacturing, in US dollars.

Appendix B is an inventory of the production indexes from three
perspectives. Table B-1 shows the base weight coverage of the
production indexes by country, at the beginning of the time series,
at a mid-point, and for 1978, the most recent year with respectable
branch coverage over a wide range of countries (although the file
also contains some 1979 data).[1] However, users are reminded that
not all time series are continuous between 1963 and 1975.

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[1] The year 1971 was chosen, rather than 1970, as the inventory
mid-point, because of the procedures used to estimate or
preserve production indexes for 1970. As a result, base weight
coverage in 1970 is relatively much higher than in surrounding
years, and would therefore not be representative of the coverage
of the late 1960's and early 1970's. The same special
procedures also were applied to the 1963 indexes, although with
less frequency, but resulting in some upward bias of the 1963
data shown in Table B-1, as well. However, because the indexes
for 1963 mark the beginning of the time series, they were
regarded as of sufficient interest to merit inclusion in the
inventory.

Table B-2 compares the results of the UDB composite production
index for total manufacturing with the "implicit production index"
derived from the DRPA's figures for GDP originating in
manufacturing, at 1975 prices. This comparison is shown for the
economic groupings of countries, and year by year through 1978, the
latest year for which DRPA data are available. Also shown is the
per cent base weight coverage associated with each composite UDB
index. According to the standard described earlier, i.e. that the
two indexes should be within a range of plus or minus 15 per cent if
the UDB base weight coverage is greater than or equal to 75 per
cent, Table B-2 indicates that these minimum criteria have been
attained for all economic groupings except the least developed
countries. Base weight coverage of production indexes for the least
developed countries also falls sharply in 1978, due to problems of
timeliness with the data.

Table B-3 shows the per cent base weight coverage of production
indexes at the branch (ISIC 3-digit) level for selected groups of
countries, and year by year, from 1963 through 1979. Although base
weight coverage of production indexes is generally quite high at the
1-digit level of ISIC (i.e. for total manufacturing), the data in
Table B-3 show significant variability in coverage at the branch
level. For all countries combined, the weakest branch is ISIC 342
(Printing and publishing), with only 79 per cent of all country base
weights covered by a production index in 1979. Among the broad
economic groupings of countries, coverage is good, except in the
most recent years among the developing countries. However, base
weight coverage of production indexes among the least developed
countries is generally erratic, and users are advised to examine
these inventories closely when working with the UDB tapes.

Finally, with respect to Appendix C, it should be noted that
both the numerical list of country codes and the key to ISIC branch
combinations include codes for some countries and some ISIC branch
combinations which do not appear in the data base at present.
However, because they may appear in updates of the UDB tapes, they
are included here for easy reference.

Table A-1.   Inventory of the UNIDO Data Base: 1975 Base Weights(BW) and DRPA Data Compared, Before and After Adjustment, by Country

Code	Country	DRPA-BW / BW (Per cent)		Code	Country	DRPA-BW / BW (Per cent)	
		Before Adjustment (UNSO)	After Adjustment (UDB)			Before Adjustment (UNSO)	After Adjustment (UDB)
012	Algeria	+2.7	+2.7	266	Gabon	+17.4	0.0
024	Angola	-47.2	0.0	270	Gambia	+35.7	+35.7
032	Argentina	+23.9	0.0	278	German Dm. Rep.b/	+14.5	+14.5
036	Australia	+6.5	+6.5	280	Germany, Fed. Rep.	+19.1	0.0
040	Austria	+32.7	0.0	288	Ghana	+32.8	0.0
048	Bahrain	a/	a/	300	Greece	+2.3	+2.3
050	Bangladesh	+14.6	+14.6	320	Guatemala	+45.6	0.0
052	Barbados	+58.8	0.0	324	Guinea	+731.3	+731.3
056	Belgium	+15.8	+15.8	328	Guyana	+40.4	0.0
204	Benin	-7.8	-7.8	332	Haiti	+12.3	+12.3
068	Bolivia	+15.2	0.0	340	Honduras	+11.4	+11.4
072	Botswana	+12.7	+12.7	344	Hong Kong	-25.0	-25.0
076	Brazil	+8.7	+8.7	348	Hungary b/	-5.8	-5.8
100	Bulgaria b/	-32.0	-32.0	352	Iceland	+16.6	+16.6
104	Burma	-0.2	-0.2	356	India	+2.2	+2.2
108	Burundi	+10.6	+10.6	360	Indonesia	+16.2	+13.3
124	Canada	+3.2	+3.2	364	Iran	-32.3	-32.3
140	Cent. Af. Rep.	+74.9	0.0	368	Iraq	-4.7	-4.7
148	Chad	-17.8	-17.8	372	Ireland	-8.6	-8.6
152	Chile	-28.3	-28.3	376	Israel	-6.9	-6.9
170	Colombia	-3.1	-3.1	380	Italy	+18.9	+18.9
178	Congo	-37.7	0.0	384	Ivory Coast	+25.7	0.0
188	Costa Rica	+30.2	0.0	388	Jamaica	+37.6	0.0
192	Cuba	a/	a/	392	Japan	+18.8	-6.4
196	Cyprus	+13.5	+13.5	400	Jordan	-28.4	-28.4
200	Czechoslovakia b/	+10.9	+10.9	116	Kampuchea b/	+51.0	+51.0
208	Denmark	+0.1	+0.1	404	Kenya	-7.5	-7.5
214	Dominican Rep.	+5.2	+5.2	410	Korea, Rep.	+26.3	-6.7
218	Ecuador	+4.7	+4.7	414	Kuwait	+25.3	+25.3
818	Egypt	-7.4	-7.4	418	Laos b/	-26.9	-26.9
222	El Salvador	+19.6	0.0	422	Lebanon	a/	a/
230	Ethiopia	0.0	0.0	426	Lesotho	-8.9	-8.9
242	Fiji c/	+42.1	0.0	430	Liberia	+8.8	+8.8
246	Finland	-2.4	-2.4	434	Libyan Arab. J.	-27.6	-27.6
250	France	+8.9	+6.9	442	Luxembourg	-14.6	-14.6

Table A-1 (contd.)

Code	Country	DRPA-BW BW (Per cent)		Code	Country	DRPA-BW BW (Per cent)	
		Before Adjustment (UNSO)	After Adjustment (UDB)			Before Adjustment (UNSO)	After Adjustment (UDB)
450	Madagascar	+57.4	0.0	702	Singapore	+4.9	+4.9
454	Malawi	+0.2	+0.2	706	Somalia	-20.6	-20.6
459	Malaysia W.	-27.2	0.0	710	South Africa	+7.5	+7.5
466	Mali	+31.4	+31.4	724	Spain	-1.0	-1.0
470	Malta	+8.3	+8.5	144	Sri Lanka	-0.4	-0.4
478	Mauritania	+46.2	+46.2	736	Sudan	+47.1	0.0
480	Mauritius	+41.1	0.0	740	Suriname	+1.1	+1.1
484	Mexico	+27.7	+19.8	748	Swaziland	-29.7	-29.7
496	Mongolia	c/	a/	752	Sweden	-0.8	-0.8
504	Morocco	+45.9	0.0	756	Switzerland	+38.8	0.0
508	Mozambique	+109.9	0.0	760	Syrian Arab Rep.	-9.8	-9.8
516	Namibia	+209.0	+209.0	764	Thailand	+17.3	0.0
524	Nepal	+15.0	+15.0	768	Togo	-26.0	0.0
528	Netherlands	+23.2	0.0	780	Trinidad Tobago	+9.6	+9.6
532	Neth. Antilles	a/	a/	788	Tunisia	+13.3	+13.3
554	New Zealand	+3.4	+3.4	792	Turkey	+15.1	0.0
558	Nicaragua	+7.4	+7.4	800	Uganda	+3.8	0.0
562	Niger	+7.6	+7.6	810	USSR b/	-7.1	-7.1
566	Nigeria	-13.4	0.0	784	United Arab Em.	a/	a/
578	Norway	+0.1	+0.1	826	United Kingdom	-2.3	-2.3
512	Oman	a/	a/	120	United Rep. Camr.	+31.6	0.0
586	Pakistan	+23.1	0.0	834	United Rep. Tanz.	-1.7	-1.7
590	Panama	+9.6	+9.6	840	United States	+7.9	+7.9
600	Paraguay	+4.5	+4.5	854	Upper Volta	+43.5	0.0
604	Peru	+104.0	+10.8	858	Uruguay	0.0	0.0
608	Philippines	+22.7	0.0	862	Venezuela	-14.8	-14.8
616	Poland b/	+5.8	+5.8	882	West. Samoa	a/	a/
620	Portugal	+12.2	+12.2	886	Yemen Arab Rep.	a/	a/
630	Puerto Rico	+33.0	0.0	720	Yemen, Dem.	a/	a/
638	Reunion	-46.1	0.0	890	Yugoslavia b/	-16.9	-16.9
642	Romania b/	+1.8	+1.8	180	Zaire	+4.7	+4.7
646	Rwanda	+376.8	+376.8	894	Zambia	+59.9	0.0
682	Saudi Arabia	+10.1	+10.1	716	Zimbabwe	-12.8	-12.8
686	Senegal	+13.3	+13.3			..	
694	Sierra Leone	+54.7	+54.7				

a/ No data were available from DRPA. Therefore, comparison was not possible.

b/ Comparison is based on a UNIDO estimate of GDP originating in manufacturing.

c/ In original 197j UNSO base weight, Fiji was combined other islands. Therefore original base weight is also UNIDO estimate.

Note: The comparison is made at factor values or producers' prices depending upon the valuation of the original base weights.

