MANPOWER PLANNING AND THE PROVISION OF TRAINING

BY

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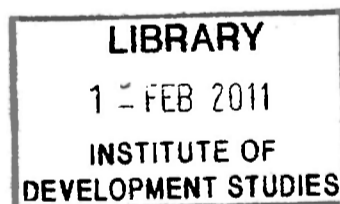
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ABSTRACT

The paper considers the importance of specific kinds of labour market data as an input to the planning of industrial training. Methods of collection are discussed with special attention on forecasting methods actually used by firms. Several data and survey activities of the Kenya government are considered and suggestions are made for possible improvements through reorganization and interagency cooperation.

Manpower Planning and the Provision of Training

Introduction:

The importance of quantitative data as an input to economic
planning and policy formation is well recognized. Indeed, the establi-
shment of a statistical bureau is one of the first priorities of a deve-
loping country in order to provide the data base against which progress
can be gauged. The promotion of effective, rapid industrialization is
one area which demands planning and for which the planning of human re-
sources (manpower planning) plays an integral part. As Zymelman $\boxed{9}$
points out, experience has shown that planning for human capital is
often more difficult than for physical capital. Manpower planning is
especially critical in countries such as Kenya where employment crea-
tion is a major policy objective and significant weight is attached to
the role of the industrial sector in providing a growing share of total
employment. When an industrialization program is faced with an initial
shortage of skilled labour, planning of the manpower component implies,
a fortiori, the formulation of appropriate training schemes. This "im-
plicit demand for training" which is embodied in manpower requirement
data means we must also obtain specific data on the nature of the rele-
vant industrial skills required to fulfill the overall objectives of
the development plan, and thus identify the possible ways in which tra-
ining programs can provide these skills.

In this paper, references to training will usually refer to
industrial training in 'employable skills' as distinct from more general
'education' which develops broad cognitive abilities which are basic or
preparatory to actual job-determined training. Of course it is fair to
say that a welldesigned 'training' program will have distinct feedbacks
to the 'education' sequence which precedes it. Thus 'training' will in-
volve either the teaching of an exact job or of a set of exact skills
necessary to the performance of a given job or set of related jobs.

What kinds of data are likely to be important to determine tra-
ining needs? On the one hand there is the demand for skills which is in-
ferred from labour market data on the industrial, occupational and skill
composition of the current labour force, a projection of future changes
in demand for labour by skill category, and a measure of job content and
thus of the training required for the existing and future labour stock.
On the supply side, planners must know which institutions and firms are
providing which kinds of training, for how many people, and in which skill
types and levels.

It is when we bring the figures on demand and supply together that we reveal areas of surplus or deficit in the skills required for the planning period,thus indicating where adjustments in the form and /or magnitude of the training output are necessary. Of course this view implies a causality, with the demand for training inducing appropriate supply responses. But we can more realistically take the view that planning is a simultaneous, interactive process in which feedback from the supply constraints determine the range of acceptable demand parameters and thus the overall manpower plan and its feasible goals.[1] For our present purpose, however, we need only assume that every possible effort _will_ be made to accommodate supply to demand in order to facilitate the expansion of industry and employment as much as possible. This is a reasonable approach where our major concern is in the planning of appropriate training facilities and less in the actual short run outcomes which are affected by current supply constraints. In short, our aim is to reduce these constraints through the provision of training.

The focus of this paper, then, is on the problems of obtaining accurate labour market data on the demand for training which, as direct measure of labour market reality, will serve as the best guide for modifying our 'dependent variable' —— the industrial training which is supplied. The paper is arranged as follows. In Section I we consider objectives in the planning of training and evaluate possible alternative techniques for obtaining the necessary data. Some preliminary evidence from a recent Kenya survey is presented. Section II briefly reviews the various data—collecting activities currently used in Kenya, the manpower forecasting methods used in planning, and their usefulness as inputs for training design. Finally, Section III contains suggestions for improved data collection and conclusions about the use of labour market data for training.

