LABOUR MARKET INFORMATION SYSTEMS

COLLECTING INFORMATION AND DATA ON LABOUR MARKET TRENDS

Today, important economic and social trends affect the situations in which labour market decisions are made. The main drivers of change in skills supply and demand, such as demography, technology, global economic trends, migration, are altering the structure of skill requirements considerably and are generating skills mismatches. Other factors for skills mismatches include poor human resource practices in companies or insufficient wage adjustment mechanisms, limits in workforce mobility, or a lack of information on job opportunities. Although perfect matching between skills demand land supply is not feasible it is important for policy-makers to be aware of the need to reduce the risk of creating large skills gaps that undermine the employability of individuals and impede the productivity of enterprises and the growth of economies.

Therefore, in rapidly changing labour markets and economies, the need to assess existing skills shortages and gather forward-looking information on how the labour market and the demand for skills might change has become increasingly important. While it is now generally agreed that in a market economy it is not possible to make precise predictions that can be used for detailed "manpower planning" the need to make strategic plans and choices which can influence and shape the future path require a clear understanding of both the current and future demand for skills based on accurate and timely labour market information.

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WHAT IS A LABOUR MARKET INFORMATION SYSTEM?

The ILO defines labour market information as any information concerning the size and composition of the labour market or any part of the labour market, the way it or any part of it functions, its problems, the opportunities which may be available to it, and the employment-related intentions or aspirations of those who are part of it. In brief, labour market information is information on current and future labour market trends and skills needs as well as on the availability of relevant skills development opportunities. Labour market information provides clear signals that guide various players towards the most appropriate choices. It helps identify skills that are needed and the best ways to develop them. It is indispensable in matching workers with jobs (and vice versa), and highlighting gaps between the skills that are available and those that are needed.

Many transition and developing countries have limited labour market information and more effort and investment is needed to build robust information systems. At the same time, even limited evidence that is available in countries can be better and more efficiently used with proper methodological tools and analyses.

Apart from creating information on skill needs, it is important that institutional arrangements are in place to disseminate and translate information into policy action, which should be aligned to broader economic policies, including trade, investment and technology policies. Information creation, mediation (dissemination) and usage are basic functions of an effective approach to anticipation and matching.

The institutional arrangements and procedures that coordinate collection, processing, storage, retrieval, and dissemination of labour market information are known as a Labour Market Information System (LMIS). The objective of an LMIS is to generate, analyse and disseminate information on current and future skills needs. In this regard, the term 'information system' not only refers to information technology systems, but to a more comprehensive set of institutional arrangements, technology platforms, datasets and information flows, and the way these are combined to provide information to those requiring it.

An LMIS covers of three main areas:

- Collection and compilation of data and information;

- Analytical capacity and tools;

- Institutional arrangements and networks.

As the structure and problems of labour markets vary from country to country, there is no general blueprint for a single most effective LMIS architecture. There are many ways to develop a set of institutional arrangements that allows for effective links between information and analysis on the one hand, and policy action on the other. The design and effectiveness of such arrangements, as well as the type or scope of labour market information that can be generated and used, is determined by a number of factors, including the role of the government in the economy, the type of policies that are envisaged, the state of the education and training system and the level of economic development. Accordingly, some countries have developed highly structured and centralised approaches while others use more decentralised systems or public-private partnerships.

DEVELOPING A LABOUR MARKET INFORMATION SYSTEM

The development of an LMIS can be described in five steps:

- **Step one**: formulating the aims of the analysis. These may include employment, education, economy or industry/related aspects. They should determine at which level the analysis has to be performed (national, regional, sectoral), the time frame (short, medium, long term), required data and regularity of updates.

- **Step two**: data audit. There are various data sources. Their availability, regularity and reliability and the level of development varies in different countries. Therefore, a data audit should be conducted to decide which data sources are the most useful for monitoring and anticipating skills supply and demand. The data audit may also reveal significant data and information gaps, which would suggest the need to improve existing tools or develop new ones for data collection.

- **Step three**: capacity building. The use of an LMI requires the infrastructure for collection, analysis and dissemination of data as well as trained and experienced analysts who are able to work with the data. Such capacity building should include improving the statistical infrastructure, training analysts and other staff in the relevant institutions, and building the trust of respondents and data users through data protection regulations.

- **Step four**: analysis. This includes choosing the relevant methods, formulation of the research questions, data analysis, and interpretation and validation of the results.

- **Step five**: disseminating and using labour market information. The main purpose of data collection and analysis is to provide labour market actors with information they can use for decisions to solve mismatch problems.