Table B-1 Per cent of 1975 Base Weights Covered by a Production Index. All Manufacturing Industries, 1963, 1971 and 1978, by Country

Code	Country	Per cent coverage 1963	1971	1978	Code	Country	Per cent coverage 1963	1971	1978
012	Algeria	96.4	100.0	0.0	266	Gabon	25.7	43.1	47.9
024	Angola	79.8	79.8	0.0	270	Gambia	0.0	100.0	100.0
032	Argentina	100.0	100.0	100.0	278	German. Dm. Rep.	98.3	98.3	98.3
036	Australia	100.0	100.0	97.4	280	Germany, Fed. Rep.	100.0	100.0	100.0
040	Austria	100.0	100.0	98.0	288	Ghana	90.9	99.1	49.7
048	Bahrain	44.1	50.0	50.0	300	Greece	100.0	100.0	100.0
050	Bangladesh	0.0	76.7	94.3	320	Guatemala	98.3	99.9	43.0
052	Barbados	36.6	69.2	69.2	324	Guinea	0.0	50.0	50.0
056	Belgium	100.0	100.0	93.7	328	Guyana	88.8	88.8	88.8
204	Benin	49.0	67.0	67.0	332	Haiti	97.4	84.6	52.1
068	Bolivia	97.7	98.2	21.3	340	Honduras	93.8	100.0	98.0
072	Botswana	57.0	57.0	57.0	344	Hong Kong	91.0	100.0	19.5
076	Brazil	100.0	100.0	93.1	348	Hungary	100.0	100.0	100.0
100	Bulgaria	99.2	99.2	98.0	352	Iceland	22.9	34.3	34.3
104	Burma	99.3	100.0	94.2	356	India	100.0	100.0	99.5
108	Burundi	0.0	0.0	0.0	360	Indonesia	99.0	100.0	80.9
124	Canada	100.0	100.0	100.0	364	Iran	100.0	100.0	96.6
140	Cent. Af. Rep.	85.4	95.4	94.0	368	Iraq	98.0	99.6	0.0
148	Chad	31.5	89.6	31.5	372	Ireland	96.7	96.7	
152	Chile	100.0	100.0	99.2	376	Israel	100.0	100.0	100.0
170	Colombia	98.6	100.0	97.3	380	Italy	100.0	100.0	88.4
178	Congo	65.1	100.0	82.4	384	Ivory Coast	70.4	97.2	61.7
188	Costa Rica	96.1	100.0	0.0	388	Jamaica	96.6	100.0	89.4
192	Cuba	87.3	99.6	100.0	392	Japan	100.0	100.0	95.0
196	Cyprus	94.7	94.7	99.9	400	Jordan	90.9	100.0	38.9
200	Czechoslovakia	100.0	100.0	100.0	116	Kampuchea	56.6	57.6	0.0
208	Denmark	100.0	100.0	100.0	404	Kenya	97.6	100.0	99.0
214	Dominican Rep.	97.8	98.0	99.9	410	Korea, Rep.	100.0	100.0	100.0
218	Ecuador	99.9	99.9	96.7	414	Kuwait	51.8	80.0	80.0
818	Egypt	99.1	100.0	99.1	418	Laos	30.0	38.7	38.7
222	El Salvador	99.8	99.9	0.0	422	Lebanon	41.6	41.6	32.5
230	Ethiopia	85.0	100.0	4.6	426	Lesotho	12.5	12.5	0.0
242	Fiji	71.0	89.6	75.1	430	Liberia	11.0	89.0	87.4
246	Finland	100.0	100.0	100.0	434	Libyan Arab J.	77.4	91.3	71.9
250	France	100.0	100.0	95.9	442	Luxembourg	99.9	99.9	99.5

Table B-1 (contd.)

Code	Country	Per cent coverage			Code	Country	Per cent coverage		
		1963	1971	1978			1963	1971	1978
450	Madagascar	69.7	99.8	93.4	702	Singapore	99.0	100.0	100.0
454	Malawi	97.6	88.8	79.8	706	Somalia	42.2	51.6	51.6
459	Malaysia W.	99.9	100.0	93.1	710	South Africa	100.0	100.0	98.5
466	Mali	22.1	22.1	22.1	724	Spain	100.0	100.0	87.7
470	Malta	95.9	98.9	95.9	144	Sri Lanka	96.1	100.0	88.5
473	Mauritania	0.0	91.1	91.1	736	Sudan	99.6	100.0	93.6
480	Mauritius	97.0	99.7	73.2	740	Suriname	63.3	83.9	74.6
484	Mexico	100.0	100.0	92.0	748	Swaziland	33.0	92.0	82.0
496	Mongolia	0.0	100.0	100.0	752	Sweden	100.0	100.0	100.0
504	Morocco	99.5	99.5	96.9	756	Switzerland	100.0	100.0	98.8
508	Mozambique	97.3	100.0	1.1	760	Syrian Arab Rep.	99.1	100.0	98.8
516	Namibia	99.7	75.8	75.8	764	Thailand	89.3	96.7	89.4
524	Nepal	0.0	65.8	65.8	768	Togo	0.0	26.1	8.0
528	Netherlands	100.0	100.0	93.8	780	Trinidad Tobago	100.0	100.0	90.7
532	Neth. Antilles	100.0	100.0	100.0	788	Tunisia	91.8	100.0	88.7
554	New Zealand	100.0	100.0	93.4	792	Turkey	100.0	100.0	89.3
558	Nicaragua	92.6	100.0	0.0	800	Uganda	97.4	100.0	64.5
562	Niger	0.0	62.3	62.3	810	USSR	100.0	100.0	100.0
566	Nigeria	95.2	99.8	77.9	784	United Arab Em.	a/	a/	a/
578	Norway	100.0	100.0	100.0	826	United Kingdom	100.0	100.0	100.0
512	Oman	a/	a/	a/	120	United Rep. Camr.	95.7	83.3	73.8
586	Pakistan	97.1	99.9	87.5	834	United Rep. Tanz.	86.5	100.0	31.9
590	Panama	98.5	100.0	100.0	840	United States	100.0	100.0	100.0
600	Paraguay	89.5	100.0	100.0	854	Upper Volta	0.0	93.9	93.9
604	Peru	100.0	100.0	0.0	858	Uruguay	100.0	100.0	90.9
608	Philippines	100.0	100.0	96.5	862	Venezuela	100.0	100.0	100.0
616	Poland	100.0	100.0	100.0	882	West. Samoa	0.0	16.7	16.7
620	Portugal	100.0	100.0	96.0	886	Yemen Arab Rep.	0.0	12.0	30.7
630	Puerto Rico	98.8	38.0	21.6	720	Yemen, Dem.	38.6	42.2	38.6
638	Reunion	100.0	100.0	100.0	890	Yugoslavia	99.0	100.0	100.0
642	Romania	97.4	97.4	97.4	180	Zaire	93.0	100.0	85.3
646	Rwanda	60.3	60.3	60.3	894	Zambia	96.1	100.0	94.0
682	Saudi Arabia	92.6	92.6	92.6	716	Zimbabwe	100.0	100.0	95.8
585	Senegal	100.0	100.0	96.5					
694	Sierra Leone	57.3	58.5	57.3					

a/ Production indexes are not available.

Table B-2. Comparison of UDB production indexes for total manufacturing and the DRPA implicit index, for selected country aggregates, 1963-1978[a/]

Year	All countries		Developed ME's		CPE's		Developing C's		LDC's	
1963	0.965	(99.78)	0.972	(99.98)	0.941	(99.74)	0.875	(98.46)	0.733[b/]	(83.55)
1964	0.964	(99.61)	0.975	(99.96)	0.923	(99.74)	0.865	(96.86)	0.738[b/]	(77.43)
1965	0.969	(99.62)	0.977	(99.96)	0.947	(99.74)	0.869	(96.95)	0.780[b/]	(79.42)
1966	0.974	(99.63)	0.983	(99.96)	0.946	(99.74)	0.875	(97.11)	0.847[b/]	(81.64)
1967	0.978	(99.71)	0.986	(99.98)	0.959	(99.74)	0.882	(97.74)	0.875	(83.13)
1968	0.982	(99.73)	0.987	(99.99)	0.972	(99.74)	0.899	(97.86)	0.870	(84.06)
1969	0.981	(99.74)	0.976	(99.99)	1.002	(99.74)	0.924	(97.98)	0.902	(90.56)
1970	0.976	(99.95)	0.967	(100.00)	1.000	(99.87)	0.948	(99.76)	0.842[b/]	(93.70)
1971	0.978	(99.77)	0.970	(99.99)	0.999	(99.74)	0.953	(98.35)	0.792	(91.37)
1972	0.981	(99.78)	0.970	(99.99)	1.008	(99.74)	0.968	(98.36)	0.812[b/]	(91.37)
1973	0.982	(99.78)	0.970	(99.99)	1.012	(99.74)	0.975	(98.37)	0.916	(91.37)
1974	0.976	(99.78)	0.960	(99.99)	1.019	(99.74)	0.980	(98.37)	0.955	(91.37)
1975	1.000	(100.00)	1.000	(100.00)	1.000	(100.00)	1.000	(100.00)	1.000	(100.00)
1976	0.997	(99.43)	0.993	(99.84)	1.008	(99.74)	1.001	(95.83)	1.114	(79.02)
1977	1.003	(98.59)	1.002	(99.04)	1.001	(99.74)	1.015	(92.57)	1.062	(76.08)
1978	0.993	(97.51)	0.996	(97.68)	1.001	(99.71)	1.014	(90.77)	1.019	(54.74)[c/]

a/ Per cent (1975) base weight coverage of the UDB composite index is shown in parenthesis.

b/ Greater than 15 per cent difference between UDB composite indexes and DRPA, i.e. congruence criterion not met.

c/ Coverage <75 per cent, i.e. coverage criterion not met.

Note: For all runs, missing base weights are treated as if they were zero. Therefore percentage coverage is somewhat over-reported.