1.   Manpower Methodology and Data for the Planning of Training:

We can identify two major objectives in the planning of training First, when a country is faced with an initial shortage of skilled labour, as in Kenya, a major goal is to create sufficient training facilities not only to provide for new requirements over time, but to overcome the current numerical gap as well, and thus reduce the bottlenecks which can limit growth. This must be a somewhat gradual process if for no other reason than that training takes time. Second, an important consideration is not only the

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1 This is a combination of 'manpower forecasting' and' social demand projections'. See Blaug /_1_/ for a complete discussion.

volume but the _specific skill content_ of the manpower demand, and this
requires direct labour market feedback.

Of course many countries, including Kenya, already have an
institutional structure of training which involves both public and
private facilities providing training of various types and levels and
with a variety of purposes in mind. Nevertheless, they all require up
-to-date labour market information in order to be efficient in their
primary objective; the creation of employable skills. Yet existing
facilities differ in their access to such information. The nature of
a particular training facility will be determined by educational philo-
sophy, budget constraints and, for non-employer operated schemes, by
conditions in the labour market for which the training is intended.

There are three parameters of training that can be affected
by the data input to planning: 1) structure -- whether training should
be public or private, formal or informal, on-job or institutional,
horizontally or vertically integrated, of what duration; 2) Scale-- the
number of facilities, the number of trainees, the rate at which gradua-
tes are produced; and 3) Content--the general skill areas to be covered
and the specific curricula for each, the proportion of theory to applied
work, and the possible combination of on-job and institutional instru-
ction. We might ask if there is an alternative to the use of systemati-
cally obtained labour market data for determining these parameters. Put
another way, should information on training needs be derived from the
data of manpower planning and forecasting techniques, or could we simply
provide a broad array of institutional training options among which
firms and individuals are free to choose, along with on-job programs run
by firms? There are obvious reasons why we should find this approach
unsuitable. It would mean the provision of institutional training in an
information vacuum without regard for actual labour market demand for
the various skills. There would be no mechanism for identifying changes
in these demands except through a very lagged indication via a change
in use of particular training options. Equally undesirable would be the
waste and inefficiency from the provision of inappropriate instruction
(content) and duplication of effort due to a lack of coordination and
cooperation among facilities. Furthermore there would be no measure of
effectiveness based on a comparison of the labour market performance and
experience among individuals from different training backgrounds. A
'blind' provision of training without informed planning and followup data
would have no capacity for self-evaluation and modification. Finally,

there are likely to be firms which require certain types of training which
are not available and which they are unable to provide themselves for
economic reasons, so there must be a mechanism for identifying and provi-
ding for these needs.

It is clear that decisions on the structure, scale and content of
training should depend on data inputs from the labour market. In Kenya this
problem was addressed squarely by an internal paper of the Ministry of Labour:

> "So far, the expansion of industrial training in Kenya has been
> directed by intuition and in response to pressure from the industr-
> ial parties rather than by systematic analysis of requirements...
>   As the capacities of the training institutions grow, however,
> and the backlogs are covered in one area after the other, the
> risks increase that a purely intuitive and responsive mode of
> resource allocation will lead to misinvestment, either through
> overproduction of certain skills... or through neglecting skills
> which are not yet represented by organised interest groups."[2]

A plan for industrial training should, "be a system for continuous review of
resource use in the light of an incoming flow of data, related both to the
training activities and to the labour market."[3]

In the literature there is ample criticism of training which is
unrelated to actual job conditions[4] Appropriate training must have some
communication with the labour market through a flow of data . How might this
flow be established through the use and extension of existing manpower pla-
nning techniques and data sources in Kenya?

There are two things we wish to measure. First, as mentioned in
the introduction. we want to know the structure of the existing stock of the
labour force in terms of its skill composition, industrial distribution, and
any current shortages. This 'stock' data is perhaps easiest to obtain.
Direct surveys of employers, perhaps based on weighted samples, will be
sufficient if carefully administered. Such surveys provide added advantages
as they offer an opportunity to discover the extent and nature of training
programs within industry on a regular basis, to form a rough picture of the
flow of skills by way of changes in stock over time, and finally it may be
possible to identify new skills as they arise and demand begins to grow for
them, due to changes in technology for example. The second measure we
require is forecasts of the future level of demand for existing skills and,
if possible, some indication of new skills and job types that may arise, to
the extent that these can be anticipated in advance . It is in the area of

2 MOL/EPD /_7_/, p.[1]
3. Ibid, p.[2]
4 For example Staley /_8_/ and McNown /_6_/. The theme of occupational rele-
vance in training is consistently pointed up and is separate from the debate
over the validity and efficiency of 'vocational education' as discussed by
Foster /_3_/ and Blaug /_2_/

forecasting that we encounter problems of reliability and accuracy in the data and in the techniques used. Manpower planning has tended to emphasize current shortages and their extrapolation rather than the dynamics of general growth patterns for all employment categories, but manpower planning must be a function of _growth_ areas. It is the latter which we most desire to identify.