The process of developing an LMIS should be carefully planned and designed as a sustainable activity. The whole process needs to be supported by a coordinated institutional framework involving all important stakeholders for it to be successful.

MAIN LIMITATIONS

There are several factors that could make an LMIS less relevant:

- limited capacity and instruments to effectively and regularly collect, process, analyse and disseminate relevant and reliable labour market information, including poor statistical infrastructure (different methodologies; broad or diverse taxonomies; insufficient sample sizes; broken time series); lack of human resources; fragmented processes and lack of policy intent;

- inability to combine information from various sources;

- inadequate resources for statistical programmes and other activities aimed at generating labour market information;

- inability of producers to coordinate efforts or lack of willingness to share information;

- inability of users to specify needs and to translate these needs to producers of labour market information;

- weak structural mechanisms to link policies with the evolution of the labour market.

In developing the LMIS these and many other barriers have to be overcome. To do so many developing and transition countries often start by establishing simple functions, but aim towards a long-term goal of building a comprehensive LMIS. The fact that many labour market information related activities are often developed within the framework of donor-funded projects with the assistance of international agencies and using foreign experts hinders the sustainability of these initiatives. This requires capacity building for local stakeholders to continue activities on an ongoing-basis.

MAIN DATA SOURCES

For an LMIS to produce good quality information relevant and reliable data is required. Labour market information must consist of multiple flows of data on skills supply and demand from different sources, both quantitative and qualitative. The main quantitative data sources are:

- Population census;

- Labour force (and other) household surveys;

- Public employment service (PES) statistics on vacancies and job seekers;

- Enterprise statistics: structure of employment in enterprises, wage statistics;

- Education statistics;

- Administrative data on tax, social insurance;

- Skill specific data sources;

- Sector studies;

- Employers surveys;

- Vacancy surveys;

- Tracer studies.

Quantitative information should always be accompanied by qualitative data, which can help to fill in the gaps where quantitative information is not available. They can also explain the context and add value to the numbers.

The main qualitative data sources are:

- Literature review including review of general press and internet sources;

- Consultation with companies, stakeholders and experts (Delphi surveys, workshops, scenario development, etc.);

- Foresight – qualitative analysis of long-term skills trends.

Additional data sources

- Projections of labour demand and supply (quantitative forecasting models) that include time series based methods, structural based methods (simulation models) and a combination of differentmethods. These methods usually draw on the data sources mentioned above to produce information about future developments in the labour market.

- International databases that are built in most cases on national surveys and statistics.

- Big data analysis and real time labour market intelligence sources. Nowadays, electronic-based technology of data generation, storing and dissemination prove a valuable source of information on labour market and skills changes. Though less standardised in presentation, availability, comprehensiveness (for example, information on vacancies or jobseekers available on social media platforms), they are taken more and more into consideration by many stakeholders and companies.

It is important to use all available data sources to obtain a deeper and broader understanding of developments and trends in the labour market. This requires coordination of information flows and data-sharing between different governmental institutions and other entities. An important function for an LMIS is the integration of many different data sources into one comprehensive and usable data base or set of linked data basis.

TABLE 1: STRENGTHS AND WEAKNESSES OF DIFFERENT DATA SOURCES

Data source	Strengths	Weaknesses
Labour Force Survey	▪ provide structural information on individuals (age, gender, education, occupation) ▪ have the potential to cover informal employment	▪ costly ▪ usually do not cover population living outside households and in remote areas ▪ need large sample sizes to get robust data and enable detailed breakdowns ▪ political implications (particularly in countries with high ethnic or racial tensions)
Public Employment Service statistics	▪ use of existing data, no need for additional data collection ▪ no sampling issues ▪ provide information on occupations, qualifications and skills in demand	▪ only flows, no information on stocks ▪ usually cover only a specific segment of the labour market
Enterprise statistics	▪ direct information from companies ▪ complementary source to household statistics ▪ enable linking employment trends to business trends	▪ require developed infrastructure at statistical institute as well as company level ▪ often do not cover SMEs or some sectors ▪ do not cover informal economy
Employers survey	▪ opportunity to get direct information at company level ▪ relatively easy execution	▪ more informative for current situation than future ▪ no information on population out of employment
Tracer study	▪ relatively low cost ▪ relatively easy execution	▪ demand for detailed information about sample groups ▪ findings may be biased
Qualitative data sources	▪ relatively cheap and easy to implement ▪ can be focused specifically on skills ▪ can bring more understanding of the underlying causes and processes	▪ subjective ▪ risk of overemphasising marginal issues ▪ partial, do not provide comprehensive information
Projections	▪ provide future-oriented information ▪ provide structural information on labour supply and demand.	▪ very data hungry, need robust time series ▪ may give a false impression of bringing 'precise information as to what the future will be'

TYPICAL INSTITUTIONS / ACTORS INVOLVED

The processes of gathering, analysing and disseminating data requires an appropriate institutional setting with clearly defined roles and responsibilities. However, defined responsibilities are not enough, the respective institutions also need adequate resources to implement them.

