Using Gender Statistics
A toolkit for training data users

Prepared for UNECE by Jessica Gardner

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About this toolkit

This toolkit aims to support statistical systems to increase the understanding and use of gender statistics by government officials and other development practitioners. It has been developed for countries in Eastern Europe, Caucasus and Central Asia[1] and builds on the work to strengthen gender statistics across this region. This toolkit will support gender focal points and others to run training sessions in their respective countries to increase statistical literacy, which should lead to better evidence-based policymaking.

The toolkit includes:

- short user-friendly descriptions of concepts with practical examples, and
- practical exercises for use in the training sessions.

In addition, PowerPoint presentations which illustrate examples from countries of Eastern Europe, Caucasus and Central Asia are available online to complete this toolkit.[2]

There are multitudes of indicators for monitoring gender equality. The indicators selected for this toolkit relate to the economy, education, health, and power and decision-making and draw on headline indicators selected under each of these topics by the UNECE expert group.[3] This set of indicators draws on other relevant frameworks, such as:

- United Nations global minimum set of gender indicators
- EU indicator framework for the Beijing Platform for Action
- OECD gender equality key data
- Millennium Development Goal (MDG) indicators
- ILO Key Indicators for the Labour Market

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[1] Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Republic of Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan.

[2] See: UNECE (2016b), Using gender statistics: A toolkit for training data users (http://www.unece.org/stats/gender/toolkit).

[3] UNECE (2015). *Indicators of Gender Equality* (http://www.unece.org/stats/publications/gender_equality).

Getting started

Developing and delivering training on gender statistics takes careful planning and preparation. This section outlines the main steps involved and provides recommendations on how to go about running a successful workshop. Draft agendas are also provided that can be used as a basis for developing training to meet the specific needs of your target audience.

Step 1: **Form the training team**	Form a team with different areas of expertise to plan, develop and deliver the training together, e.g. a gender specialist, demographer, statisticians from areas relevant to the topics being presented, statistical dissemination and communication experts.
Step 2: **Identify target audience**	The first and most important step in developing a workshop is to identify who will participate. Typical audiences for training on gender statistics may include:

- Statisticians and staff of national statistical offices
- Data producers from across the national statistical system (e.g. ministry of health, education, finance)
- Government officials
- Politicians and/or their advisors
- Users of statistics from civil society
- Academics and researchers
- Journalists
- School and university students

Target audiences may have similar or quite different needs depending on their current knowledge of statistics and what type of training they want. Where needs overlap, it can work well to combine different groups in one workshop as they bring different perspectives and can benefit from hearing other points of view. For example, many gender statistics workshops have been successful because they have brought data producers and users together.

Step 3: **Identify training needs and expectations**

Finding out what participants need from gender statistics training can be done in several ways. Where it is possible and makes sense to do so, it is often best to ask them directly. Otherwise, using feedback or experiences from previous or related training, or speculating based on other interactions with that target audience can also work well.

Ask participants about their needs
Asking participants directly, either by speaking with a few people considered to be good representatives of the target group, or by sending participants a short questionnaire on training needs a few weeks before the workshop, is the ideal approach. A general questionnaire that gathers information about topic preferences is

provided at Annex 1. However, when asking about needs it may also be important to ask about existing knowledge of gender statistics and how this is being applied in the work setting. An internet search on 'training needs analysis' should lead to examples of questionnaires that could be used as a basis.

Use feedback or lessons learned from other training

Be sure to read through any reports on previous training on related topics or with the target audience(s) to identify lessons learned to have in mind while developing your training. Where possible, approach others who have developed and delivered similar training to discuss their experiences and ideas for ensuring the workshop is successful.

Use information about the target audience

Use previous consultations, experiences or other interactions with the target audience to identify likely training needs. Frameworks, such as the Draft Capability Framework,[4] developed by the Australian Bureau of Statistics, could be a useful guide to identify the types of skills each audience group is likely to need.

Step 4: **Establish training objectives**

Once the target audience and their needs are agreed, the next step is to identify clear objectives for the gender statistics training. Objectives should be expressed clearly so that it is possible to gauge if they have been met by the end of the workshop. Examples of possible objectives include:

- To increase awareness and understanding of gender statistics
- To encourage use of gender statistics in policies and programs
- Increase capacity to produce and use gender statistics
- Share national experiences and good practices in producing gender statistics
- Identify priority areas for future work

Step 5: **Prepare the workshop agenda**

The agenda should list the main topics that will be covered, the types of activities to be done and the amount of time to be allocated to each item. As there should always be a degree of flexibility in the agenda in order to react to emerging needs or adapt if things need to change, it can be wise to maintain two versions of the agenda: one with broad timing and topics that is provided to the participants; and another with more detail for the facilitator(s) to use as a running sheet.

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[4] Australian Bureau of Statistics (2015). Draft Statistical Capability Framework (www.abs.gov.au/websitedbs/a3121120.nsf/home/ABS+Statistical+Capability+Framework).

Some tips to consider when developing the agenda:
- Depending on how many days the training will go for and how experienced the participants are already, it is advisable to select no more than three topics to include in the agenda (i.e. three modules). This toolkit includes key topics that are often in demand, but it is not exhaustive. Other important topics include gender-based violence, migration, and balancing work and family life, for example.
- Each topic or module in this toolkit takes between 2-3 hours to present, depending on how many activities and how much time for discussion is allowed.
- Limit lecture-style presentations to 20 minutes to keep the workshop interactive and participative.
- Maintain energy and interest by using a mix of different training activities in the agenda, such as small group discussions, individual activities, videos, work in pairs, etc.
- Invite speakers from relevant agencies to contribute or lead a session to provide context to the training and encourage sharing of local experience.
- Always allow slightly more time (e.g. 10%) than you anticipate the agenda item will take, especially for group activities.
- Think through exactly how each item will run (e.g. how much time for introducing each topic; if and how groups will be asked to report back on group activities) to get an accurate estimate of the time required.
- Have 1-2 spare activities that you can quickly go to if there is spare time or if a last minute change is necessary.
- Seek feedback on the draft agenda from stakeholders, such as anyone assisting in the organization and facilitation of the workshop, sponsors, and potential participants.
- Once the training materials have been prepared (next step), review the agenda to check if the timing needs adjusting.

An example of an agenda similar to the one used during the testing of this toolkit is provided at Annex 2.

Step 6: **Develop training materials**

Based on the toolkit modules, related resources and local examples, prepare the presentations, handouts and group activities for use in the training. Example presentations and activity handouts for a number of the toolkit modules are available for download from the UNECE website.

Tips for preparing the materials:
- Use a common theme for PowerPoint presentations and a similar look and feel for any handouts, so that the materials look professional and coherent.
- Include identifying information such as the title, location and date of the workshop so that materials can later be easily associated with when and where they were used.
- Keep words to a minimum on presentation slides. Use more images and diagrams instead and prepare handouts with explanatory notes.