Table B-3. PERCENT OF 1975 BASE WEIGHTS COVERED BY AN INDEX

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	1963	1964	1965	1966
3ne				
311	94.74	99.76	99.83	99.87
312	94.45	99.45	99.85	99.85
314	99.29	99.29	99.30	99.39
321	99.52	99.48	99.51	99.52
322	99.54	99.55	99.59	99.59
323	99.41	99.04	99.05	99.07
324	99.27	99.21	99.21	99.21
331	99.64	99.62	99.66	99.66
332	99.66	99.51	99.51	99.51
341	99.76	99.76	99.76	99.85
342	99.29	99.07	99.07	99.08
351	99.63	99.54	99.55	99.57
352	99.84	96.57	96.57	96.57
353	97.17	97.48	97.67	97.94
354	96.72	97.22	97.22	97.22
355	99.76	99.64	99.64	99.64
356	96.92	95.54	95.66	95.67
361	99.46	99.20	99.21	99.21
362	99.71	99.46	99.46	99.46
369	99.87	99.85	99.88	99.88
371	99.87	99.83	99.83	99.87
372	99.57	99.45	99.54	99.50
381	99.73	99.50	99.70	99.70
382	99.97	99.92	99.92	99.42
383	99.95	99.73	99.73	99.73
384	99.91	99.90	99.93	99.53
385	99.95	98.91	98.91	98.92
390	97.37	97.09	97.09	97.09

OF INDUSTRIAL PRODUCTION - ALL COUNTRIES

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1967	1968	1969	1970
99.87	99.87	99.90	99.98
99.86	99.86	99.89	99.94
99.39	99.41	99.41	99.95
99.52	99.54	99.57	99.93
99.63	99.67	99.71	99.83
99.15	99.46	99.46	99.73
99.28	99.39	99.40	99.94
99.66	99.66	99.66	99.85
99.57	99.57	99.57	99.83
99.86	99.86	99.87	99.96
99.09	99.09	99.09	99.87
99.61	99.61	99.61	99.82
98.74	98.77	98.77	99.86
98.14	98.25	98.33	98.36
99.25	99.30	99.36	99.50
99.72	99.72	99.73	99.97
97.10	97.79	97.79	99.21
99.33	99.40	99.53	99.67
99.49	99.49	99.75	99.88
99.88	99.89	99.84	99.97
99.88	99.90	99.91	99.95
99.75	99.75	99.79	99.99
99.72	99.73	99.73	99.93
99.92	99.93	99.93	99.98
99.74	99.74	99.74	99.99
99.93	99.94	99.94	99.97
99.61	99.61	99.62	99.99
97.10	97.14	97.24	98.59

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Table B-3. PERCENT OF 1975 BASE WEIGHTS COVERED BY AN INDEX

	1971	1972	1973	1974
300				
311	99.95	99.94	99.96	99.96
313	99.91	99.91	99.92	99.92
314	99.95	99.94	99.98	99.98
321	99.87	99.87	99.87	99.87
322	99.74	99.74	99.74	99.74
323	99.46	99.46	99.46	99.46
324	99.54	99.54	99.54	99.54
331	99.67	99.67	99.67	99.67
332	99.58	99.58	99.58	99.58
341	99.89	99.89	99.89	99.89
342	99.09	99.09	99.09	99.09
351	99.64	99.64	99.64	99.64
352	98.84	98.84	98.95	98.95
353	98.35	98.37	98.41	98.41
354	99.38	99.38	99.38	99.38
355	99.74	99.74	99.74	99.74
356	99.85	98.85	98.85	98.85
361	99.63	99.63	99.63	99.63
362	99.42	99.42	99.84	99.84
369	99.97	99.97	99.98	99.98
371	99.92	99.92	99.95	99.95
372	99.90	99.90	99.90	99.90
381	99.74	99.74	99.74	99.74
382	99.43	99.43	99.93	99.43
383	99.76	99.76	99.76	99.76
384	99.95	99.95	99.95	99.95
385	99.75	99.75	99.75	99.76
390	97.55	97.55	97.55	97.55

OF INDUSTRIAL PRODUCTION - ALL COUNTRIES

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1975	1976	1977	1978	1979
100.00	99.87	99.72	99.00	96.27
100.00	99.74	99.44	98.06	93.51
100.00	98.78	98.39	96.83	91.89
100.00	99.41	99.31	98.34	93.94
100.00	99.04	93.16	84.92	82.86
100.00	98.81	97.95	95.88	94.35
100.00	99.13	98.55	97.57	95.28
100.00	98.09	97.96	94.98	93.92
100.00	95.51	94.28	93.97	92.88
100.00	99.72	99.55	99.24	97.90
100.00	98.57	95.61	81.02	79.35
100.00	99.56	99.49	99.11	97.90
100.00	98.82	98.66	98.14	95.09
100.00	98.40	98.38	97.33	87.26
100.00	97.81	96.86	95.35	94.35
100.00	99.56	99.08	98.76	97.05
100.00	98.03	92.07	90.02	89.42
100.00	99.43	98.57	98.27	97.50
100.00	99.53	99.32	98.95	96.05
100.00	99.93	99.90	99.40	95.55
100.00	99.72	99.63	99.22	98.10
100.00	99.41	97.71	96.94	93.07
100.00	99.54	95.86	95.60	94.07
100.00	93.87	99.76	99.63	99.09
100.00	99.70	99.48	99.29	96.35
100.00	99.87	99.76	99.57	98.46
100.00	98.81	98.59	98.02	97.92
100.00	93.81	91.73	83.82	80.39

Table B-3. PERCENT OF 1975 BASE WEIGHTS COVERED BY AN INDEX

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	1963	1964	1965	1966
300				
311	100.00	100.00	100.00	100.00
313	100.00	100.00	100.00	100.00
314	100.00	100.00	100.00	100.00
321	100.00	100.00	100.00	100.00
322	99.98	99.98	99.98	99.98
323	99.94	99.94	99.94	99.94
324	99.99	99.99	99.99	99.99
331	100.00	100.00	100.00	100.00
332	99.92	99.92	99.92	99.92
341	99.99	99.99	99.99	99.99
342	99.97	99.97	99.97	99.97
351	99.99	99.99	99.99	99.99
352	99.99	99.99	99.99	99.99
353	100.00	100.00	100.00	100.00
354	100.00	100.00	100.00	100.00
355	99.77	99.77	99.77	99.77
356	99.24	98.86	98.86	98.60
361	99.96	99.96	98.96	99.96
362	99.99	99.99	99.99	99.99
369	100.00	100.00	100.00	100.00
371	100.00	100.00	100.00	100.00
372	99.93	99.93	99.93	99.93
381	100.00	100.00	100.00	100.00
382	99.98	99.98	99.98	99.98
383	99.99	99.99	99.99	99.99
384	99.98	99.98	99.98	99.98
385	99.99	99.29	99.29	99.29
390	99.99	99.99	99.99	99.99

OF INDUSTRIAL PRODUCTION - DEVD MARKET ECONOMIES

1967	1968	1969	1970
100.00	100.00	100.00	100.00
100.00	100.00	100.00	100.00
100.00	100.00	100.00	100.00
100.00	100.00	100.00	100.00
99.98	100.00	100.00	100.00
99.94	99.94	99.94	99.94
99.99	100.00	100.00	100.00
100.00	100.00	100.00	100.00
99.92	99.92	99.92	99.92
99.99	99.99	99.99	100.00
99.97	99.97	99.97	99.97
99.99	99.99	99.99	99.99
99.99	99.99	99.99	99.99
100.00	100.00	100.00	100.00
100.00	100.00	100.00	100.00
99.77	99.77	99.77	99.99
99.26	99.87	99.87	99.98
99.96	99.96	99.96	99.96
100.00	100.00	100.00	100.00
100.00	100.00	100.00	100.00
100.00	100.00	100.00	100.00
99.93	99.93	100.00	100.00
100.00	100.00	100.00	100.00
99.98	99.98	99.98	99.98
99.99	99.99	99.99	99.99
99.98	99.98	99.98	99.98
99.99	99.99	99.99	99.99
99.99	99.99	99.99	99.99

Table B-3. PERCENT OF 1975 BASE WEIGHTS COVERED BY AN INDEX OF INDUSTRIAL PRODUCTION - DEVD MARKET ECONOMIES

	1971	1972	1973	1974	1975	1976	1977	1978	1979
300									
311	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	98.87
313	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	98.25
314	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	98.98
321	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.99	98.78
322	100.00	100.00	100.00	100.00	100.00	100.00	92.82	79.04	77.63
323	99.94	99.94	99.94	99.94	100.00	99.94	99.94	99.94	98.89
324	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	98.33
331	100.00	100.00	100.00	100.00	100.00	97.82	97.82	97.82	97.11
332	99.92	99.92	99.92	99.92	100.00	98.37	98.37	98.37	97.63
341	99.99	99.99	99.99	99.99	100.00	99.99	99.99	99.99	99.16
342	99.97	99.97	99.97	99.97	100.00	99.97	96.88	80.35	79.47
351	99.99	99.99	99.99	99.99	100.00	99.99	99.99	99.99	99.32
352	99.99	99.99	99.99	99.99	100.00	99.99	99.99	99.99	96.87
353	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
354	100.00	100.00	100.00	100.00	100.00	99.83	99.32	99.32	99.32
355	99.77	99.77	99.77	99.77	100.00	99.77	99.77	99.77	98.83
356	99.87	99.87	99.87	99.87	100.00	99.60	94.83	94.82	94.82
361	99.96	99.96	99.96	99.96	100.00	99.96	99.57	99.57	99.28
362	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.99	98.94
363	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	96.59
371	100.00	100.00	100.00	100.00	100.00	99.98	99.98	99.60	98.34
372	100.00	100.00	100.00	100.00	100.00	99.50	99.50	99.50	98.44
381	100.00	100.00	100.00	100.00	100.00	100.00	95.35	95.35	94.31
382	99.98	99.98	99.98	99.98	100.00	99.98	99.98	99.98	99.51
383	99.99	99.99	99.99	99.99	100.00	99.99	99.99	99.99	99.44
384	99.98	99.98	99.98	99.98	100.00	99.98	99.98	99.98	99.36
385	99.99	99.99	99.99	99.99	100.00	98.84	98.77	98.07	97.97
390	99.99	99.99	99.99	99.99	100.00	97.42	94.57	81.45	80.20

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SLANG V2.1   OUTPUT OF PROGRAM: UQD.(IN.J) ARIS(RHGH) - PICIM4   DATE: 82/01/14   TIME: 12:19   PAGE: 0004

Table B-3. PERCENT OF 1974 BASE WEIGHTS COVERED BY AN INDEX OF INDUSTRIAL PRODUCTION - CENTRALLY PLANNED ECONOMIES

	1963	1964	1965	1966	1967	1968	1969	1970
300	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
311	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
312	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
314	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
321	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
322	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
323	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
324	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
331	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
332	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
341	92.67	92.67	92.67	92.67	92.67	92.67	92.67	100.00
342	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
351	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
352	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
353	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
354	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
355	94.89	74.89	94.89	94.89	94.89	94.89	94.89	94.89
356	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
361	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
362	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
369	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
371	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
372	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
381	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
382	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
383	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
384	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
385	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
390	94.37	94.37	94.37	94.37	94.37	94.37	100.00	100.00

