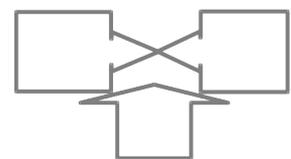


December 2018

**L M I S**  
**a b o u r** **a r k e t** **n f o r m a t i o n** **s y s t e m**

*Labour Market Capability Framework*



- Recognise causes
- Investigate correlations
- Strengthen positive impulses
- Counteract negative developments

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## Labour Market Information System

Data collected over a long period of time may indicate developments. Experts assess whether the trends are permanent and on what causes they are based. And they show whether these can be influenced and, if so, by what means.

With each administration data are collected. It is often difficult to have these data anonymously available in a synoptic overview.

A labour market information system (LMIS) combines and prepares data from different sources to offer them for export. The data thus becomes information, after interpretation by experts information becomes knowledge, usable for political and administrative decision-makers in the fields of education, the labour market and business.

An LMIS shall be run nationally to ensure the data stays with the country.

Anonymisation preserves the privacy of citizens. Restricted access regulates which institution/person may access which data output.

## Data Sources

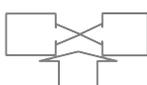
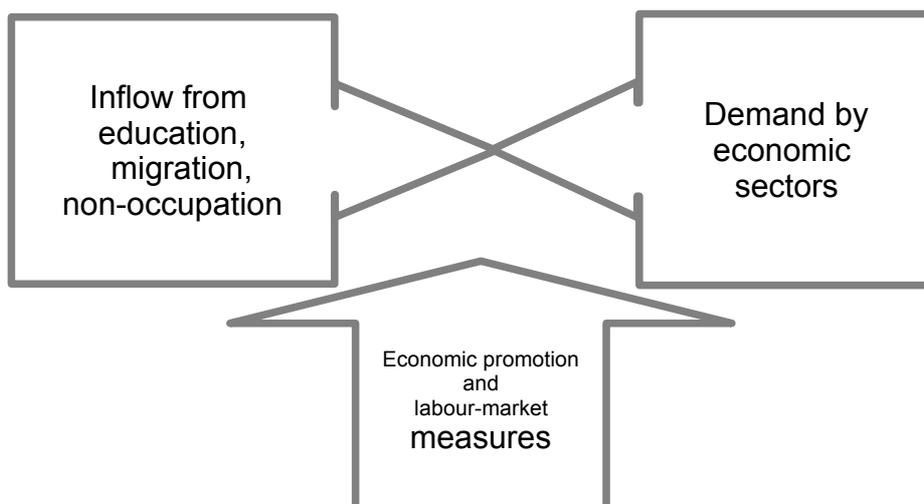
Often, simple data conceal true treasures as soon as they are brought into context in a processed form.

Which data is collected and which data can flow into the LMIS differs from country to country. Some institutions may not be convinced to export data. Other institutions may be happy to get a data collection system from the LMIS team. The more data the system feeds, and the more accurate they are (e.g. number of students per town and gender, instead of per province), the more meaningful they are.

There is no such thing as "the LMIS", which is universally applicable in all countries. A blueprint does not exist. Information systems must be based on data that is available, accessible and reliable. That is why LMIS are custom-made.

The focus is on supply and demand as well as interventions.

## Labour Market Capability Framework



Possibly existing data sources are for example

- population projection, population census, micro-census
- pension insurance / social insurance / health insurance
- trade office
- tax authority
- job placement, job advertisements (data from the informal sector may also be available here)
- school authorities, university administration
- chambers, professional associations
- register of residents, migration office
- chronology of labour market, economic development and other measures
- studies, surveys and research

The following categories play a role here.

### **Inspections, investigations, studies, surveys**

On the one hand, they are used to investigate recognised or suspected phenomena in more detail. On the other hand, they cover areas that are not covered by administrative data, such as informal employment, work safety measures or child labour.

### **Census and micro-census**

The socio-demographic data collected and forecasted serve as basic data and to determine population and samples for surveys.

### **Administrative Data**

They cover formal employment, education and training and can also provide insight into social security or migration. They are often the most reliable data source available.

### **Non-statistical Data**

They reflect the environment in which the labour market is located. These include national and international regulations, measures, indicators, commitments and objectives. They also include training curricula or geographical data on training institutions and their services.

## **Properties and Characteristics**

Information systems can only be as good as the data they process. Therefore, the data must be obtained in a proven manner, a limitation here is the available capacity. An annual population census would of course be desirable in terms of accuracy, but this is not realistic.