Step 7: **Make the arrangements**

Ensure all the logistical arrangements are made and in plenty of time. Some things, such as preparing the invitation, may need to be done concurrently with Step 5 above, or earlier. Things that need to be arranged include:
- Liaising with partners and other stakeholders
- Invitations to participants
- Booking a venue
- Deciding how to set up the room
- Arranging any catering (e.g. morning tea, lunch)
- Organizing stationery and equipment, such as projector, laptops, flip charts, etc.
- Photocopying materials and handouts
- Checking the venue and testing the equipment before the workshop starts
- Prepare an sign-in sheet to confirm who attended
- Prepare an evaluation form to gather feedback at the end of the workshop

Step 8: **Conduct the workshop**

Now that all the arrangements are in place it is time to conduct the workshop. Some tips to prepare yourself and deliver a successful workshop:
- Practice delivering any sessions that are new or unfamiliar in front of the mirror or to a colleague or family member.
- Be early and give yourself plenty of time to get to the venue so you are ready before the participants arrive.
- Be flexible during the workshop and respond to the verbal and non-verbal cues from the participants about how the training is going.
- Speed up or slow down as necessary.
- Ask participants for feedback during the breaks to make sure things are going well or to find out what needs to change.
- Get participants to fill out the sign-in sheet each day to be sure who attended.

Step 9: **Gather feedback and prepare an evaluation report**

At the end of the workshop, give participants ample time to complete an evaluation form and encourage them to give honest feedback to help improve future workshops.

Soon after the workshop is over, hold a debriefing meeting with the other organizers and facilitators to discuss what everyone thought went well and where things could be improved. Document the main points of this discussion to include as part of a report on the workshop.

Prepare a brief written report of the workshop that includes:
- Target audience and objectives
- Topics covered and the final agenda followed
- Summary of lessons learned (e.g. based on organizers' debriefing discussion)
- Summary of participants' evaluation
- Recommendations for future training and related work.

Distribute the evaluation report to stakeholders, participants and other interested parties, as appropriate. Make sure the report is accessible to others preparing similar training in the future.

Further resources to develop training and facilitation skills

Developing Gender Statistics: A practical tool (www.unece.org/?id=17450) published by UNECE in 2010 includes a case study that provides detailed information on how to successfully organize and conduct training in gender statistics. It presents tested facilitation techniques and options for icebreakers and other activities that encourage a high level of participation.

The *Oxfam Gender Training Manual* (1994) (policy-practice.oxfam.org.uk/publications/the-oxfam-gender-training-manual-141359) is a comprehensive resource for training on gender and development. Although not specifically about gender statistics, it provides tested activities and handouts that explore gender issues, gender roles and needs, and how gender impacts development.

Module 1: Basic skills in gender statistics

Delving into the world of statistics can be daunting, especially for those not used to working with data or numbers. The increasing availability of statistical information and the growing emphasis on applying them to public policies and programs, means that a basic knowledge of how to access, interpret and use statistical indicators is an essential skill for everyone working on gender and development issues.

What is covered in this module

Materials
1.1   Firstly, what is gender?
1.2   General skills for understanding and using statistics
1.3   Key statistical concepts
1.4   Understanding gender statistics

Practical exercise
1.5   Exercise: Understanding key terms
1.6   Exercise: Practice calculating rates

1.1   Firstly, what is gender?

Before discussing gender statistics, it is essential to ensure participants have a common understanding of what is meant by the term 'gender'. Unless participants are all gender experts, 'What is gender?' is usually the first topic that should follow the opening and introductory session of any gender statistics training.

Familiarizing participants with the concept of gender can be done in a number of ways:

1. Discuss the difference between the terms 'sex' and 'gender'

Sex	Gender
- Male / female - Biology – how we are born - Relatively fixed	- Social norms - Expected roles of women, men, girls and boys - What it means to be 'masculine' and 'feminine' - Can change over time

2. Ask participants what they think the term 'gender' means and how gender impacts on the lives of women and men, girls and boys
    o   **Gender**
        Gender refers to socially-constructed differences in attributes and opportunities associated with being female or male and to the social interactions and relations between women and men. Gender determines what is expected, allowed and valued in a woman or a man in a given context.

In most societies, there are differences and inequalities between women and men in roles and responsibilities assigned, activities undertaken, access to and control over resources, as well as decision-making opportunities. These differences and inequalities between the sexes are shaped over by the history of social relations, and change over time and across cultures.[5]

- o **Gender equality**
  Gender equality means equal opportunities, rights and responsibilities for women and men, girls and boys. Equality does not mean that women and men are the same but that women's and men's opportunities, rights and responsibilities do not depend on whether they are born female or male. It implies that the interests, needs and priorities of both women and men are taken into consideration.
  While gender equality is an important goal in itself – an issue of human rights and social justice – steps toward greater equality can also contribute to the achievement of other social and economic objectives.[6]

3. Ask participants to identify whether each of the following are due to 'sex' or 'gender'
   - o Women give birth to babies, men don't (sex)
   - o Little girls are gentle, boys are tough (gender)
   - o Men are more capable leaders and decision-makers (gender)
   - o Men's voices break at puberty, women's do not (sex)
   - o Women tend to work as nurses and school teachers, men tend to work as doctors and university professors (gender)

4. Conduct the practical activity at the end of this module to get participants discussing key terms in small groups.

Emphasize that gender statistics are important precisely because gender roles change over time and statistics reveal where and how these changes are occurring (e.g. increased university enrolment for women; more women in the workforce; lower life expectancy for men).

1.2   General skills for understanding and using statistics

What are the skills needed to understand and use statistics? Often referred to as 'statistical literacy' the skills needed for the informed use of statistics consist of:

1. data awareness
2. the ability to understand statistical concepts
3. the ability to analyse, interpret and evaluate statistical information, and
4. the ability to communicate statistical information and understandings[7]

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[5] United Nations (2015b). Gender Statistics Manual: Glossary of Terms. United Nations Statistics Division (http://unstats.un.org/unsd/genderstatmanual/Glossary.ashx).
[6] Ibid.
[7] UNECE (2012a). *Making Data Meaningful – Part 4: A guide to improving statistical literacy* (http://www.unece.org/fileadmin/DAM/stats/documents/writing/Making_Data_Meaningful_Part_4_for_Web.pdf).