Table B-3. PERCENT OF 1975 HASE WEIGHTS COVERED BY AN INDEX

	1971	1972	1973	1974
300				
311	100.00	100.00	100.00	100.00
313	100.00	100.00	100.00	100.00
314	100.00	100.00	100.00	100.00
321	100..	100.00	100.00	100.00
322	100.00	100.00	100.00	100.00
323	100.00	100.00	100.00	100.00
324	100.00	100.00	100.00	100.00
331	100.00	100.00	100.00	100.00
332	100.00	100.00	100.00	100.00
341	100.00	100.00	100.00	100.00
342	92.67	92.67	92.67	92.67
351	100.00	100.00	100.00	100.00
352	100.00	100.00	100.00	100.00
353	100.00	100.00	100.00	100.00
354	100.00	100.00	100.00	100.00
355	100.00	100.00	100.00	100.00
356	94.89	94.89	94.89	94.89
361	100.00	100.00	100.00	100.00
362	100.00	100.00	100.00	100.00
369	100.00	100.00	100.00	100.00
371	100.00	100.00	100.00	100.00
372	100.00	100.00	100.00	100.00
381	100.00	100.00	100.00	100.00
382	100.00	100.00	100.00	100.00
383	100.00	100.00	100.00	100.00
384	100.00	100.00	100.00	100.00
385	100.00	100.00	100.00	100.00
390	94.37	94.37	94.37	94.37

OF INDUSTRIAL PRODUCTION - CENTRALLY PLANNED ECONOMIES

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1975	1976	1977	1978	1979
100.00	100.00	100.00	100.00	100.00
100.00	100.00	100.00	100.00	95.67
100.00	100.00	100.00	100.00	100.00
100.00	100.00	100.00	100.00	100.00
100.00	100.00	100.00	100.00	100.00
100.00	100.00	100.00	100.00	100.00
100.00	100.00	100.00	100.00	100.00
100.00	100.00	100.00	100.00	100.00
100.00	100.00	100.00	100.00	100.00
100.00	100.00	100.00	100.00	100.00
100.00	92.67	92.67	92.67	92.67
100.00	100.00	100.00	100.00	100.00
100.00	100.00	100.00	100.00	100.00
100.00	100.00	100.00	100.00	100.00
100.00	100.00	100.00	96.55	95.55
100.00	100.00	100.00	100.00	100.00
100.00	94.89	94.89	94.89	94.89
100.00	100.00	100.00	100.00	100.00
100.00	100.00	100.00	100.00	100.00
100.00	100.00	100.00	100.00	100.00
100.00	100.00	100.00	100.00	93.40
100.00	100.00	100.00	100.00	95.30
100.00	100.00	100.00	100.00	100.00
100.00	100.00	100.00	100.00	100.00
100.00	100.00	100.00	100.00	100.00
100.00	100.00	100.00	100.00	100.00
100.00	100.00	100.00	100.00	100.00
100.00	94.37	94.37	94.37	94.37

Table B-3. PERCENT OF 1975 BASE WEIGHTS COVERED BY AN INDEX

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	1963	1964	1965	1966
300				
311	94.25	98.54	98.89	99.13
313	99.04	99.04	99.04	99.04
314	97.70	97.70	98.00	98.00
321	97.40	97.14	97.27	97.41
322	95.95	95.67	96.13	96.13
323	90.73	89.33	92.66	92.82
324	93.97	93.29	93.29	93.29
331	97.11	95.59	96.85	96.86
332	96.29	93.76	93.76	93.76
341	97.45	97.03	97.03	98.17
342	97.29	94.03	94.11	94.23
351	95.25	94.03	94.21	94.50
352	99.15	91.89	91.89	91.90
353	92.10	92.95	93.48	94.95
354	76.31	79.93	79.93	79.93
355	99.48	98.43	98.43	98.43
356	79.57	69.74	69.95	70.09
361	95.92	93.95	93.99	93.99
362	97.17	94.79	94.79	94.79
363	98.71	98.51	98.83	98.87
371	98.39	97.87	97.87	98.47
372	95.95	94.68	95.69	95.84
381	96.10	93.68	95.78	95.78
382	99.75	98.54	98.55	98.56
383	93.31	95.71	95.71	95.77
384	99.02	98.40	99.20	99.20
385	97.52	55.34	55.79	55.86
390	93.52	90.15	90.15	90.15

OF INDUSTRIAL PRODUCTION   - DEVELOPING COUNTRIES

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1967	1968	1969	1970
99.14	99.14	99.35	99.87
99.09	99.09	99.29	99.63
98.00	98.07	98.07	99.84
97.41	97.49	97.69	99.61
96.49	96.73	97.16	98.38
93.45	95.89	95.89	98.11
93.87	94.75	94.88	99.49
96.86	96.86	96.86	98.60
94.66	94.66	94.66	98.43
98.30	98.37	98.42	99.55
94.37	94.39	94.39	98.49
94.93	94.95	95.02	97.70
92.86	93.03	93.03	99.22
94.80	95.12	95.32	95.43
94.58	94.46	95.49	96.41
99.03	99.04	99.12	99.83
81.71	83.77	83.81	97.63
94.47	95.46	96.49	97.61
94.98	94.98	97.57	98.83
98.67	98.92	98.94	99.72
98.59	98.80	98.91	99.39
97.84	97.85	97.85	99.91
95.98	96.12	96.15	98.98
98.56	98.58	98.68	99.93
95.82	95.83	95.83	99.88
99.31	99.35	99.38	99.79
77.79	77.85	78.16	99.72
90.27	90.81	91.93	98.55

Table B-3.   PERCENT OF 1975 BASE WEIGHTS COVERED BY AN INDEX

	1971	1972	1973	1974
300				
311	99.70	99.70	99.70	99.70
313	99.41	99.41	99.47	99.47
314	99.95	99.95	99.95	99.95
321	99.30	99.30	99.30	99.30
322	97.49	97.49	97.49	97.49
323	95.89	95.89	95.89	95.89
324	96.05	96.05	96.05	96.05
331	96.93	96.93	96.93	96.93
332	94.81	94.91	94.81	94.81
341	98.71	98.71	98.71	98.71
342	94.42	94.42	94.42	94.42
351	95.39	95.39	95.39	95.39
352	93.42	93.42	94.07	94.07
353	95.41	95.44	95.56	95.56
354	95.49	95.49	95.49	95.49
355	99.18	99.18	99.18	99.18
356	94.82	94.82	94.82	94.82
361	97.30	97.30	97.30	97.30
362	98.21	98.21	98.41	98.41
369	99.71	99.71	99.78	99.78
371	94.96	98.98	94.38	99.45
372	95.98	95.98	98.98	99.00
381	96.23	96.23	96.23	96.23
382	98.69	98.69	98.69	98.69
383	96.17	96.17	96.21	96.21
384	99.51	99.51	99.51	99.51
385	86.17	86.17	86.17	86.17
390	95.71	95.71	95.71	95.71

OF INDUSTRIAL PRODUCTION - DEVELOPING COUNTRIES

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1975	1976	1977	1978	1979
100.00	99.13	98.15	93.37	74.17
100.00	98.38	96.45	87.74	70.52
100.00	96.02	94.76	89.68	75.38
100.00	96.80	96.28	91.01	70.65
100.00	40.55	72.35	57.15	54.68
100.00	90.70	83.79	67.21	59.66
100.00	92.61	87.61	79.22	66.47
100.00	96.04	94.88	67.21	61.87
100.00	51.87	33.91	29.31	21.42
100.00	96.53	94.43	90.55	82.48
100.00	86.91	82.71	78.04	64.87
100.00	94.35	93.34	88.40	79.34
100.00	93.30	92.38	89.41	75.88
100.00	95.53	95.46	92.55	66.38
100.00	84.77	79.57	78.78	71.61
100.00	97.86	94.28	91.84	83.70
100.00	88.49	66.05	44.88	38.59
100.00	95.69	90.63	88.31	83.54
100.00	95.36	93.34	89.75	68.14
100.00	99.33	98.49	94.14	75.13
100.00	96.81	95.66	93.88	85.11
100.00	96.72	79.07	71.08	54.22
100.00	94.22	85.70	81.98	70.30
100.00	97.42	95.09	92.38	88.06
105.00	95.20	91.66	88.62	79.62
100.00	98.47	96.88	94.27	84.93
100.00	61.50	50.50	35.31	32.32
100.00	67.78	61.50	52.67	19.93

Table B-3. PERCENT OF 1975 BASE WEIGHTS COVERED BY AN INDEX

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	1963	1964	1965	1966
300				
311	61.57	71.66	71.66	76.02
313	77.58	77.58	77.58	77.58
314	40.30	40.30	48.57	48.57
321	46.73	46.73	46.73	46.73
322	26.37	26.37	26.37	26.37
323	59.06	59.06	59.06	59.06
324	80.41	80.41	80.41	80.41
331	64.20	65.43	65.43	65.74
332	43.78	43.78	43.78	43.78
341	28.03	26.78	26.78	26.78
342	58.50	46.69	46.69	46.69
351	52.99	0.43	0.43	35.18
352	25.37	25.37	25.37	26.37
353	67.53	11.28	67.53	66.11
354				
355	64.29	60.98	60.98	60.98
356	1.74	1.74	1.74	1.74
361	44.48	16.59	16.59	16.59
362	77.71	77.71	77.71	77.71
369	70.34	70.34	70.34	73.47
371	15.62	8.03	8.03	16.92
372	77.87	77.87	77.87	77.87
381	61.71	61.71	62.25	62.25
382	57.85	57.85	57.85	57.85
383	26.02	26.02	26.83	64.23
384	10.47	10.47	10.47	10.88
385				
390	66.45	22.26	22.26	22.26

OF INDUSTRIAL PRODUCTION - LEAST DEVELOPED COUNTRIES

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1967	1968	1969	1970
76.34	76.34	83.66	99.97
77.58	77.58	84.51	91.07
48.57	50.54	50.64	98.77
46.73	47.60	52.72	95.22
26.37	26.37	49.74	60.08
54.06	54.91	59.91	66.68
80.41	80.41	85.53	85.53
65.74	65.74	65.74	65.74
43.78	43.78	43.78	53.00
46.44	46.44	46.44	93.31
46.69	46.69	46.69	83.90
37.97	38.40	48.70	85.60
26.37	26.37	26.37	27.57
98.44	98.44	98.44	98.44
60.48	60.48	75.00	92.68
2.61	2.61	12.17	18.26
16.59	44.48	44.48	49.11
78.98	78.98	78.98	78.98
73.47	73.47	73.47	85.71
16.92	16.92	26.25	33.84
93.61	93.61	93.61	93.61
62.25	62.25	64.31	73.11
57.85	57.85	57.85	65.92
64.23	64.23	65.04	65.85
48.25	48.25	64.27	79.68
			10.00
22.59	22.59	66.78	70.21