In his review of manpower planning techniques, Zymelman /_9_/ describes the four principal, conventional approaches to the forecasting of occupational structure:1) trend projection or extrapolation; 2) international comparisons based on given productivity levels; 3) estimation by direct surveys of employers; and 4) special studies of specific industries. The intent of each of these is to tie industry technology to an occupational (skill) structure in some predictable manner. While each of these methods has elements to recommend it, at least in theory, we can analyze each specifically in terms of its practical usefulness as an input to training.

Method (2) is more suited to the introduction of an industry for the first time than to manpower planning for already existing establishments who will, in any event, manipulate productivity, inputs and outputs according to local conditions which may not be duplicated elsewhere. This approach also tends to rely on agregate occupational categories (e.g., administrative/skilled, etc.) which are useless for setting up job specific training as they can only indicate the relative magnitudes for emphasis in the overall training structure. Specific skills are required to determine training content.

Method (4) could be very useful in select cases but since it only relates to a particular portion of training requirements it could not serve as a general guide for a comprehensive training program.

Method (1) in practice often suffers from the same limitation as (2); too broad occupational categories. Moreover, such projections tend to rely on technical data which is simply not available in developing countries with short industrial histories; e.g. long term data on capital/labour/output ratios which provide the base for extrapolation.

Method (3) is generally dismissed as a very short run technique, but one which can provide a useful check on other methods of forecasting. In fact, the regular use of direct surveys may eventually reveal some of the long term relations of technology, output and occupational structure in various industries in developing economies, thus contributing to the data base which can make method (1) more reliable. In particular, the direct

approach is well-suited for obtaining data which has the necessary occupa-
tional detail to determine training requirements. (e.g. rather than 'skilled'
we have 'masons, fitters, welders', etc) Thus the subsequent aggregate
projections of needs can be in terms of the detailed skill requirements for
the occupations which training must serve.

> " If the important question is to determine the size and type of
> the educational system that provides the skills, we have to group
> data in accordance with the type of training provided...
>   The best data that can be obtained of the occupational structure
> of the labour force is at the establishment level."[5]

Direct surveys, in conjuction with subsequent extrapolation, emer-
ge as 'best' for our purpose of obtaining both stock and forecast data for
the detailedplanning of industrial training. The level of aggregation and
degree of accuracy of data collection are a function of the use for which
the data are intended. The design of training obviously requires data on
specific occupations and their skill content. In addition to providing
this important detail for trend projections, direct survey/make it possible
to monitor new skills and job types as they emerge in the labour market,
thus allowing more rapid (albeit still ex post) adaptation of training
facilities to the fulfilment of new needs. These surveys can also be used
to discover the extent of in-house training schemes operated within some
firms.[6]

A Kenya Survey: Some Preliminary Findings.

In a direct employer survey we find that not all firms will in fact
calculate their own projected demand for skills; nor should they if their
own employment is small and their requirements easy to fulfil. But for
those that do project, we can use the data in one of two ways. It can be
used as a check against independently calculated aggregate forecasts, or
it can be weighted by sample size and used to actually create the aggregate
forecasts after being adjusted for the predicted effects of macro variables
on the micro projections. (e.g. the oil crisis, tax and tariff policies,
etc) The use to which we may put the available data will depend partly on
the accuracy of the techniques which firms themselves use, as well as the
length of their forecast horizon. This is an area about which more needs
to be known. Referring again to Zymelman, he describes two ways in which
firms can translate their physical or money targets (sales, production,

5 Zymelman /9_/ pps.61,63

6 one cannot overestimate the importance of these internal training acti-
   vities of firms. It is obvious even to the casual observer that most
   labour skills are not acquired formally but through on the-job experie-
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   training. This is one of the goals of an ILO project described below.