Data awareness

Data awareness involves knowing what types of data are available, how those data are collected and how they can be used, in order to decide if they are appropriate for a particular need. This includes being able to:

- describe the data that is needed including the issue being investigated, the population(s) being examined and the relevant time frames
- know the types of statistics that are produced by the national statistical system and how to access them
- read and understand tables and graphs
- assess the quality of the data and whether it is 'fit for purpose'

Understand statistical concepts

Statistics relies on clear definitions of what is being measured and, as a result, there are multitudes of what statisticians call 'concepts' that are individually identified and defined. A number of these are used regularly throughout this toolkit, the main ones are explained in the next section on 'Key statistics concepts'. It is recommended to become familiar with them before looking at individual indicators to aid understanding and interpretation.

Analyse, interpret and evaluate statistical information

The ability to critically evaluate statistical information, determine appropriate analytical techniques and identify when concepts have been applied without proper statistical foundation are essential to using statistics in effective decision-making. This toolkit provides the basis for developing these skills in relation to key gender indicators.

Communicate statistical information and understandings

Once the statistics are understood, gender and development practitioners need to have the skills to communicate them to others. This involves drawing out the main relationships, causations and trends in the data and being able to report on progress toward set benchmarks. It includes clearly presenting statistics in tables and graphs, writing text and verbally describing what they mean and how they relate to the issue being examined.

There are varying levels of skill required to use statistics. Some gender and development practitioners may need to develop expertise in data collection and the application of statistical methods, such as simple or multivariate regression. However, this toolkit is focused on providing basic skills to understand key gender indicators. It concentrates on **descriptive statistics**, which involves summarizing basic information about variables such as measures of central tendency (mean, median and mode), frequency dispersion (percentage shares), and calculating ratios and rates. There are many other resources out there for those that wish to learn in more detail about other forms of statistical analysis. For example, the book *Essential Statistics for Public Managers and Policy Analysts* (Berman & Wang, 2012) provides a good overview of research methods, descriptive and inferential statistics aimed at those involved in public policy issues.

1.3   Key statistical concepts

These are some of the concepts used repeatedly throughout the toolkit. It is helpful to ensure a common understanding of these terms before going through the specific guidance on each of the indicators.[8]

Indicator	A statistical indicator is a measure that signals the state or level of something. It represents statistical data for a specified time, place, and other characteristics. For example, indicators include: • Total Fertility Rate (average number of children per woman) • Percentage of government budget spent on education • Hourly gender pay gap • Share of women in national parliament Much work has been done at national, regional and international levels to test and agree on standard indicators for monitoring gender equality. This toolkit focuses on a selection of key gender indicators that has emerged from that work, as documented in the UNECE publication *Indicators of Gender Equality*.[9]
Concept	A statistical concept is a characteristic of a time series or an observation. For example, 'unemployment', 'birth', and 'tertiary enrolment' are all concepts. To be measured accurately and consistently, concepts must have clear definitions.
Population	The set of elements about which information is wanted and estimates are required. The population could refer to the total number of people in a country or area (e.g. when talking about the population census), or may be a specific group of people (e.g. the youth population aged 15-24, or married/partnered women aged 15-49).
Variable	A variable is a characteristic of a unit being observed that may assume more than one of a set of values to which a numerical measure or a category from a classification can be assigned. For example, income, age, weight, occupation, industry, and cause of death are all variables.
Classification	A set of discrete, exhaustive and mutually exclusive observations, which can be assigned to one or more variables to be measured in the collation and/or presentation of data. Standard classifications are those that follow prescribed rules and are generally recommended and accepted. They aim to ensure that information is classified consistently regardless of the collection, source, point of time, etc. Such standards provide the basis for producing internationally comparable statistics. Examples of standard classifications used in the production of gender statistics include: • International Standard Classification of Education (ISCED) • International Standard Classification of Occupations (ISCO) • International Standard Industry Classification (ISIC) • International Classification of Diseases (ICD)

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[8] United Nations (2015a). Gender Statistics Manual: Descriptive analysis of data. United Nations Statistics Division (http://unstats.un.org/unsd/genderstatmanual/Descriptive-analysis-of-data.ashx); OECD (n.d.). OECD Glossary of Statistical Terms (https://stats.oecd.org/glossary/).

[9] UNECE (2015). *Indicators of Gender Equality* (http://www.unece.org/stats/publications/gender_equality).

Proportions and percentages	A proportion is defined as the relative number of observations in a given category of a variable relative to the total number of observations for that variable. It is calculated as the number of observations in the given category divided by the total number of observations. The sum of proportions of observations in each category of a variable should equal to unity, unless the categories of the variable are not mutually exclusive. Most often, proportions are expressed in percentages. Percentages are obtained from proportions multiplied by 100. Percentages will add up to 100 unless the categories are not mutually exclusive. Proportions expressed as percentages are widely used in gender statistics. For example, the distribution of education attainment level of the population aged 25-64 shows how much of the population has low, medium or high levels of formal education. Also, the share of women in managerial positions is a percentage indicator.
Ratio	A ratio is a single number that expresses the relative size of two numbers. The ratio of one number A to another number B is defined as A divided by B. Ratios can take values greater than unity. Because of the way they are calculated, proportions can be considered a special type of ratio in which the denominator includes the numerator. Ordinarily, however, the term ratio is used to refer to instances in which the numerator (A) and the denominator (B) represent separate and distinct categories. Ratios can be expressed in any base that happens to be convenient; however, the base of 100 is often used. A well-known example of a ratio is the sex ratio: the number of males per 100 females, used to state the degree to which members of one sex outnumber those of the other sex in a population or subgroup of a population. A variation of this indicator is the sex ratio of birth, defined as the number of male live births per 100 female live births.
Rate	In general, proportions and ratios are useful for analysing the composition of a population or of a set of events. Rates, in contrast, are used to study the dynamics of change. Demographic rates such as fertility rates and mortality rates are typical examples of rates used in gender statistics. Some ordinary percentage figures showing the composition of a population group are called rates. For example, what is called a literacy rate is actually a simple percentage of the population that is literate. Note that data used for the numerator and data used for the denominator in calculating rates can sometimes come from different sources. For example, in the case of mortality rates, data on deaths used for the numerator may come from the civil registration system, while data on population used for the denominator may come from population censuses. When data from different sources are to be combined, it is essential to ascertain whether they are comparable in terms of the coverage of all groups of population, and geographic areas and time period.

Index	Numerous indicators can be aggregated into an index. For example, the Gender Parity Index combines the two indicators of male and female gross enrolment ratio to get an index. So to, the Human Development Index combines a range of variables on socio-economic development to get a single comparable number or index.
Data source	A specific data set, metadata set, database or metadata repository from where data or metadata are available. Data sources can be distinguished, according to the modality of data collection: a) administrative (for data coming from administrative records) b) survey (for data coming from surveys for a specific sector or institutional unit) c) census (for data coming from collections that include all members of a particular population).
Metadata	Metadata is data that defines and describes other data. It is all the information needed to understand what the numbers represent. Examples of metadata include the title or name of the indicator, definitions of concepts, information on the data source, and guides that explain how the statistics were produced. Metadata is essential for understanding statistics. Without it, users cannot be sure they know what the figures relate to and can easily misinterpret them. As metadata can be detailed and lengthy, many producers of statistics provide the minimum of information with the data and give links to more descriptive metadata on their website or in another publication.