Table B-3. PERCENT OF 1975 BASE WEIGHTS COVERED BY AN INDEX OF INDUSTRIAL PRODUCTION - LEAST DEVELOPED COUNTRIES

	1971	1972	1973	1974	1975	1976	1977	1978	1979
300									
311	94.21	94.21	94.21	94.21	100.00	94.11	94.11	88.66	34.55
313	88.88	88.88	91.13	91.13	100.00	91.13	91.13	72.02	9.81
314	98.77	98.77	98.77	98.77	100.00	98.77	97.43	83.85	25.60
321	93.52	93.52	93.52	93.52	100.00	93.52	88.39	65.49	1.47
322	59.67	59.67	59.67	59.67	100.00	34.33	34.33	26.37	13.55
323	59.91	59.91	59.91	59.91	100.00	59.48	59.48	28.58	3.18
324	85.53	85.53	85.53	85.53	100.00	77.72	77.72	56.49	1.83
331	69.60	69.60	69.60	69.60	100.00	68.98	68.98	50.93	33.49
332	43.78	43.78	43.78	43.78	100.00	17.05	17.05	17.05	1.38
341	84.52	84.52	84.52	84.52	100.00	43.51	43.51	43.51	5.44
342	46.69	46.69	46.69	46.69	100.00	2.86	2.86	2.86	2.86
351	69.29	69.29	69.29	69.29	100.00	66.08	65.65	31.54	10.30
352	26.37	26.37	91.01	91.01	100.00	91.01	83.92	80.42	0.60
353	98.44	98.44	100.00	100.00	100.00	100.00	100.00	100.00	68.58
354									
355	85.37	85.37	85.37	85.37	100.00	10.98	10.98	10.37	
356	53.91	53.91	53.91	53.91	100.00	1.74	1.74		
361	44.48	44.48	44.48	44.48	100.00	44.48	44.48	16.59	16.59
362	74.98	78.98	95.54	95.54	100.00	95.54	95.54	47.13	
369	82.59	82.59	87.48	87.48	100.00	87.48	87.48	62.04	25.71
371	26.25	26.25	90.89	90.89	100.00	81.56	81.56	73.54	
372	93.61	93.61	93.61	93.61	100.08	77.87	77.87	50.74	
381	70.72	70.72	70.72	70.72	100.00	21.18	14.77	2.06	2.06
382	57.85	57.85	57.85	57.85	100.00				
383	65.04	65.04	92.68	92.68	100.00	65.85	65.85	27.64	27.64
384	78.23	78.23	78.23	78.23	100.00	14.37	14.37	14.37	13.96
385					100.00				
390	66.78	66.78	66.78	66.78	100.00	2.78	2.78	2.78	2.78

Table B-3.   PERCENT OF 1975 BASE WEIGHTS COVERED BY AN INDEX

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	1963	1964	1965	1966
300				
311	93.70	93.89	94.39	95.63
313	97.26	96.94	96.94	96.94
314	98.55	98.53	98.53	98.53
321	96.83	95.21	95.21	95.55
322	76.12	72.67	72.67	72.67
323	60.77	57.73	57.73	57.73
324	96.04	89.41	89.41	89.41
331	95.48	95.60	95.60	95.60
332	95.26	95.09	95.09	95.09
341	80.87	83.81	83.81	96.45
342	87.93	86.12	86.12	87.36
351	89.09	72.81	72.81	78.39
352	98.84	96.64	96.64	96.78
353	63.32	59.72	67.73	79.04
354	95.96	37.38	37.38	37.38
355	96.41	88.04	88.04	88.04
356	28.78	17.44	17.44	17.44
361	69.54	47.09	47.09	47.09
362	77.33	61.91	61.91	61.91
369	95.61	93.70	93.70	94.13
371	86.01	86.01	86.01	91.91
372	67.75	67.75	67.75	67.75
381	93.13	91.08	91.15	91.15
392	95.14	95.25	95.25	95.25
393	86.33	85.86	85.89	87.33
384	83.95	83.24	92.68	92.70
385	55.70	7.59	7.59	7.59
390	81.30	65.95	65.95	65.95

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1967	1968	1969	1970
95.63	95.63	97.51	99.40
97.26	97.26	98.50	99.68
98.53	98.53	98.53	99.01
95.55	95.82	97.41	99.73
76.29	79.27	84.54	92.08
63.53	85.82	85.82	97.86
91.73	97.75	98.67	99.38
95.60	95.60	95.60	96.57
95.09	95.09	95.09	98.42
97.40	98.27	98.27	99.35
88.45	88.85	86.85	95.98
86.53	86.59	88.02	97.85
96.80	99.00	99.04	99.58
91.12	97.46	97.91	99.99
91.78	91.78	95.61	99.93
96.46	96.46	97.56	99.75
78.42	87.00	87.87	92.91
69.76	81.49	81.49	93.32
63.31	63.31	84.42	100.00
94.13	94.58	94.86	98.44
93.19	93.19	94.31	97.54
97.36	97.36	97.36	100.00
92.48	93.93	94.19	98.40
95.25	96.82	96.82	100.00
88.50	88.88	88.91	99.97
95.18	95.74	96.58	100.00
24.05	24.05	46.84	97.47
67.66	67.66	82.85	92.07

Table B-3. PERCENT OF 1975 BASE WEIGHTS COVERED BY AN INDEX

	1971	1972	1973	1974
300				
311	97.92	97.92	97.92	97.92
313	99.29	99.29	99.29	99.29
314	99.96	99.95	99.95	99.95
321	97.46	97.45	97.46	97.46
322	86.98	86.98	86.98	86.98
323	85.92	85.82	85.82	85.82
324	98.67	98.67	98.67	98.67
331	95.60	95.60	95.60	95.60
332	95.09	95.09	95.09	95.09
341	98.77	98.77	98.77	98.77
347	89.10	89.10	89.10	89.10
351	92.25	92.25	92.25	92.25
352	99.04	99.04	99.04	99.04
353	99.61	99.61	99.61	99.61
354	95.61	95.61	95.61	95.61
355	97.85	97.85	97.85	97.85
356	91.65	91.65	91.65	91.65
361	91.41	91.41	91.41	91.41
362	88.85	88.85	89.36	89.36
369	98.37	98.37	98.37	98.37
371	95.62	95.62	95.62	97.04
372	97.36	97.36	97.36	97.36
381	95.07	95.07	95.07	95.07
382	97.11	97.11	97.11	97.11
283	96.90	96.90	96.90	96.90
384	96.66	96.66	96.66	96.66
385	58.23	58.23	58.23	58.23
390	83.35	83.35	83.35	83.35

OF INDUSTRIAL PRODUCTION - DEVELOPING AFRICA

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1975	1976	1977	1978	1979
100.00	97.90	97.90	85.00	61.35
100.00	99.29	99.29	86.64	48.23
100.00	96.32	95.89	76.66	37.56
100.00	86.25	84.59	71.22	18.47
100.00	73.70	63.16	38.19	27.94
100.00	73.02	64.22	36.75	20.82
100.00	94.10	93.57	78.54	38.45
100.00	94.10	93.90	65.74	51.50
100.00	45.44	42.34	24.72	15.42
100.00	82.21	82.00	70.65	50.10
100.00	44.77	41.20	40.13	25.39
100.00	81.58	80.00	73.32	56.37
100.00	96.09	95.05	87.07	28.08
100.00	99.61	99.61	77.59	62.56
100.00	43.05	41.21	37.38	0.62
100.00	86.42	52.46	47.72	31.74
100.00	45.32	29.88	17.91	17.91
100.00	78.66	72.79	57.41	27.87
100.00	67.74	66.58	51.07	12.71
100.00	95.92	94.80	75.63	45.92
100.00	93.32	91.91	82.98	54.38
100.00	80.26	80.26	77.73	41.55
100.00	84.96	83.89	72.60	39.41
100.00	81.85	81.26	49.41	22.99
100.00	90.29	59.19	80.82	46.42
100.00	84.39	83.92	66.51	26.31
100.00	50.63	31.65	8.86	2.53
100.00	40.47	39.80	40.98	33.50

Table B-3. PERCENT OF 1975 BASE WEIGHTS COVERED BY AN INDEX

	1963	1964	1965	1966
300				
311	100.00	100.00	100.00	100.00
313	100.00	100.00	100.00	100.00
314	100.00	100.00	100.00	100.00
321	99.98	99.98	99.98	99.98
322	99.59	99.59	99.59	99.59
323	100.00	99.71	99.71	100.00
324	99.94	99.94	99.94	99.94
331	99.79	96.41	96.41	96.41
332	99.62	96.00	96.00	96.00
341	99.88	98.82	98.82	98.82
342	99.64	94.69	94.69	94.69
351	100.00	96.59	96.59	96.59
352	99.98	91.52	91.52	91.52
353	98.37	98.55	98.98	99.51
354	90.28	90.28	90.28	90.28
355	99.92	99.19	99.19	99.19
356	95.84	90.71	91.03	91.24
361	99.66	99.61	99.61	99.61
362	99.98	99.80	99.80	99.80
369	99.97	99.97	99.97	99.97
371	99.69	99.43	99.43	99.43
372	99.54	98.53	98.82	98.83
381	96.88	93.36	95.47	96.47
382	99.95	98.40	98.40	98.42
383	99.97	94.27	94.27	94.27
384	99.96	99.69	99.69	99.69
385	99.56	50.19	50.33	50.44
390	91.71	86.87	86.87	86.87

OF INDUSTRIAL PRODUCTION - LATIN AMERICA

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1967	1968	1969	1970
100.00	100.00	100.00	100.00
100.00	100.00	100.00	100.00
100.00	100.00	100.00	100.00
99.98	99.98	99.98	99.99
99.59	99.59	99.59	99.90
100.00	100.00	100.00	100.00
99.94	99.94	99.94	99.97
96.41	96.41	96.41	100.00
96.52	96.52	96.52	100.00
98.82	98.82	98.82	99.99
94.69	94.69	94.69	99.92
96.59	96.59	96.59	100.00
91.52	91.52	91.52	100.00
99.51	99.51	99.66	99.66
92.13	92.13	92.13	92.13
99.19	99.19	99.19	100.00
96.66	97.27	97.27	100.00
99.66	99.66	99.66	99.98
99.98	99.98	99.98	100.00
99.97	99.97	99.97	100.00
99.43	99.74	99.74	100.00
98.83	98.84	98.84	99.96
96.47	96.47	96.47	100.00
98.42	98.50	98.50	100.00
94.27	94.27	94.27	100.00
99.69	99.69	99.69	100.00
80.30	80.39	80.53	100.00
86.87	87.18	87.18	99.84