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capacity, investment, etc.) into forecasts of manpower needs. One is the
ratio-trend method using a time series of past experience and assuming no
structural change in the organization. The second is the 'normative app-
roach' which allows for radical structural change but which requires deta-
iled knowledge of labour requirements for given technology, production
techniques and output levels which may be chosen. One could conceivably
find both of these methods in use by the same firm; e.g. if a firm were
planning on growth as predicted by a trend plus the addition of a new unit
of capacity to be staffed on a normative basis.

Fortunately some preliminary and very tentative data on the
forecasting techniques actually employed by Kenyan industry is available
and we can examine it in terms of the standard techniques described above.
This information comes from a Survey of Industrial Training (SIT) carried
out for the Directorate of Industrial Training by the Employment Promotion
Division of the Ministry of Labour, with advice and finance from the ILO.
The purposes of the SIT are to determine the detailed training needs of
industry by occupation, the skill content of these occupations in the hope
of deriving standard occupational classifications based on common termino-
logy for Kenya, and the extent of training activities existing within firms.
The SIT will be further discussed in the following section. One phase of
the project, however, was an in-depth personal interview of a random sample
of 83 firms chosen across all industries and employment sizes. It is from
some of these interviews that the information in Table I is drawn. We again
stress that this data is based on partial responses (37 of 83 firms) to a
subjective question asking what forecasting techniques, if any, are employed.
The size breakdowns are arbitrary; nevertheless some interesting patterns appear
whose implications could form the basis for further investigation. For example
one would not expect very small firms to require or use any long term pla-
nning methods and, in the sample, none did. Within this group there were
a disproportionate number of building and construction enterprises which are
something of a special case. Except for a small core of permanent employees
(usually the most highly skilled) they 'hire and fire' by the contract from
a 'pool' of workers which the ILO estimates at about 70 to 80 thousand in
Kenya. Most of these firms do have a notion of the ratio of labour to co-
ntract value per year, but this varies by type of job and among firms. They
have no trouble procuring general unskilled labour but face a serious shor-
tage of skilled artisans and technicians, and especially foremen.

As we look at the categories of larger firms we find most of them
using some form of planning, which again is not too surprising since larger

Table 1

Forecasting Methods in Kenya Industry

(of firms stating method)

Method Range of Firm Size (employees)	Ratio-trend	Normative	Other*	None	Totals
7 to 72	0	0	0	12**	12
12 to 256	1	2	1	3	7
374 to 576	$1, \frac{1}{2}, \frac{1}{2}$	$1, \frac{1}{2}, \frac{1}{2}$	2	0	6
724 to 3605	$6, \frac{1}{2}$	$2, \frac{1}{2}$	3	0	12
Totals	$8, \frac{1}{2}, \frac{1}{2}, \frac{1}{2}$	$5, \frac{1}{2}, \frac{1}{2}, \frac{1}{2}$	6	15	37

* Other: includes informal guesstimates', replacement merely
for Kenyanization and expected retirements, and
planned intake of formal apprentices.

** Includes 5 building and contracting firms who hire and
fire as contracts are obtained and completed, maintaining
only a small 'permanent' staff.

Table 11

Manufacturing and Repairs	Firm Size — 1973	
	$\leqslant 50$	> 50
of firms	2993	385
employment	15,284	78,569

Source: Statistical Abstract 1974

employment requires more labour management due simply to magnitudes and training demands. Half of those using the ratio—trend method identified' 'expected sales volume' as the determinant of future labour requirements. In this limited sample several of the largest firms indicated the use of rather rigorous procedures, decentralized by departments with the estimated labour (and in some cases training) requirements fed upward from the workshop level to top management where they are reconciled with investment and growth plans. These seemed to be the firms with large investment in machinery, and assembly line processes which depend on the availability of adequate numbers and types of labour in order to operate. We must refrain from making too many conclusions at this time, but further investigations of the relation of types of planning to types of firms and an examination of the level of sophistication of methods would seem worthwhile. In particular a systematic study of the accuracy of firms' forecasts over time would contribute greatly to our ability to adjust aggregate manpower and training forecasts to the input from micro surveys. Table 11 shows the dominance, in terms of employment, of the relatively few large firms in the 'manufacturing and repairs' industry where one traditionally thinks of industrial training as appropriate. Since these large firms are the ones employing planning techniques they are obvious choices for further study, especially since they are the most likely to be operating **training** programs of their own as well.