1.4 Understanding gender statistics

Gender statistics is an important field that cuts across traditional fields of social, economic, demographic and environmental statistics. They are an essential part of a well-functioning statistical system that provides relevant, accurate and reliable data on the population.

Gender statistics involves data that is sex-disaggregated (collected and presented by sex as a primary and overall classification), but there is much more to it than that. Gender statistics also involves:

- Data that is relevant to understanding gender issues (e.g. data on time use or on the prevalence of domestic violence)
- Data being based on concepts and definitions that adequately reflect the diversity of women and men and capture all aspects of their lives
- Data collection methods take into account stereotypes and social and cultural factors that may induce gender bias in the data.[10]

There are many existing resources that provide guidance on producing and using gender statistics. They provide the basis for the materials in this toolkit and can be used as further reading and information for trainers and participants who want to learn more.

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[10] United Nations (2015c). Gender Statistics Manual: What are Gender Statistics. United Nations Statistics Division (http://unstats.un.org/unsd/genderstatmanual/What-are-gender-stats.ashx).

Gender Statistics Manual
United Nations Statistics Division
unstats.un.org/unsd/genderstatmanual

This manual aims to foster a gender perspective in national statistics. It provides information needed to:
(a) achieve a comprehensive coverage of gender issues in data production activities;
(b) incorporate a gender perspective into the design of surveys or censuses, by taking into account gender issues and avoiding gender biases in measurement; and
(c) improve data analysis and data presentation and to deliver gender statistics in a format that is easy to use by policymakers and planners.

Available online, it is targeted at statisticians working in less developed national statistical systems. It can also be used as a resource manual for training in gender statistics.
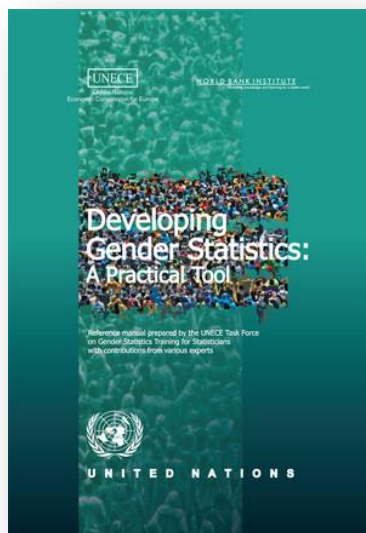
Developing Gender Statistics: A Practical Tool
United Nations Economic Commission for Europe (2010)
www.unece.org/?id=17450

This comprehensive manual aims to guide statistical organizations in the production and use of gender statistics. It represents a consolidated reference for any organization or individual interested in producing information about gender differences, guides producers of gender statistics and assists in improving the availability of high-quality information on women and men.
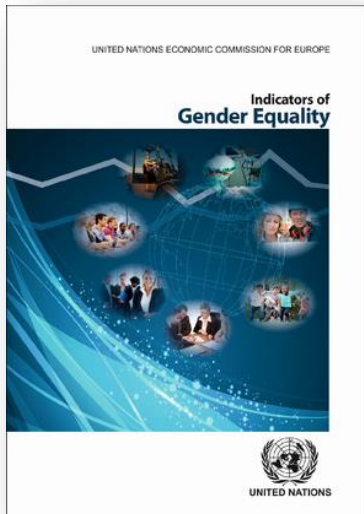
Indicators of Gender Equality
United Nations Economic Commission for Europe (2015)
http://www.unece.org/stats/publications/gender_equality

Statistics and indicators that reflect the realities of the lives of women and men are needed to describe women's and men's role in the society, economy and family, to formulate and monitor policies and plans, monitor changes, and inform the public. This publication contains the result of the work by a Task Force of experts under the Conference of European Statisticians (CES). It presents a set of 115 gender equality indicators recommended for use in countries participating in the work of CES.

The indicators presented in this toolkit are taken from this recommended set.
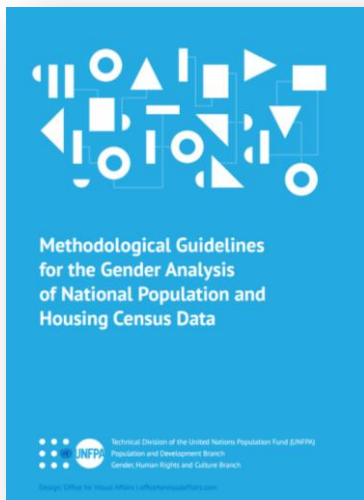
Methodological Guidelines for the Gender Analysis of National Population and Housing Census Data
United Nations Population Fund (2014)
http://www.unfpa.org/publications/methodological-guidelines-gender-analysis-national-population-and-housing-census-data

This guide aims to increase the analysis and use of Population and Housing Census Data for monitoring gender concerns. It is a tool for staff of National Statistical Offices (NSOs), National Ministries responsible for gender equality and women's empowerment, and civil society gender advocates, to be used in their efforts to promote equality, human rights and equity issues between women and men through the appropriate analysis of census data.
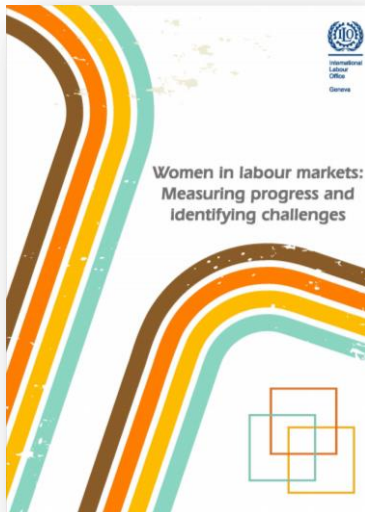
Women in labour markets: Measuring progress and identifying challenges
International Labour Organization (2010)
http://www.ilo.org/empelm/pubs/WCMS_123835

This report emphasizes the importance of labour market information and analysis for informed policy-making. It examines 12 of the key labour market indicators that together paint a fairly accurate portrait of how women and men engage in labour markets.
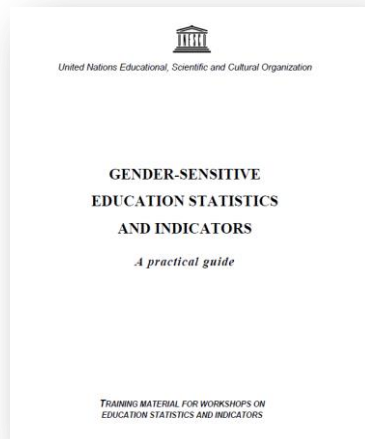
Gender-sensitive education statistics and indicators: A practical guide
United Nations Educational, Scientific and Cultural Organization (UNESCO) (1997)
http://www.uis.unesco.org/Education/Documents/unesco-gender-sensitive-edstats-indicators.pdf

This guide focuses on some of the best practices for presenting and analysing indicators of gender disparities in literacy and schooling, utilizing regional and country data available at the UNESCO Institute of Statistics.