**Flexibility, relevance, effectiveness and efficiency constitute the sustainable utility value of an LMIS.**

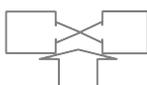
### **Flexibility**

An information system is flexible if it can react promptly to changes. Information systems should behave like living organisms and adapt to a changing environment.

Changes caused by development or policy change, can be the result of new or adapted indicators, new versions of international categorisations or the reorganisation of stakeholders and data-providing institutions.

### **Relevance**

An information system is relevant if it is a tool for achieving the objectives of its organisation. Or in other words: when it provides information to answer the questions that are asked.



## **Effectiveness**

An information system is effective if it produces the planned information and also maximizes the usability of the available data.

## **Efficiency**

An information system is efficient if it works without wasting resources.

That's why it's necessary to

- be in contact with the international standardisation institutions;
- cooperate closely with stakeholders and data-providing institutions;
- have up-to-date information on indicators and observation needs at all times;
- work closely with the groups that have queries to the system;
- also store metadata (such as the storage date and the origin of a date);
- plan the output in detail with stakeholder representatives;
- check data on the same topic from different sources against one another;
- brainstorm from time to time to see if there is more valuable information hidden in the data;
- be aware that unplanned output can also mean giving information to unauthorised persons;
- provide adequate computing capacity;
- collect only the data that is needed;
- minimise costs by not purchasing unnecessary software licenses and hardware that is susceptible to repair.

## **Focal Points**

Administrative data can be used to describe the formal sector of the labour market, i.e. employment relationships that are formalised in one way or another (tax, compulsory insurance, registration).

If this formalisation already existed before the establishment of an LMIS, there are also data on it. If these data are available in electronic form, they can be quickly integrated into the LMIS and thus enable a retrospective view right from the start and thus also a look at a development to date. Long- and short-term continuities and fluctuations become visible.

The Labour Market Capacity Framework portrays the following data.

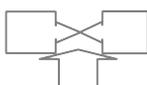
### ***Demand: Status quo and development of economic sectors***

Authorities and associations collect data on employees and companies from various points of view. First of all, totals are derived from these sources. The number of enterprises and employees. If one had only these figures, without further attributes, one could already set up a time series and read off a development in it. In the case of data from compulsory insurance or registration, they represent the entire formal sector. Any additional data that is collected makes the information more meaningful.

Thus not only the development of individual economic sectors can be mapped, but also, for example, the period of non-employment of employees in the formal sector between two jobs. Or groups of earnings in certain sectors, for gender, for a certain level of education or occupation. It can also be observed whether enterprises in a particular sector are growing or shrinking in size and whether there are regional differences.

Chambers and professional associations can also provide data on planned new hirings, further training and the like. For example, it might be possible to conclude that there is a strong demand for competences from enquiries for certain continuing training courses.

Demand is driven by job vacancies and - looking ahead - also by the growing economic sectors.



## **Supply: Graduates, non-employment, population development**

Formal education, legal migration, leaving the formal labour sector or job search via a formalised job market, they all generate data.

In addition, updating a population census can provide information on the development of the population in age groups relevant to the labour market (end of basic education, end of further education, end of education after primary or secondary school, end of studies, retirement).

Many education systems embrace descriptions of fields of competence or curricula for occupations, initial and continuing training and study courses.

## **Matching, trends and measures**

The added value of an LMIS lies in its synopsis. And in precisely tailored queries for labour market-relevant data from a wide variety of sources.

Many questions only arise when different points of view are placed side by side, such as

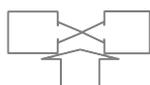
- What are the educational and career paths like?
- Are labour market and economic development measures effective?
- Are companies with certain characteristics (a certain size, a certain sector, in a certain province) only active for a short time?
- Are there cycles that can be responded to?
- Is internal migration sufficient to meet the demand?
- In which economic sectors do foreign workers work?
- How many graduates of a particular level and field can we expect in year x?
- How long does non-employment last?
- What are the characteristics of economically stable companies?
- How many children of a cohort enter school, when do they leave school?
- In which occupational groups do boys aspire, in which girls?
- Are there more drop-outs where the teaching staff is less well trained?
- How many people are dependent on a formally working person?
- Where are the skills-gaps?