11. Data Collection and Manpower Planning in Kenya:

Having discussed some of the techniques of planning, the kinds of data that are useful to have for a training program to function efficiently, and a desirable way of obtaining this data, we can now examine the current data activities in Kenya which are or could be related to the administration of training.

Ministry of Finance and Planning —Central Bureau of Statistics ((CBS):

CBS maintains a 'Register of Establishments' (rather than of firms) in the modern sector which is updated continuously. The bureau draws on 25 different sources, some of them weekly, in order to cross—check the Registry's accuracy. Each year in June CBS mail/an 'Annual Enumeration of Employees and Self—Employed Persons' to every entry in the Register. At the same time a field staff conducts an area canvas of informal sector activity. The mail questionnaire asks for data as of 30th June. Returns are requested by July but it is usually December before they are reasonably complete and data processing doesn't begin until April of the following year.

The normal lag until results are available is 15 months, but the '72 and '73 results have yet to be published although they are expected soon with the '74 data to quickly follow. The survey form asks for: numbers of employees in various job categories by citizenship and race, occupational totals by sex, and gross cash remuneration by occupation and sex for the month of June. It also asks for the distribution of all workers by race and sex over various wage groupings, gross establishment expenditure on fringe benefits, and number of hours in the normal work week. The occupations listed are very general: e.g. "Technicians, Works Managers, Workshop foreman and Semi-Professionals" is one category and "Semi-Skilled Workers" and "Skilled Workers" are others. The latter is defined as individuals who "have passed some Trade Test" and is thus not a true reflection of the number of de facto skilled workers currently employed. These categories are clearly too broad to be of much use in providing for specific training.

CBS also typically carries out a "Survey of High and Middle Level Manpower"—The Manpower Survey (MPS) —prior to the formulation of each Development Plan. This is carried out through a direct employer questionnaire over a sample population. The last of these was done in 1972 for the 1974-78 Plan. Here, too, the occupational groups are broad with the exception of 28 manual trades for which some detail is provided. However, the current Plan states that there will be a "comprehensive labour force survey" so that the government can "target its programmes more accurately on those in greatest need".[7] This survey has been temporarily put aside. Meanwhile the Bureau is considering conducting the MPS on a regular basis, independently of the Development Plan, which may fill the same need as the proposed comprehensive survey. In addition, it may be possible to carry out the next MPS in conjuction with a special mail survey— tentatively scheduled for   - that is being done by CBS as one phase of the SIT which was discussed in Section 1. A continuous MPS could be a useful tool when such 'special' questions as those concerning training activities can be added to the standard format as required.

Ministry of Labour (MOL):

Within the MOL there are three subdivisions that are of interest to us:

A) Kenyanization of Personnel Bureau (KPB):

The KPB was established under the Immigration Act of 1967. While the Bureau does not itself issue work permits for non-citizens, it is charged

7 Kenya $\sqrt{5}$7 ,p.97

with ensuring that citizens are being trained as bona fide replacements for
expatriate workers with permits. As the level of Kenyanization has risen
substantially over the years the remaining areas tend to be higher level
professional/and some technicians who might be considered 'above' the level
of industrial training. The building and construction industry is a major
exception where non-citizen artisans are still numerous.

      The questionnaire used by KPB asks for employment breakdown by
citizenship and by the same broad occupational categories as the CBS enu-
meration. In addition, however, it asks for a detailed description of
'Training and Experience Schemes for Citizens' in those firms where non-
citizens are employed,. This survey is sent out on a rotating basis to any
firm which has a work permit due for expiry. Thus it is possible for the
same firm to receive the form in consecutive months in regard to different
permits. A "Return on/Progress of Trainees" is required every six months for
"Trainee Understudies" to expatriate positions. Until last year, research
and data activities were given a low priority relative to the mere place-
ment function, but this situation is changing with the addition of new staff.
At present information is filed by industry and employer with no overall
coordination and classification by occupations or any comparison among firms.
Thus there are no common standards or criteria for judging the relevance
or quality of training. Neither is this information shared with nor advice
sought from other training organizations (such as the Directorate of
Industrial Training — DIT) although increased cooperation is now planned
with other parts of the MOL which we discuss next.