Similar to the aims of this toolkit, it provides practical ideas and guidance to policy-makers and managers of education in using gender-sensitive education statistics and indicators.

Gender and Health Data and Statistics: An annotated resource guide
Bloom S.S. and Arnoff E., Measure Evaluation (2012)
http://www.cpc.unc.edu/measure/resources/publications/ms-12-52/

This guide lists over 100 resources related to the production and use of gender statistics on health issues. It provides a good starting point for locating resources for further study on gender statistics.

1.5   Exercise: Understanding key terms

Objective	**Ensure participants have a common understanding of key concepts and terms**
Preparation	If necessary, add or delete terms from the handouts. Make copies of the handouts.
Time required	Approximately 40 minutes • Introduce the activity (2 minutes) • Work in groups or pairs to discuss the key terms (15 minutes) • Go through answers (10 minutes) • Summary discussion (5 minutes)
Task	a) Ask the participants to discuss what they think each of the terms on the handouts means. How would they define each term? b) Circulate the handout below to each person. c) Go through the answers by calling on random groups or pairs to describe how they defined the term, then show the right answer and ask all groups if they got something similar or different. d) It is important to listen closely to how people defined each term and to discuss and correct any misunderstandings or misinterpretations. e) Distribute a copy of the answer sheet handout.

Handout for practical exercise

Task: Discuss what you think is meant by each of the following terms

Gender relations	
Gender roles and responsibilities	
Productive work	
Reproductive work	
Gender equality	
Gender mainstreaming	
Gender analysis	
Gender statistics	
Gender indicators	

Gender relations	These are the social **relationships between women and men**. Gender relations are simultaneously relations of co-operation, connection, and mutual support, and of conflict, separation and competition, of difference and inequality. Gender relations are concerned with **how power is distributed between the sexes**. They create and reproduce systemic differences in men and women's position in a given society. They also define the ways in which responsibilities and claims are allocated and the way in which each are given a value.
Gender roles and responsibilities	In all societies, either women or men typically undertake tasks and responsibilities. This **allocation of activities on the basis of sex** is known as the sexual division of labour and is learned and clearly understood by all members of a given society. Change in roles and responsibilities usually takes place when the society is under some form of stress, for example when family members migrate to find work, other members of their families must undertake their tasks. The sexual division of labour is perhaps the most significant social structure that governs gender relations.
Productive work	This is work that **produces goods and services for exchange in the market place** for income. Some analysts, especially those working on questions of equality between men and women, **include the production of items for consumption by the household** under this definition, even though they never reach the market place, regarding this as a form of **nonmonetary income**. Both men and women contribute to family income with various forms of productive work. However, **men predominate in productive work**, especially at the higher income levels. Historically, changes in economic structure, and hence in the structure of productive activities, have led to changes in the sexual division of labour and gender relations.
Reproductive work	This work involves all the tasks associated with **supporting and servicing the current and future workforce**, i.e. those who undertake or will undertake the productive work. It includes **childbearing and nurture**, but is not limited to these tasks. It has increasingly been referred to as social reproduction to indicate the broader scope of the term than the activities associated with biological reproduction. Socially reproductive activities include **childcare, food preparation, care for the sick, socialisation of the young, attention to ritual and cultural activities** through which the society's work ethic is transmitted, and community sharing and support which is essential to the survival of economic stress. Women and girls are mainly responsible for this work, which is usually unpaid.

Gender mainstreaming	Gender Mainstreaming is a globally accepted strategy for promoting gender equality. Mainstreaming is not an end in itself but a strategy, an approach, a means to achieve the goal of gender equality. Mainstreaming involves ensuring that gender perspectives and attention to the goal of gender equality are central to all activities - policy development, research, advocacy/ dialogue, legislation, resource allocation, and planning, implementation and monitoring of programmes and projects.
Gender analysis	Gender analysis is a systematic way of looking at the **different impacts of development, policies, programs and legislation** on women and men that entails, first and foremost, **collecting sex-disaggregated data** and gender-sensitive information about the population concerned. Gender analysis can also include the examination of the multiple ways in which women and men, as social actors, engage in strategies to transform existing roles, relationships, and processes in their own interest and in the interest of others.
Gender statistics	Gender statistics are defined as statistics that adequately reflect differences and inequalities in the situation of women and men in all areas of life. Gender statistics are the sum of the following characteristics: a) data are collected and presented disaggregated by sex as a primary and overall classification; b) data are reflecting gender issues; c) data are based on concepts and definitions that adequately reflect the diversity of women and men and capture all aspects of their lives; and d) data collection methods take into account stereotypes and social and cultural factors that may induce gender biases.
Gender indicators	Gender indicators are a **useful tool in monitoring gender differences**, gender-related changes over time and progress towards gender equality goals. In general, indicators are **statistics** with a reference point (a norm or a bench-mark) against which judgments can be made. Indicators have a normative nature, in the sense that a change from the reference point in a particular direction can be interpreted as ʻgoodʼ or ʻbadʼ. In the case of gender statistics, the status of women in a particular country is usually evaluated by reference to (comparison with) the situation of men in that country. In a few cases – such as for maternal mortality or access to antenatal services - the norm is the situation of women in other countries.

1.6   Exercise: Practice calculating rates

Objective	**Develop confidence in using statistics**
Preparation	Make copies of the handouts. Prepare slides with answers.
Time required	Approximately 40 minutes • Introduce the activity, including showing 1-2 examples of how to calculate the employment rate (5 minutes) • Work in pairs to calculate the missing rates and answer the four questions (15 minutes) • Go through answers (10 minutes)

Task	a) Explain what the employment rate is and how to calculate it.
	 b) Circulate the handout below to each person.
	 c) Allow 15 minutes to complete the task. Some people may choose to work alone and that can work well for an exercise like this.
	 d) Start going through the answers to the four questions.
	
	     1. Which has the highest employment rate for men?
	     Answer: Kazakhstan
	     2. Which country has the highest employment rate for women?
	     Answer: Kazakhstan
	     3. Where are the employment rates the lowest?
	     Answer: Moldova and Georgia
	     4. Where is the gender gap between men and women the greatest?
	     Answer: Kyrgyzstan
	
	 e) Show the table with all the missing rates on the screen and check that people got the same answers.