Where a connection is suspected, it can be investigated more precisely. Many constellations can be examined more closely with surveys or studies, the results of which are then incorporated into the LMIS. Where a connection is suspected, it can be investigated more precisely. Many constellations can be examined more closely with surveys or studies, the results of which are then incorporated into the LMIS.

## **Remarks on a Job Market**

From an ostensibly practical point of view, the job market (employment agency, job exchange) may be the core of an LMIS. In fact, information about movements in the labour market can only be obtained or disseminated via this module if there is a reason for jobseekers and employers to use the job market. However, the hurdles can be high, because jobseekers only register with a job placement service if

- they know about it. Particularly in developing countries, the dissemination of this instrument can take a long time, be tedious or limited to urban areas;
- there is added value (e.g. proven placement skills, unemployment benefit, subsidies for application costs, induction subsidy);
- access is practicable. Often there is no nationwide access to the Internet, sometimes even visiting the district town in which the employment office is located is a hurdle;
- the social / cultural context allows it, i.e. utilisation is not stigmatising.



Even in countries where job placement is highly formalised, for example because unemployment benefits are paid, this job market only reflects part of the fluctuation.

A job placement service is not the only data source of the formal and informal labour market, but the data it collects can complement the LMIS.

## International Labour Organization and KILM

185 countries are ILO members. States ratify ILO Conventions and then report regularly in prescribed form. The data required for this logically belong to a labour market information system and can be collected and processed here. The "Key Indicators of the Labour Market" (KILM<sup>1</sup>) defined by the ILO can be filled from a comprehensive LMIS. Many of the current 18 key figures can be determined with only a few attributes. The standards and indicators that ILO sets can provide orientation for an LMIS in any case, even if KILM does not play a role in the country's policies or if data are not to be reported regarding any convention.

Last but not least, the ILO provides important international categorisations that produce unambiguity in data and thus guarantee comparability.

## UN Sustainable Development Goals

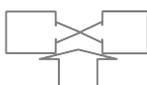
2030 Agenda's goal 8 „Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all“<sup>2</sup> embraces indicators as well as fields of action and starting points, and will serve as a minimum requirement for every LMIS with regard to the data to be processed.

Goal 4 „Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all“ and goal 17 „Strengthen the means of implementation and revitalize the global partnership for sustainable development“ as well as their indicators form further basic foundations.

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1 <http://www.ilo.org/global/statistics-and-databases/research-and-databases/kilm/lang--en/index.htm>

2 <https://sustainabledevelopment.un.org/sdgs/>



## Setup and Operation of an LMIS

The introduction of an LMIS can be a driving force for authorities and institutions for

- additional data acquisition;
- the use of national or international categorizations and standards;
- the introduction of testing and cleansing measures within the databases and in the collection of data.

Since data is a sensitive commodity, the LMIS must be legally and politically anchored, i.e. institutionalised, and must commit itself to anonymisation and data security vis-à-vis the institutions providing the data.

Ideally, an information system should have a modular structure. The visible area of the LMIS is divided into

- Factual information (e.g. curricula, training centres, selected statistics);
- Service information (e.g. job market, inquiries);
- Decision information (in-depth statistics, e.g. latency periods between formal employment relationships).

The invisible system forms the actual core: the underlying databases, the import and check routines, the evaluation scripts and the user administration.

The structure of the LMIS is based on the motto "begin with the possible, end with the desirable", so a result can be shown relatively quickly, which gives value to the LMIS in the fast-paced political activities of many countries.

Whenever possible, the LMIS team participates in the creation of export routines for data-providing institutions, which also accelerates the development of the system, because sometimes the database applications used do not originate from the institutions, but are third-party products.

Institutions that would like to participate but do not have data collection software can be supported by creating such an application. The LMIS team can also help with data consolidation within existing systems.

The LMIS team creates data collection and analysis software for surveys requested by stakeholders. Special queries on the data and reports on relevant topics are of course also part of the LMIS environment, if stakeholders wish so.

In addition to the standard evaluations, the LMIS offers data export from the system in the form of diagrams and spreadsheet files.

## Work Philosophy

Education and information systems is our passion.

That's why we strive to build up as much skill as possible in the partner country. This succeeds well with further training accompanying the work process, but also with trainee programmes, which deal with the respective software development process.

When implementing our projects, we use "Free and Open Source Software" (FOSS). On the one hand, because it is free of charge and therefore financially relieves the countries at least in this respect. On the other hand, because open source products (such as operating systems, database management systems, development environments) are usually very well documented, and access to information and learning material is low-threshold and also free of charge.