B) Employment Promotion Division (EPD):

      The EPD is involved in analysis and planning in a variety of
labour areas. One of these is Employment Exchanges. The Exchanges are
interesting to our present purpose because of their potential as a data
-gathering service. The current Development Plan provides for an increase
in the number of exchange offices. Several reforms are already in pro-
gress as a result of a special study in 1973; among these is higher prio-
rity for the collection of labour market information and special regard
for requirements of technical skills. If this in fact becomes a signi-
ficant activity of labour officers in the various regional exchanges it
could prove an invaluable source of detailed data on manpower requirements
at the level of individual employers and on a countrywide basis which has
heretofore been difficult to achieve.

      A more significant interest of the EPD is the MPS which it assi-
sts CBS in carrying out and evaluating. The MPS provides some projections
of the future demand and supply of broad occupational categories based on

extrapolations of past employment/output ratios and assumptions about
future sectoral output growth. EPD has used these figures to project
requirements in 28 more detailed occupations. (MOL / 7 /). These pro-
jections have well-recognized limitations. It was the EPD, responding
to the need for an ongoing analysis and a long term manpower plan, which
put forth the idea of a follow-up to the '72 MPS which would also fulfill
the function of a 'comprehensive labour force survey'. We quoted from the
MOL/EPD report / 7_/ in section 1. The follow-up idea evolved into the
current SIT in cooperation with the ILO, and of course the DIT. The SIT
is attempting to identify actual job titles and to obtain detailed
descriptions of job content, as well as turnover and vacancy rates in an
effort to enable the DIT to orient training activities more directly to
labour market requirements. (A proposed change in DIT training philosophy
is discussed below). As mentioned earlier, it is also a first time ever
attempt to begin to catalogue and examine the training programs carried
on privately by firms. Thus the SIT is a start toward a continuing labour
market analysis and training review. A regularly scheduled, continuous
MPS, briefly mentioned in our CBS discussion, is a logical mechanism for
implementing the long term plan, and for "collection and analysis of bro-
ader categories of data on demand and supply of <u>manpower with different</u>
<u>types of industrial skills</u>..." (my underlining). As a direct survey of
employers it would satisfy our previous conclusion about desirable data
collecting methods. Such a survey could hopefully allow for the study
of employer forecasting techniques as suggested earlier by responses in the
preliminary SIT results.

C) The Directorate of Industrial Training (DIT):

        The DIT was established in 1971 in conjuction with the National
Industrial Training Act. It plans to eventually assume administrative and
technical supervision of all industrial training in Kenya through the esta-
blishment of approved curricula and of uniform testing standards. Currently
its major responsibility focuses on the three National Industrial Vocational
Training Centres (NIVTC's) in Nairobi, Kisumu and Mombasa, and of course it
administers the Training Levy funds. The organizational hierarchy under
the Training Act consists of an Industrial Training Council, the ultimate
policy and decision body, under which are Industry Training Committees for
each levied industry (5 at this time). These in turn have Technical Sub-
committees to work out the details of training. Each body has tripartite
representation from government, unions and employers. Thus there is direct

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communication with the labour market through employer representatives.
There is no other formal mechanism for information gathering, however, and
consequently the non-levied industries are somewhat hindered in voicing
their interests. Another limitation arises in that the concern of the DIT
at this time is primarily with formal apprentice and technician training
rather than on the entire spectrum of industrial instruction. Thus the
SIT with its broad coverage is an important step for the DIT especially
since, with ILO technical support, the DIT is planning a major change to-
ward a 'modular' format of instruction based on clearly defined 'employa-
ble skills'. This would replace the old style curriculum of standardized,
comprehensive trade courses which have been oriented toward the external
standards of the London City and Guilds examinations. The new system will
establish performance standards of local relevance — therein lies the need
for explicit skill details of manpower requirements in industry, and for
appropriate means of obtaining this information.

     The present structure of the government bodies we have been
discussing can be roughly represented as in Diagram 1.