Institutional arrangements may vary based on the country context, however, the active involvement and collaboration of various stakeholders including social partners are a precondition for establishing an efficient and well-functioning LMIS. This creates a culture of joint responsibility, which promotes long-term commitment to problem solving and ensures greater harmonisation of skills development policies.

The most important actors in an LMIS are:

- ministries of labour/manpower, economy/industry/trade, education, finance, etc.;

- statistical offices and other providers of data (e.g. statistical or analytical units at ministries);

- public employment services;

- social partners (employers' associations and unions);

- education and training institutions (from different levels and forms of education: general/vocational education, higher education, public/private, initial/adult education);

LABOUR MARKET INFORMATION SYSTEM USERS

While the collection of labour market data is important, it is not enough to simply compile it. The information has to be analysed to suit the needs of different users. For instance, policy planners will require complex levels of detail, while jobseekers may only require more general information about opportunities in the sector or location in which they wish to work. To make an LMIS that responds effectively to different users' needs, it is important to develop a system that understands their needs. It is also crucial that information is disseminated in a timely fashion. Across many countries, the central weakness of labour market information dissemination is that it fails to be systematic or coordinated.

Labour market information users include:

- policy makers and civil servants at various levels;

- employment services;

- counselling and guidance services;

- education and training providers;

- employers;

- workers;

- students and job seekers;

- researchers.

There are various methods and tools to disseminate labour market information. Publications and internet websites are the most common information tools in communication with the general public. They provide information on the labour market situation in a user-friendly manner and target people with no special knowledge of labour market analysis. General information through online and other tools should be accompanied by guidance services provided by public employment services and career counsellors at schools specifically targeting jobseekers and young people. Guidance services can reach out to the most in need of new and updated skills helping them to make learning and employment choices. Information on labour demand and supply should also reach business associations and employers to support their plans for human resources development, adjustment of commercial strategies and investment plans.

LABOUR MARKET INFORMATION IN POLICY MAKING

The main objective of an LMIS is to enable better decision-making and policy planning in the areas of employment, education and migration policies. Labour market infomration is particularly important in the development of policies addressing skills mismatches and shaping of education and training systems towards the needs of labour market. In the policy cycle, labour market information is particularly important in identifying and defining problems, and formulating policy options to develop and implement the most appropriate measures. It is also necessary for effective policy monitoring and evaluation.

INFORMING EMPLOYMENT POLICY

Labour market information can feed into the development of employment and activation policies. It is frequently used for updating occupational standards; development of training/retraining and apprenticeship programmes for the unemployed (in fields/skills that are in high demand but where there is insufficient labour supply through labour market training) and supporting evidence-based career guidance.

INFORMING EDUCATION POLICY

Information on skills demand, supply and mismatch are used for adapting or reforming education and training systems to better address skills mismatches and respond to the needs of the labour market. This includes developing national qualifications frameworks; adjusting curricula, deciding on course funding/allocation and developing systems for the recognition and validation of informal training.

INFORMING MIGRATION AND OTHER POLICIES

Labour market information is also an important source for migration policies and other sector-specific policy goals, such as the transition to a resource-efficient and low carbon or digital economy, particularly in relation to occupations that are identified as in short supply.

EXAMPLES

The European Union: the EU Skills Panorama is an online tool providing central access to data, information and intelligence on skills needs in occupations and sectors. It provides a European perspective on trends for skills supply and demand and possible skills mismatches, while also giving information about national data and sources. The EU Skills Panorama is managed by Cedefop.

http://skillspanorama.cedefop.europa.eu/en

Canada: the Canadian Occupational Projection System (COPS) has been producing analytical outputs and labour market information for nearly 30 years. The outputs of COPS are widely available to policy and labour market analysts. More importantly, COPS disseminates labour market information to the public through publications or online.

http://occupations.esdc.gc.ca/sppc-cops/w.2lc.4m.2@-eng.jsp

REFERENCE READING

ETF-Cedefop-ILO (2016): Using labour market information, Volume 1, Guide to Anticipation and Matching Skills and Jobs, Luxembourg (forthcoming)