Handout: Practice calculating rates

The **employment rate** is the percentage of the total adult population (aged 15 and above) who are employed. It is calculated by dividing the employed population by the total population, and then multiplying the result by 100 to get a percentage figure (usually expressed to one decimal point). The formulas for calculating female and male rates are below:

$$\frac{\text{Female employed age 15+}}{\text{Female population aged 15+}} \times 100 = \text{Female employment rate (\%)}$$

$$\frac{\text{Male employed age 15+}}{\text{Male population aged 15+}} \times 100 = \text{Male employment rate (\%)}$$

Task

Calculate the female and male employment rates for the countries below. First test your understanding by making sure you can produce the same answer as the one already provided for Azerbaijan.

Once you have calculated all the rates, answer the following questions:

1. Which has the highest employment rate for men?
2. Which country has the highest employment rate for women?
3. Where are the employment rates the lowest?
4. Where is the gender gap between men and women the greatest?

Employment rate (%) for population aged 15 and above, by sex, selected countries, year as indicated

	Year	Population age 15+		Employed age 15+		Employment rate (%)	
		Female	Male	Female	Male	Female	Male
Azerbaijan	2010	3,616,857	3,405,782	2,102,000	2,227,000	58.1	65.4
Belarus	2012	4,364,517	3,655,027	2,352,000	2,225,000		
Georgia	2010	1,976,206	1,718,460	777,000	851,000		
Kazakhstan	2012	6,632,986	5,930,058	4,131,000	4,376,000		
Kyrgyzstan	2010	1,952,835	1,850,895	926,000	1,318,000		
Moldova, Republic of	2010	1,522,172	1,409,368	570,000	573,000		
Russian Federation	2010	66,242,404	54,929,054	34,304,000	35,500,000		

Notes: Georgia – data do not cover Abkhazia AR and Tskhinvali regions; Republic of Moldova – data exclude the territory of the Transnistria and municipality of Bender; Russian Federation – data refer to the population aged 15-72 years.
Source: UNECE (2016a). UNECE Statistical Database (http://w3.unece.org/PXWeb/en) - compiled from national and international (Eurostat) official sources.

Answers

Employment rate (%) for population aged 15 and above, by sex, selected countries, year as indicated

	Year	Population age 15+		Employed age 15+		Employment rate (%)		Gender gap
		Female	**Male**	**Female**	**Male**	**Female**	**Male**	(male-female)
Azerbaijan	2010	3,616,857	3,405,782	2,102,000	2,227,000	58.1	65.4	7.3
Belarus	2012	4,364,517	3,655,027	2,352,000	2,225,000	53.9	60.9	7.0
Georgia	2010	1,976,206	1,718,460	777,000	851,000	39.3	49.5	10.2
Kazakhstan	2012	6,632,986	5,930,058	4,131,000	4,376,000	62.3	73.8	11.5
Kyrgyzstan	2010	1,952,835	1,850,895	926,000	1,318,000	47.4	71.2	23.8
Moldova, Republic of	2010	1,522,172	1,409,368	570,000	573,000	37.4	40.7	3.2
Russian Federation	2010	66,242,404	54,929,054	34,304,000	35,500,000	51.8	64.6	12.8

Notes: Georgia – data do not cover Abkhazia AR and Tskhinvali regions; Republic of Moldova – data exclude the territory of the Transnistria and municipality of Bender; Russian Federation – data refer to the population aged 15-72 years.
Source: UNECE (2016a). UNECE Statistical Database (http://w3.unece.org/PXWeb/en) - compiled from national and international (Eurostat) official sources.

Module 2: Measuring the population

What is covered in this module	**Materials**
	2.1 Importance of demographic indicators for gender analysis
	2.2 Data sources
	2.3 Understanding the key indicators
	Practical exercises
	2.4 Exercise: Relationship between infant mortality and total fertility rates

2.1   Importance of demographic indicators for gender analysis

What is demography?
Demography is a field of statistics that involves the study of human populations. It involves measuring the structure and changing dynamics of the population through the number of births, deaths and migration. Demographers use models to estimate birth or fertility rates, mortality rates, life expectancy, migration rates, and project the size of population growth in the future.

Demography and gender
Demographic indicators are fundamental to monitoring gender relations and dynamics. How many women are there compared to men? Are many more boys born than girls? The basic male and female population count of country or sub-national area provides a snapshot of the number of females compared to the number of males (the sex ratio). This can point to imbalances in the age-sex structure of the population that can alert policymakers to demand on public services and the need for policy interventions.

For example, many countries experience high rates of rural-urban migration. If men are the ones most likely to move for employment reasons, there can be a greater proportion of men to women in urban centres and the opposite in rural areas. If the imbalance is very high (e.g. 120 men for every 100 women), this can lead social problems, such as higher rates of alcohol consumption by men, leading to increases in violence and crime. In rural areas where there may be more women, elderly and young children, this increases the demand for health and education services to areas that can be hard or costly to reach. Rural development policies and infrastructure projects can be used to intervene.

There are many other examples of how demographic indicators are a useful basis for monitoring gender issues. This toolkit covers the demographic indicators of sex ratio of the total population, infant mortality, mean age at first marriage, and total fertility rate.

2.2   Data sources

Population censuses
Population censuses are a key data source for producing demographic indicators. Conducted every 10 years in most countries, they provide a total count of the population and gather the basic characteristics needed to determine the age-sex structure of the population and know something

about their education, work background and migration patterns since birth and the last census.

As birth and death registration is poor in many countries, population censuses often ask questions on number of children born and the number of people who have died. This data is used to estimate birth (fertility) and death (mortality) rates.

Demographic and Health Surveys (DHS)
The Demographic and Health Survey (DHS) is nationally representative household survey that provides data on fertility, mortality, health, nutrition and a range of related topics. It uses a standard methodology developed through a program funded by the United States government (through USAID). The DHS is an important source of demographic indicators and gender statistics in many countries.

Administrative registers
Civil registration systems are the source of data for vital statistics on births, deaths and marriages. In some cases these systems are dysfunctional and not able to produce data of sufficient quality. Where civil registration systems, national population registers or similar administrative data source exists, is well-maintained and covers the entire population, it can provide the data needed for producing demographic indicators.

2.3 Understanding the key indicators

Selected indicators
- Sex ratio for total population
- Infant mortality
- Mean age at first marriage
- Total fertility rate

2.3.1 Sex ratio for total population

How to calculate
The sex ratio is the number of males for every 100 females. This indicator is calculated by dividing the number of males by the number of females in the total population and then multiplying by 100 to get the ratio (typically expressed with one or no decimal places). As it is a ratio (males:females) there is no percentage sign needed.

$$\frac{\text{Total male population}}{\text{Total female population}} \times 100$$

$$\frac{\text{Male population of Moldova in 2012 } (\textbf{1,712,035})}{\text{Female population of Moldova in 2012 } (\textbf{1,847,483})} \times 100 = \textbf{93}$$

Data sources
- Population and Housing Censuses
- Population registers
- Population projections based on demographic estimation models using migration, fertility and mortality estimates from surveys, censuses and administrative records.