     To sum up, we find that existing data collection suffers from
a variety of limitations from the viewpoint of its usefulness for training
plans. Although most surveys are implemented at the level of individual
employers, the form in which data is gathered and the degree of detail are
unsatisfactorily broad and non-specific. There are long time lags before
results are available and cooperation and data sharing among government
branches is poorly developed. The lack of a central authority to oversee
and coordinate all data activities means that some areas of government aren't
even aware of the existence or format of data gathered by others.

111. Some Suggestions and Conclusions.

     At this point we can consider some possible recommendations based
on our summary of findings. The most obvious improvement would be the
establishment of a central clearing agency for all surveys. CBS would pro-
bably be best suited to assume this responsibility. Such centralization
would avoid unnecessary duplication of effort and could lead to the combi-
ning of some of the existing surveys into a common format. This would apply
to all types of data, not just in the manpower and labour market area.
Central organization and cataloging would be a great assist to academic as
well as applied research both in and out of government . In this paper we
have suggested that a regular MFS (perhaps every 2 years) could form the
basis for a single, cooperative survey among some of the agencies we have
mentioned. One lesson of the SIT is that employers currently feel bomba-
rded, if not harassed, by the number of survey forms which they continually

Diagram I

Organization Chart
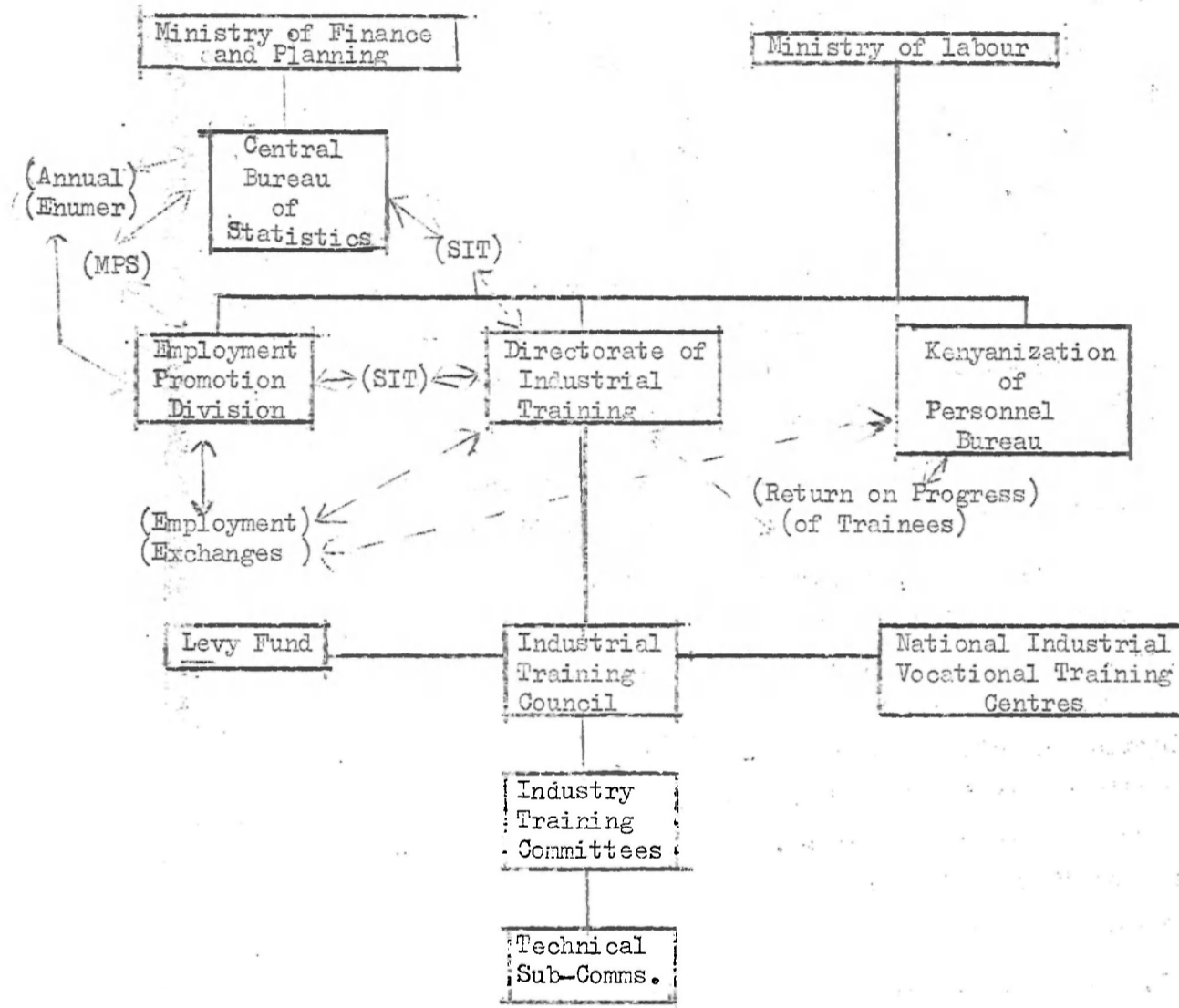
The solid arrows represent existing interaction while the broken arrows represent potentially useful interactions which could be developed.