Table B-3. .PERCENT OF 1975 BASE WEIGHTS COVERED BY AN INDEX

	1971	1972	1973	1974
300				
311	100.00	100.00	100.00	100.00
313	100.00	100.00	100.00	100.00
314	100.00	100.00	100.00	100.00
321	99.98	.99.98	99.98	99.98
322	99.90	99.90	99.90	99.90
323	100.00	100.00	100.00	100.00
324	99.94	99.94	99.94	99.94
331	96.41	.96.41	96.41	96.41
332	96.73	96.73	96.73	96.73
341	98.82	98.82	98.82	98.82
342	94.69	94.69	94.69	94.69
351	96.59	96.59	96.59	96.59
352	91.53	91.53	91.53	91.53
353	99.66	99.66	100.00	100.00
354	92.13	92.13	92.13	92.13
355	99.19	99.19	99.19	99.19
356	97.66	97.66	97.66	97.66
361	99.98	99.98	99.98	99.98
362	100.00	100.00	100.00	100.00
369	100.00	100.00	100.00	100.00
371	99.74	99.74	99.74	99.74
372	98.84	98.84	98.84	98.88
381	96.47	96.47	96.47	96.47
382	98.50	98.50	98.50	98.50
383	94.29	94.29	94.29	94.29
384	99.82	99.82	99.82	99.82
385	80.88	80.88	80.88	80.88
390	95.25	95.25	95.25	95.25

OF INDUSTRIAL PRODUCTION - LATIN AMERICA

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1975	1976	1977	1978	1979
100.00	99.06	97.91	93.32	84.97
100.00	99.38	97.55	66.58	71.18
100.00	92.52	91.54	82.19	62.23
100.00	97.57	97.02	91.11	86.17
100.00	87.21	83.89	79.15	69.76
100.00	45.43	94.85	69.99	63.74
100.00	45.10	94.05	86.43	78.68
100.00	45.04	94.51	41.01	35.00
100.00	42.51	24.82	20.59	12.44
100.00	98.35	97.41	93.48	84.26
100.00	93.74	93.12	89.31	81.67
100.00	45.77	94.52	90.30	85.64
100.00	91.16	90.48	86.94	80.87
100.00	99.91	99.69	96.64	62.89
100.00	92.13	91.83	91.50	87.08
100.00	98.56	97.86	94.44	87.46
100.00	92.17	91.92	62.47	52.93
100.00	99.41	99.74	97.64	92.81
100.00	99.29	99.17	95.10	86.84
100.00	99.61	99.19	95.61	85.46
100.00	94.35	99.35	97.36	90.18
100.00	48.91	73.47	61.85	59.02
100.00	45.97	95.97	91.95	85.93
100.00	98.41	98.12	95.59	93.87
100.00	93.97	93.96	90.08	87.09
100.00	99.67	99.67	97.08	92.81
100.00	50.40	50.40	28.54	24.25
100.00	46.89	46.89	28.93	25.01

Table B-3. PERCENT OF 1975 BASE WEIGHTS COVERED BY AN INDEX

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	1963	1964	1965	1966
300				
311	96.50	96.50	96.50	98.51
313	95.98	95.98	95.98	95.98
314	99.63	99.63	99.63	99.63
321	96.60	96.60	96.60	96.60
322	82.76	82.76	82.76	82.76
323	87.99	87.99	87.99	87.99
324	99.80	99.80	99.80	99.80
331	85.04	85.04	85.04	85.04
332	68.54	68.54	68.54	68.54
341	92.13	92.13	92.13	92.13
342	75.78	75.78	75.78	75.78
351	58.80	76.49	76.49	76.49
352	98.99	98.99	98.99	98.99
353	83.99	83.99	83.99	83.99
354	92.57	72.36	72.36	72.36
355	97.86	97.86	97.86	97.86
356	65.09	65.09	65.09	65.09
361	74.17	74.17	74.17	74.17
362	85.20	85.20	85.20	85.20
369	94.39	94.39	94.39	94.39
371	96.32	95.59	95.59	95.59
372	79.00	79.00	81.76	81.76
381	83.89	83.89	83.89	83.89
382	98.11	98.11	98.11	98.11
383	98.59	98.59	98.59	98.59
384	96.82	96.82	96.82	96.82
385	93.07	93.07	93.07	93.07
390	86.33	80.33	80.33	80.33

OF INDUSTRIAL PRODUCTION - DEVELOPING WEST ASIA

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1967	1968	1969	1970
98.70	98.70	98.70	98.75
95.98	95.98	95.98	99.41
99.63	99.63	99.63	99.63
96.60	96.60	96.60	96.78
82.76	82.76	82.76	89.56
87.99	87.99	87.99	87.99
99.80	99.80	99.80	99.80
85.04	85.04	85.04	85.04
76.20	76.20	76.20	86.56
92.13	92.13	92.13	92.69
75.78	75.78	75.78	79.80
76.49	76.49	76.49	76.49
98.99	98.99	98.99	98.99
83.99	83.99	83.99	83.99
92.57	95.39	95.39	100.00
97.86	97.86	97.86	97.86
69.38	69.38	69.38	70.27
74.17	74.17	74.17	78.19
85.20	85.20	85.20	85.20
94.39	94.39	94.39	99.11
96.47	96.47	96.47	98.67
82.79	82.79	82.79	98.61
85.09	85.09	85.09	87.74
98.11	98.11	98.11	99.53
98.59	98.59	98.59	98.59
96.82	96.82	96.82	96.82
93.07	93.07	93.07	100.00
80.33	80.33	80.33	83.42

Table B-3. PERCENT OF 1975 BASE WEIGHTS COVERED BY AN INDEX

	1971	1972	1973	1974
300				
311	98.75	98.75	98.75	98.75
313	95.98	95.98	95.98	95.98
314	99.63	99.63	99.63	99.63
321	96.60	96.60	96.60	96.60
322	82.76	82.76	82.76	82.76
323	87.99	87.99	87.99'	87.99
324	99.80	99.80	99.80	99.80
331	85.04	85.04	85.04	85.04
332	76.20	76.20	76.20	76.20
341	92.13	92.13	92.13	92.13
342	75.78	75.78	75.78	75.78
351	76.49	76.49	76.49	76.49
352	98.99	98.99	98.99	98.99
353	83.99	84.12	84.12	84.12
354	95.39	95.39	95.39	95.39
355	97.86	97.86	97.86	97.86
356	69.38	69.38	69.38	69.38
361	74.17	74.17	74.17	74.17
362	85.20	85.20	85.20	85.20
369	99.11	99.11	100.00	100.00
371	96.47	96.47	96.47	96.47
372	98.61	98.61	98.61	98.61
381	85.09	85.09	85.09	85.09
382	98.11	98.11	98.11	98.11
383	98.59	98.59	98.59	98.59
384	96.82	96.82	96.82	96.82
385	93.07	93.07	93.07	93.07
390	80.33	80.33	80.33	80.33

OF INDUSTRIAL PRODUCTION - DEVELOPING WEST ASIA

1975	1976	1977	1978	1979
100.00	98.75	98.75	89.07	89.07
100.00	80.92	80.92	80.92	80.92
100.00	88.74	88.74	88.74	88.74
100.00	96.60	96.23	84.17	84.17
100.00	82.76	31.65	16.11	3.00
100.00	65.97	58.15	58.15	45.78
100.00	99.80	96.55	70.47	70.47
100.00	83.36	83.06	83.06	83.06
100.00	68.54	19.74	19.74	19.74
100.00	84.53	83.64	83.64	83.64
100.00	73.70	72.36	72.36	72.36
100.00	76.49	75.90	74.18	72.61
100.00	89.06	89.06	89.06	89.06
100.00	84.12	84.12	80.98	26.25
100.00	75.19	75.19	75.19	75.19
100.00	94.02	93.68	93.68	93.68
100.00	65.04	1.01	1.01	1.01
100.00	74.17	4.88	2.44	2.44
100.00	85.20	79.26	77.34	77.34
100.00	100.00	100.00	84.86	81.66
100.00	96.47	95.59	95.59	95.59
100.00	98.61	97.58	97.58	79.00
100.00	82.78	6.47	6.47	0.97
100.00	88.80	88.56	88.56	85.59
100.00	88.56	87.75	87.75	85.75
100.00	88.89	87.86	87.86	87.76
100.00	93.07	13.86	13.86	13.86
100.00	80.33	25.68	0.55	0.55

Table B-3.   PERCENT OF 1975 BASE WEIGHTS COVERED BY AN INDEX

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	1963	1964	1965	1966
300				
311	96.27	97.44	98.69	98.69
313	98.41	96.41	98.41	98.41
314	95.57	45.57	96.21	96.21
321	94.49	94.49	94.98	94.98
322	98.25	.98.25	99.37	99.37
323	65.06	61.57	94.32	94.32
324	97.98	75.37	75.37'	75.37
331	96.18	96.18	99.56	99.57
332	94.45	94.45	94.45	94.45
341	98.37	98.37	98.37	98.37
342	98.59	98.54	98.94	98.94
351	98.69	98.69	99.37	99.37
352	96.65	90.49	90.49	90.49
353	96.87	99.59	99.59	99.59
354	46.07	85.20	85.20	85.20
355	99.47	99.47	99.47	99.47
356	49.52	21.48	21.48	21.48
361	94.05	57.94	88.14	88.14
362	97.59	92.67	92.67	92.67
369	98.33	96.33	99.46	99.46
371	97.94	96.61	96.61	97.94
372	96.77	94.07	97.25	97.91
381	98.50	98.50	99.12'	99.12
382	99.66	99.66	99.66	99.66
383	99.73	99.73	99.73	99.73
384	99.40	99.40	99.40	99.40
385	94.32	68.52	68.52	68.52
390	98.16	98.16	98.16	98.16