Key definitions
Total population
The total number of people of all ages residing in a geographical location or area. The population should be disaggregated by sex.

Be mindful of	**Sex ratios vary across sub-populations**
	Sex ratios can also be calculated on a sub-group of the population, e.g. people living in urban versus rural areas, on in a particular city or administrative area.
	Sex ratios at birth is a different indicator
	The sex ratio at birth is different from the sex ratio of the total population, and the sex ratio of the elderly population. The normal ranges for each measure are relatively consistent across populations and are due to biological differences between males and females. Biologically, a higher number of boys are born than girls (between about 104 to 107 male babies for every 100 female babies). On average, females are more resistant to disease and tend to live longer than males. Also, the tendency for males to engage in more risky and violent behaviour increases their chances of premature death.[11] So the sex ratio at birth favours males, but the sex ratio for the elderly population favours females (ratio is less than 100).
	Normal ranges for sex ratio of the total population
	In gender-neutral societies, where males and females are subject to the same living conditions, the sex ratio for the total population tends to be between 98 and 100.[12] In 2015, the sex ratio for total global population was 102, but ranged from 274 in the United Arab Emirates to 85 in Latvia and Lithuania (86 in Ukraine).[13]

Examples

Data needed to calculate the sex ratio

Resulting calculation

Total population (all ages), selected regions and countries, 2012

	Female	Male	Sex ratio
European Union-28	259,339,081	247,291,379	95
Armenia	1,573,567	1,450,560	92
Azerbaijan	4,679,645	4,616,138	99
Georgia	2,349,394	2,141,304	91
Kazakhstan	8,691,313	8,100,112	93
Kyrgyzstan	2,837,242	2,770,269	98
Moldova, Republic of	1,847,483	1,712,035	93
Russian Federation	76,936,816	66,264,905	86
Tajikistan	3,909,796	3,987,516	102
Ukraine	24,443,259	20,969,728	86

Notes:
- Total mid-year or annual average population. Regional aggregates are computed by UNECE secretariat (UNECE, n.d.). Due to rounding, there may be slight differences between regional aggregates and the sum of the population of all component countries.
- Georgia - Data do not cover Abkhazia AR and Tskhinvali Region; Kyrgyzstan - Data reflect the average resident population; Tajikistan - Data refer to beginning of year.
Source: UNECE (2016a). UNECE Statistical Database (http://w3.unece.org/PXWeb/en) - compiled from national and international (Eurostat and UNICEF TransMONEE) official sources.

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[11] Hesketh, T. and Xing, Z.W. (2006). 'Abnormal sex ratios in human populations: Causes and consequences' *Proceedings of the National Academy of Sciences of the United States of America, Vol. 103 No. 36* (http://doi.org/10.1073/pnas.0602203103).

[12] Ibid.

[13] United Nations (2015e). *World Population Prospects: The 2015 Revision, Key Findings and Advance Tables*. United Nations Population Division, ESA/P/WP.241 (http://esa.un.org/unpd/wpp/Publications/Files/Key_Findings_WPP_2015.pdf).

Sex ratio

Country	Sex ratio
Tajikistan	102
Azerbaijan	99
Kyrgyzstan	98
European Union-28	95
Kazakhstan	93
Moldova, Republic of	93
Armenia	92
Georgia	91
Russian Federation	86
Ukraine	86
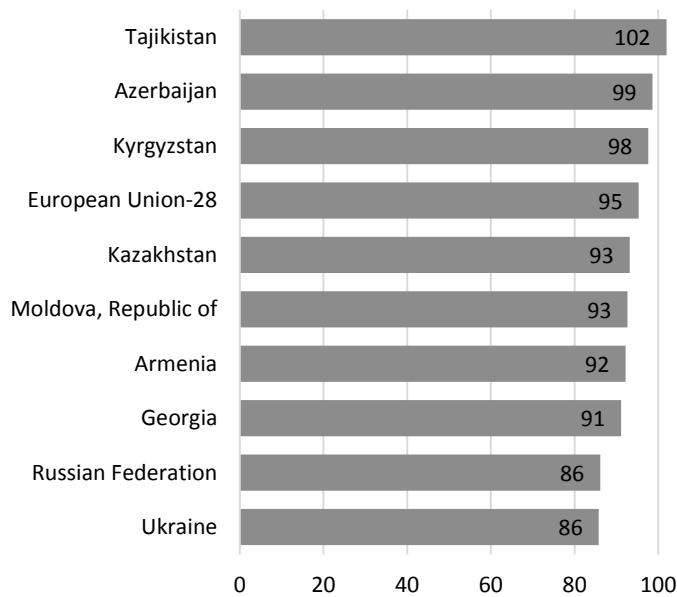
This graph shows the sex ratio in the table above, sorted from highest to lowest.

Key messages from the table and graph above:

- Sex ratio is particularly low in the Russian Federation and Ukraine.
- Central Asian countries tend to have higher sex ratios.

How to interpret this indicator	**Basic interpretation** - Sex ratio of **less than 100** → more females than males - Sex ratio of 100 → same number of females and males - Sex ratio **greater than 100** → more males than females **What impacts on sex ratio?** Understanding the things that will impact on a sex ratio can guide further research and interpretation of this figure. Any event that has a disproportionate impact on the birth, death or migration of males or females will affect the sex ratio. These include biological, social and economic factors, such as: - tendency for women to live longer - son preference - employment-related migration - risks to health, such as alcohol, smoking and violence - wars and conflicts For example, the low sex ratio for the total population of the Russian Federation (86), is largely due to the significant gap in life expectancy between men (59 years (2009)) and women (73 years (2009)). This is thought to be caused by differences in alcohol consumption by men and women (men tend to binge drink vodka whereas women consume wine and beer), which leads to premature death due to poor health and a higher tendency to be involved in violence or accidents.[14]

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[14] Bhattacharya, P.C. (2012). *Gender Inequality and the Sex Ratio in Three Emerging Economies*, Heriot-Watt University Economics Discussion Papers (http://www2.hw.ac.uk/sml/downloads/economics/HW_DP_2012_01.pdf).

| **Policy implications** | Abnormal sex ratios can emphasise the outcomes of socio-economic factors, such as male or female tendency to migrate from rural to urban areas or to other countries to seek employment, or the preference for male children over females. Monitoring how the sex ratio changes between different populations (e.g. urban versus rural) and over time provides essential evidence that, when combined with research into the causes, can inform where policy interventions are needed to get the balance back in the normal range. |