The above diagram and preceding discussion are in no way intended to be a an exhaustive or comprehensive representation of the data activities of the Kenya Government. They merely represent those of which the author is aware and has had direct contact with through his work with the SIT.

receive from the government and from various special study
teams. Cooperation from firms is obviously fundamental to a
successful survey. Consequently an effort should be made to establish
a uniform survey format through consultation with employer representa-
tives in order to reconcile the government's desired data with what
firms can reasonably and accurately be expected to supply . The in-de-
pth interview phase of the SIT revealed private sector personnel prac-
tices that ranged from well-indexed, cross-filed systems to complete
chaos, (sometimes even in larger firms). It might therefore be useful
to conduct a course for personnel managers at KIA in an effort to coo-
rdinate and standardize industry practices in personnel records and
data, especially among larger employers. If firms knew what surveys
to expect, when to expect them, and what data would be required , and
if the government maintained some orderliness in the survey process,
frustrations would be reduced on all sides. The timing aspect can be
very important. During the January/February period most firms are
involved in preparing year-end reports, and multi-nationals often have
field visits from corporate officers, so that they are less willing and
able to deal with surveys unless the data is already in an accessible
format.

        Another area for improvement is in the supervision and coor-
dination of the training activities themselves in response to the labour
market information that is gathered and evaluated. The DIT is the desi-
gnated body for this task and as their role expands they should be able
to advise training institutions at all levels as to which occupations
need emphasis, what type of curriculum is best, and how a given insti-
tution can best 'mesh' its instruction vertically or horizontally
within the overall training structure. This must be done in cooperati-
on, for example, with the Ministry of Education. DIT guidance should also
lead to more informed contributions from foreign aid donors who wish to
establish training facilities since they can be advised of the occupa-
tional and regional priorities for new facilities.

        In conclusion, we have seen that for firms which do not or can-
not use rigorous forward planning techniques, a centralized survey of
employment composition in occupational detail, and of training activity,
provides the means for comprehensive planning by creating a continuous data
base upon which to measure changes and make projections, as well as to
guide training curricula. The survey would be equally important in regard
to large firms which already do plan and which, as we have seen, make

up the bulk of total employment in industry and of demand for training facilities. Comprehensive surveys, with the built in reliability controls suggested above, allow not only for more accurate, centralized aggregate forecasts which account for macro effects, but they also create the potential for on-going analysis of the impact of those macro factors on micro plans. They are also a potential means of far better follow up of institutional trainees during their labour market experience.

Discussions with firms indicate a very real concern about actual shortages of skills. It is a problem not only of insufficient scale of existing training, but of the absence of some kinds altogether (e.g. foreman and supervisor training). While not threatening the existence of these enterprises, the shortages surely pose a contraint on potential growth in output and employment. Growth depends on the availability of factors of production, among which trained labour ranks high in importance. There must be a regular, systematic means of communicating these needs to training authorities. We said earlier that the level of aggregation and method of collection of data were functions of the purpose for which the data was intended. We have explained not just the importance of data for manpower planning and training, but of the specific kind of data and thus, by implication, the way in which it should be collected. Hopefully this discussion has helped to clarify the picture on data needs for taining and the ways in which the relevant data collection process might be improved in Kenya.

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