OF INDUSTRIAL PRODUCTION - DEVELOPING EAST ASIA

1967	1968	1969	1970
98.69	98.69	98.69	100.00
98.41	98.41	98.41	98.41
96.21	96.37	96.37	100.00
94.98	95.11	95.11	99.66
99.52	99.52	99.52	99.52
94.32	94.32	94.32	97.80
76.58	76.76	76.76	98.14
99.57	99.57	99.57	99.57
94.45	94.45	94.45	96.65
98.37	98.51	98.73	99.92
98.94	99.06	99.06	99.06
99.37	99.42	99.42	99.98
94.92	94.97	94.97	96.70
99.59	99.59	99.97	99.97
99.44	100.00	100.00	100.00
99.47	99.51	99.51	99.65
41.45	47.32	47.32	99.81
88.14	88.14	94.25	95.19
92.67	92.67	97.59	98.93
99.46	99.46	99.46	99.76
97.94	97.94	98.19	98.19
97.91	97.91	97.91	99.95
99.12	99.12	99.12	99.29
99.66	99.75	99.75	99.75
99.73	99.73	99.73	99.77
99.40	99.49	99.49	99.66
73.05	73.05	73.05	99.14
98.16	99.06	99.06	99.06

Table B-3.   PERCENT OF 1975 BASE WEIGHTS COVERED BY AN INDEX

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            ■■■■■■■■■■■  ■■■■■■■■■■■  ■■■■■■■■■■■  ■■■■■■■■■■  ■
            1971         1972         1973         1974

   300
   311    100.00      100.00      100.00      100.00
   613     93.41       98.41       98.75       98.75
   314    100.00      100.00      100.00      100.00
   321     99.66       99.66       99.66       99.66
   322     99.52       99.52       99.52       99.52
   323     94.32       94.32       94.32       94.32
   324     82.30       82.30       82.30       82.30
   331     99.76       99.76       99.76       99.76
   332     94.45       94.45       94.45       94.45
   341     99.92       99.92       99.92       99.92
   342     99.06       99.06       99.06       99.06
   351     99.98       99.98       99.98       99.98
   352     96.70       96.70       99.68       99.68
   353     99.97       99.97       99.98       99.98
   354    100.00      100.00      100.00      100.00
   355     99.65       99.64.      99.65       99.65
   356     94.68       94.68      .94.68       94.68
   361     95.19       95.19       95.19       95.19
   362     98.93       98.93       99.52       99.52
   369     99.76       99.76       99.76       99.76
   371     98.19       98.19       99.98       99.98
   372     99.95       99.95       99.95.      99.95
   381     99.12       99.12       99.12       99.12
   382     99.75       99.75       99.75       99.75
   383     99.73      '99.73       99.88       99.88
   384     99.66       99.66       99.66       99.66
   385     99.14      ·99.14       99.14       99.14
   390     99.06       99.06       99.06       99.06
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OF INDUSTRIAL PRODUCTION - DEVELOPING EAST ASIA

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1975	1976	1977	1978	1979
100.00	100.00	98.80	98.43	73.33
100.00	98.75	94.35	94.35	84.65
100.00	100.00	98.04	97.70	89.19
100.00	99.66	99.53	99.36	66.86
100.00	99.39	68.81	68.81	52.71
100.00	94.32	77.96	77.33	72.26
100.00	82.30	62.85	62.85	50.18
100.00	99.76	97.41	97.03	94.40
100.00	44.45	80.73	80.73	71.11
100.00	99.92	91.74	91.74	90.55
100.00	87.48	73.40	64.29	35.01
100.00	99.98	99.48	92.16	68.46
100.00	99.68	97.95	97.95	78.63
100.00	99.48	99.98	99.98	95.37
100.00	94.10	79.86	79.57	79.57
100.00	99.65	97.15	97.15	87.58
100.00	94.68	17.29	12.16	12.16
100.00	89.08	85.36	85.36	85.21
100.00	94.61	89.23	88.64	37.48
100.00	99.76	99.76	99.76	63.43
100.00	90.17	85.58	85.58	74.19
100.00	94.57	92.36	92.36	38.30
100.00	96.39	77.68	77.28	56.94
100.00	97.90	87.07	87.07	75.56
100.00	99.16	87.62	86.70	67.74
100.00	99.46	91.40	91.40	67.30
100.00	86.42	52.88	52.88	52.88
100.00	93.77	82.41	82.41	13.28

Appendix C-1. Numerical Key to Country Codes Used in the UNIDO Data Base

Code	Country	Code	Country
004	Afghanistan	212	Dominica
008	Albania	214	Dominican Republic
012	Algeria	218	Ecuador
024	Angola	222	El Salvador
032	Argentina	226	Equatorial Guinea
036	Australia	230	Ethiopia
040	Austria	242	Fiji
044	Bahamas	246	Finland
048	Bahrain	250	France
050	Bangladesh	266	Gabon
052	Barbados	270	Gambia
056	Belgium	278	German Democratic Republic
064	Bhutan	280	Germany, Federal Republic of
068	Bolivia	288	Ghana
072	Botswana	300	Greece
076	Brazil	320	Guatemala
084	Belize	324	Guinea
090	Solomon Islands	328	Guyana
096	Brunei	332	Haiti
100	Bulgaria	340	Honduras
104	Burma	344	Hong Kong
108	Burundi	348	Hungary
116	Democratic Kampuchea	352	Iceland
120	United Republic of Cameroon	356	India
124	Canada	360	Indonesia
132	Cape Verde	364	Iran
140	Central African Republic	368	Iraq
144	Sri Lanka	372	Ireland
148	Chad	376	Israel
152	Chile	380	Italy
156	China	384	Ivory Coast
170	Colombia	388	Jamaica
174	Comoros	392	Japan
178	Congo	400	Jordan
180	Zaire	404	Kenya
188	Costa Rica	408	Korea, Democratic People's Republic of
192	Cuba		
196	Cyprus	410	Korea, Republic of
200	Czechoslovakia	414	Kuwait
204	Benin	418	Lao People's Democratic Rep.
208	Denmark	422	Lebanon
		426	Lesotho

Appendix C-1 (contd.)

430	Liberia	638	Reunion
434	Libyan Arab Jamahiriya	642	Romania
442	Luxembourg	646	Rwanda
446	Macau	678	Sao Tome and Principe
450	Madagascar	682	Saudi Arabia
454	Malawi	686	Senegal
459	Malaysia, Peninsular	690	Seychelles
460	Malaysia: Sabah	694	Sierra Leone
461	Malaysia: Sarawak	702	Singapore
462	Maldives	706	Somalia
466	Mali	710	South Africa
470	Malta	716	Zimbabwe
478	Mauritania	720	Democratic Yemen
480	Mauritius	724	Spain
484	Mexico	736	Sudan
496	Mongolia	740	Suriname
504	Morocco	748	Swaziland
508	Mozambique	752	Sweden
512	Oman	756	Switzerland
516	Namibia	760	Syrian Arab Republic
520	Nauru	764	Thailand
524	Nepal	768	Togo
528	Netherlands	776	Tonga
532	Netherlands Antilles	780	Trinidad and Tobago
554	New Zealand	784	United Arab Emirates
558	Nicaragua	788	Tunisia
562	Niger	792	Turkey
566	Nigeria	800	Uganda
570	Niue	810	Union of Soviet Socialist Rep.
578	Norway	818	Egypt
586	Pakistan	826	United Kingdom
590	Panama	834	United Republic of Tanzania
596	Papua New Guinea	840	United States of America
600	Paraguay	854	Upper Volta
604	Peru	858	Uruguay
608	Philippines	862	Venezuela
616	Poland	866	Viet Nam
620	Portugal	882	Samoa
624	Guinea-Bissau	886	Yemen
630	Puerto Rico	890	Yugoslavia
634	Qatar	894	Zambia

Appendix C-2. Key to ISIC Branch Codes

| Code	Branch description
311/2	Food products
313	Beverages
314	Tobacco
321	Textiles
322	Wearing apparel
323	Leather and fur products
324	Footwear
331	Wood and cork products
332	Furniture and fixtures excluding metal
341	Paper
342	Printing and publishing
351	Industrial chemicals
352	Other chemicals
353	Petroleum refineries
354	Miscellaneous products of petroleum and coal
355	Rubber products
356	Plastic products
361	Pottery, china and earthenware
362	Glass
369	Other non-metallic mineral products
371	Iron and steel
372	Non-ferrous metals
381	Metal products, excluding machinery
382	Non-electrical machinery
383	Electrical machinery
384	Transport equipment
385	Professional and scientific equipment, photographic and optical goods
390	Other manufactures

Appendix C-3. Key to ISIC Branch Combination Codes

Code	Contents of the ISIC Combination[a]
311A	311/2 + 313
311B	311/2 + 313 + 314
311F	311/2 + 314
313A	313 + 314
321A	321 + 322
321B	321 + 322 + 323
321C	321 + 322 + 323 + 324
321F	321 + 322 + 324
321G	321 + 323 + 324
321H	321 + 324
322A	322 + 323
322B	322 + 323 + 324
322F	322 + 324
3220A	322 + 323 + 324 + 331 + 332 + 342 + 390
3220B	322 + 323 + 324 + 331 + 332 + 341 + 342 + 361
3220C	322 + 323 + 324 + 331 + 332 + 341 + 342 + 361 + 362 + 390
3220D	322 + 323 + 324 + 331 + 332 + 341 + 342 + 361 + 362
323A	323 + 324
323 AA	323 + 324 + 355
3230A	323 + 355
331A	331 + 332
331AB	331 + 332 + 341
331AC	331 + 332 + 390
3310A	331 + 332 + 341 + 342
3310B	331 + 332 + 341 + 342 + 390
3320A	332 + 341 + 342
3320B	332 + 341
341A	341 + 342
342F	342 + 341
351A	351 + 352
351AA	351 + 352 + 369
351B	351 + 352 + 353
351C	351 + 352 + 353 + 354
351D	351 + 352 + 353 + 354 + 355
351E	351 + 352 + 353 + 354 + 355 + 356
351EA	351 + 352 + 353 + 354 + 355 + 356 + 220
351F	351 + 353
351G	351 + 356
351H	351 + 352 + 354
351J	351 + 352 + 355
351K	351 + 352 + 356
351L	351 + 353 + 354
351M	351 + 355 + 356
351N	351 + 352 + 353 + 356
351P	351 + 352 + 354 + 356
351Q	351 + 352 + 355 + 356

Appendix C-3. (contd.)

Code	Contents of the ISIC Combination
351QA	351 + 352 + 355 + 356 + 341
351QB	351 + 352 + 355 + 356 + 210
351R	351 + 353 + 354 + 356
351S	351 + 352 + 353 + 354 + 356
351T	351 + 352 + 354 + 355 + 356
351U	351 + 353 + 355 + 356
351V	351 + 355
351W	351 + 354 + 355 + 356
3510A	351 + 352 + 353 + 354 + 355 + 356 + 361 + 362 + 369
3510B	351 + 352 + 361 + 362 + 369
3510C	351 + 352 + 355 + 356 + 361 + 362 + 369
352A	352 + 353
352B	352 + 353 + 354
3520A	352 + 381
353A	353 + 354
353AA	353 + 354 + 220
353AC	353 + 354 + 210 + 220 + 290
353AF	353 + 354 + 361 + 362 + 369
353B	353 + 354 + 355
3530A	353 + 220
355A	355 + 356
355AA	355 + 356 + 361 + 362 + 369
355E	355 + 352 + 353 + 354
361A	361 + 362
361B	361 + 362 + 369
361BA	361 + 362 + 369 + 290
361BB	361 + 362 + 369 + 354
361BC	361 + 362 + 369 + 355
361BD	361 + 362 + 369 + 390
361F	361 + 369
362A	362 + 369
362AA	362 + 369 + 290
362F	362 + 361
369F	369 + 361
369FA	369 + 361 + 353
369FC	369 + 361 + 290
369FD	369 + 361 + 390
3690A	369 + 290
3690B	369 + 354
3690C	369 + 356
3690D	369 + 371
371A	371 + 372
371AA	371 + 372 + 381
371AB	371 + 372 + 230
371AC	371 + 372 + 290
3710A	371 + 372 + 381 + 382 + 383 + 384
3710B	371 + 372 + 381 + 382 + 383
3710C	371 + 372 + 381
3710D	371 + 372 + 381 + 382 + 383 + 384 + 385 + 390
3710E	371 + 372 + 381 + 382 + 384 + 385 + 390

Code	Contents of the ISIC Combination
3710F	371 + 372 + 381 + 382
3710G	371 + 372 + 381 + 382 + 383 + 384 + 385
3710H	371 + 372 + 381 + 382 + 383 + 384 + 390
3720A	372 + 381
381A	381 + 382
381AA	381 + 382 + 383 + 385 + 390
381B	381 + 382 + 383
381C	381 + 382 + 383 + 384
381CA	381 + 382 + 383 + 384 + 390
381D	381 + 382 + 383 + 384 + 385
381DA	381 + 382 + 383 + 364 + 385 + 390
381E	381 + 382 + 384 + 385
381EA	381 + 382 + 384 + 385 + 390
381F	381 + 385
381FA	381 + 385 + 390
381G	381 + 382 + 385
381H	381 + 382 + 383 + 385
381JA	381 + 383 + 385 + 390
381KA	381 + 383 + 390 + 371
381L	381 + 382 + 384
381M	381 + 383 + 384
382A	382 + 383
382B	382 + 383 + 384
382F	382 + 385
382G	382 + 384
383AA	383 + 384 + 390
383B	383 + 385
383C	383 + 384 + 385
383D	383 + 381 + 384 + 385
384A	384 + 385
384AA	384 + 385 + 390
384B	384 + 390
384F	384 + 382
3840A	384 + 314 + 321 + 341 + 354 + 355 + 356 + 362
385A	385 + 390
385AA	385 + 390 + 356
385AB	385 + 390 + 323 + 356
385AC	385 + 390 + 353 + 354
385AD	385 + 390 + 353 + 354 + 355 + 356
385AE	385 + 390 + 355
385AF	385 + 390 + 323 + 354
385AG	385 + 390 + 323 + 354 + 356
385AH	385 + 390 + 322 + 324 + 332 + 354 + 356 + 382
385AJ	385 + 390 + 355 + 361 + 362
385AK	385 + 390 + 353
385AL	385 + 390 + 353 + 372
385AM	385 + 390 + 314
385AN	385 + 390 + 381 + 382 + 383 + 384
385AP	385 + 390 + 353 + 354 + 356
385AQ	385 + 390 + 323
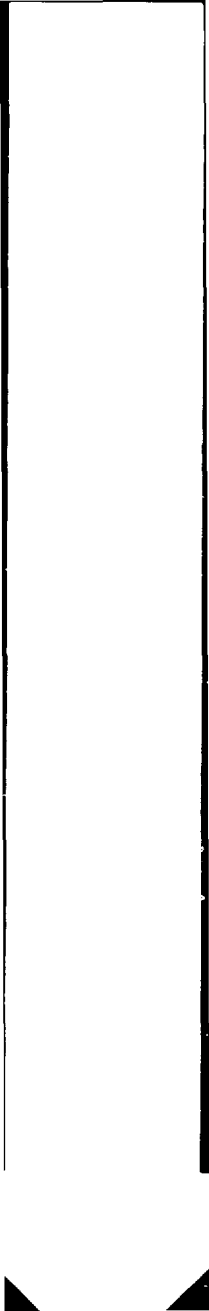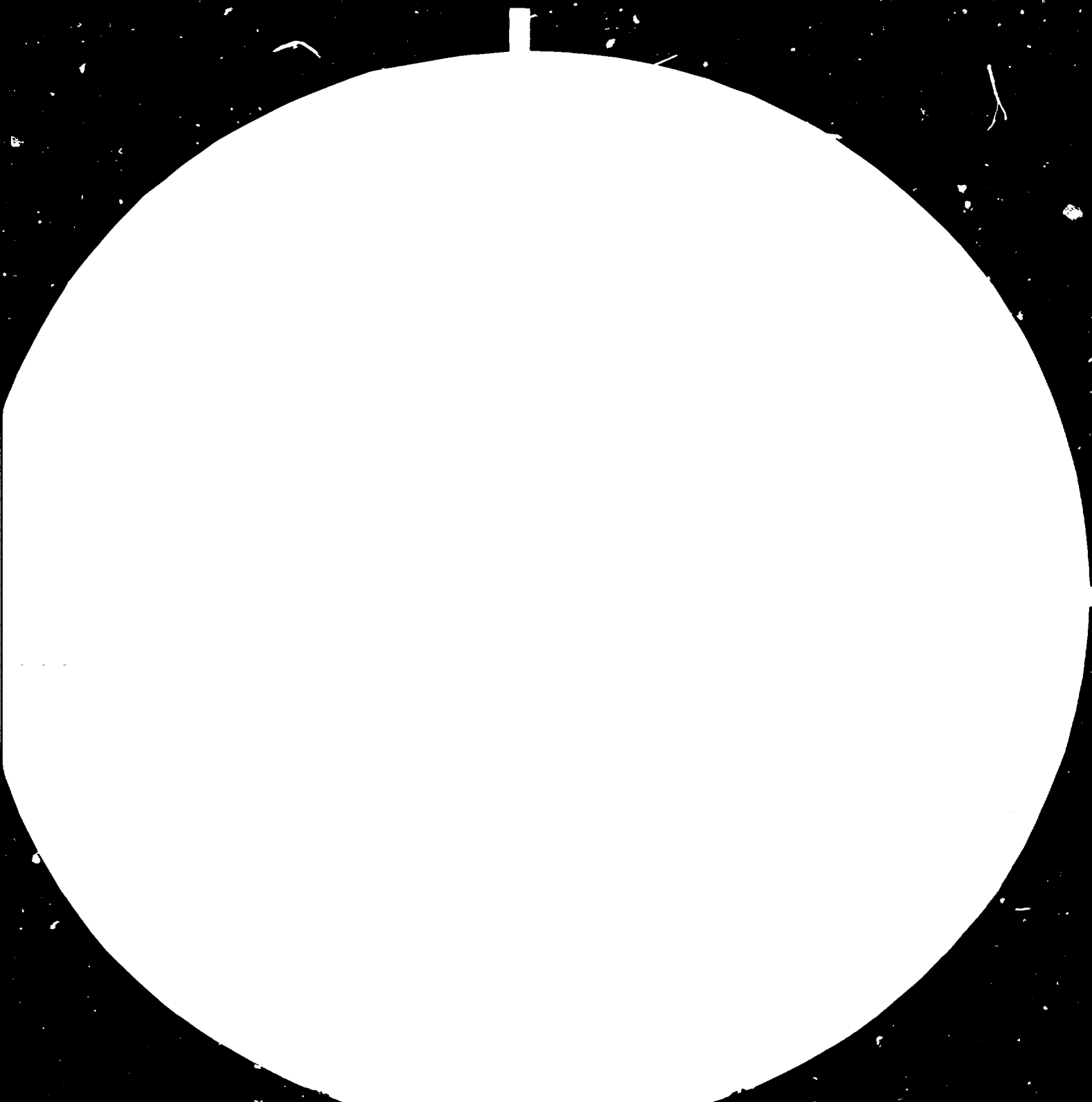
1.25 1.4 1.6

1.1

1.0

28

18 20 22 25

Appendix C-3. (contd.)

Code	Contents of the ISIC Combination
390AB	390 + 342 + 356
390AC	390 + 341
390AD	390 + 352
390AE	390 + 383
390AF	390 + 351 + 354 + 355 + 372
390AG	390 + 351 + 352 + 354 + 355 + 372
3900A	390 + 356
3900B	390 + 323 + 356
3900C	390 + 341 + 356
3900D	390 + 355 + 356
3900E	390 + 314 + 323 + 331 + 341
3900F	390 + 384
3900G	390 + 323 + 351 + 352 + 361
3900H	390 + 322 + 324 + 342 + 383
3900J	390 + 324 + 341 + 355 + 371
3900K	390 + 324 + 341 + 355 + 356 + 371
3900L	390 + 322 + 324 + 341 + 355 + 356 + 362 + 371 + 382
3900M	390 + 322 + 323 + 324 + 341 + 355 + 356 + 362 + 371 + 382
3900N	390 + 324 + 341 + 351 + 352
3900P	390 + 372
3900Q	390 + 342
3900R	390 + 331 + 332 + 342 + 351 + 352 + 369
3900S	390 + 382 + 383
3900T	390 + 322 + 323 + 324 + 355 + 356 + 361 + 362 + 371 + 382
3900U	390 + 353 + 354 + 372
3900V	390 + 353
3900W	390 + 322 + 324 + 342
3900X	390 + 331 + 332 + 342 + 352 + 369
3900Y	390 + 353 + 354
3900Z	390 + 356 + 331 + 332

a/ Although the UDB focusses exclusively on manufacturing industries, four ISIC branches belonging to ISIC Major Division 2, "Mining and Quarrying", will be found among the combinations. These are: ISIC 210, Coal mining; ISIC 220, Crude Petroleum and Natural Gas Production; ISIC 230, Metal Ore Mining; and ISIC 290, Other Mining.