2.3.2 Infant mortality rate (IMR)

How to calculate	Infant mortality rate is the probability of a child born in a specific year or period dying before reaching the age of one, expressed as rate per 1,000 live births. Calculating the infant mortality rate is complex and is typically done by trained professionals (demographers or statisticians) using international standards and methods. For more information, refer to the United Nations *Step-by-step Guide to the Estimation of Child Mortality*.[15]
Data sources	- Household surveys - Population and Housing Censuses - Population registers and sample registration systems - Vital registration systems
Key definitions	**Infant** A child aged between birth and one year (i.e. not reached their first birthday). **Mortality rate** A measure of the number of deaths in a particular population. Note that the infant mortality rate is strictly speaking not a rate (i.e. the number of deaths divided by the number of population at risk during a certain period of time) but a probability of death derived from a life table and expressed as rate per 1000 live births.[16] **Live births** Refers to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life - e.g. beating of the heart, pulsation of the umbilical cord or definite movement of voluntary muscles - whether or not the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered live born.
Be mindful of	**Disaggregations** The IMR can be disaggregated to show neonatal mortality (deaths within the first 27 days of life (i.e. less than one month old)) and postneonatal mortality (deaths between 28 days old and before one year old). Neonatal deaths account for close to half of all deaths under age five.[17] **Other measures of child survival** Infant mortality represents an important component of under-five mortality, another widely used indicator of child and maternal health. Note that the under-five mortality rate (U5MR) is the sum of the infant mortality rate and the child mortality rate (probability of dying between age 1 and before age 5). **Infrequently updated** Civil registration systems and health system records tend not to be a reliable source of data for child mortality estimates for a range of reasons. In these cases, mortality rates are based on survey data that is only likely to be collected every five years or more. The result is that new estimates of IMR and other mortality rates are usually only infrequently updated.

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[15] United Nations (1990). *Step-by-step Guide to the Estimation of Child Mortality* (www.un.org/en/development/desa/population/publications/manual/estimate/estimate-child-mortality).
[16] WHO (2011b). Indicator and Measurement Registry, Version 1.7.0 (http://apps.who.int/gho/indicatorregistry/App_Main/view_indicator.aspx?iid=1).
[17] WHO (2015a). Global Health Observatory visualizations: Child mortality – Neonatal deaths and mortality rate (http://apps.who.int/gho/data/node.wrapper.MORT-1).

Examples

Azerbaijan Infant Mortality Rate, by sex, 1980-2012
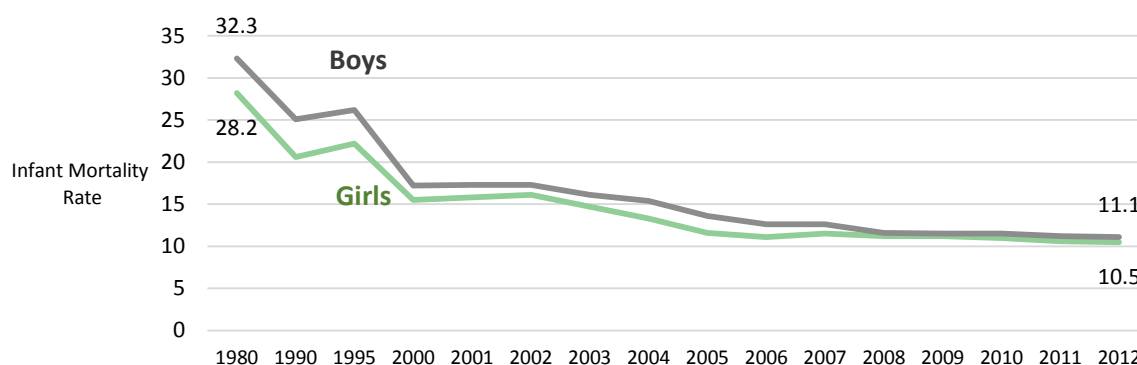
Notes: Break in methodology (2000) - Change in calculation methodology.
Source: UNECE (2016a). UNECE Statistical Database (http://w3.unece.org/PXWeb/en) - compiled from national and international (WHO European health for all database, Eurostat and UNICEF TransMONEE) official sources.

Key messages from the graph above:

- Azerbaijan's infant mortality rate has declined significantly since 1980.
- The gender gap in the infant mortality rate has almost completely closed.

Infant Mortality Rate, by sex, selected countries, 2010
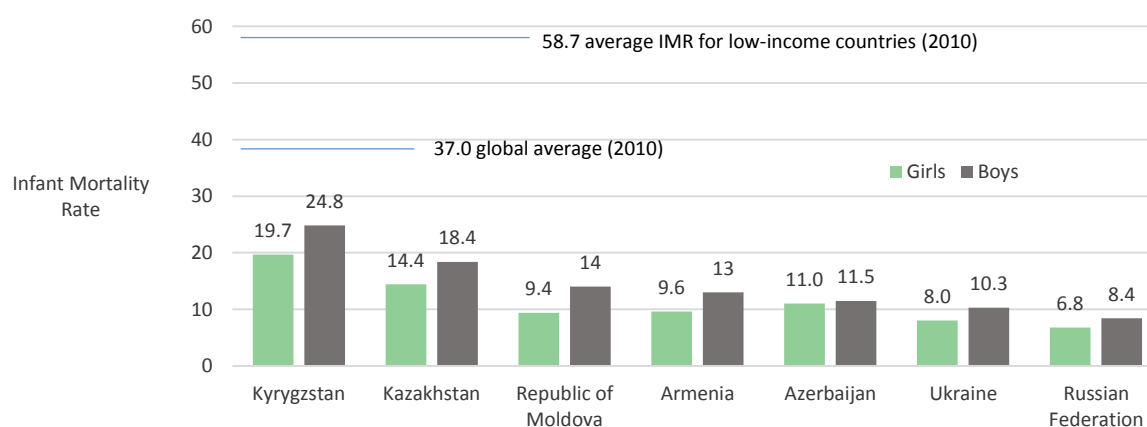
Notes: Azerbaijan - break in methodology (2000): Change in calculation methodology. Low income countries based on World Bank classification (http://data.worldbank.org/about/country-and-lending-groups).
Sources: UNECE (2016a). UNECE Statistical Database (http://w3.unece.org/PXWeb/en) - compiled from national and international (WHO European health for all database, Eurostat and UNICEF TransMONEE) official sources; global and low-income country averages from WHO Global Health Observatory Data Repository.

Key messages from the graph above:

- Infant mortality in these countries is below the global average and well below the low-income countries average.
- Infant mortality rates are higher for boys than girls in all countries (see notes below).

How to interpret this indicator	**Aiming for low rates over time** The lowest rates of infant mortality − 5 deaths per 1,000 live births (2012) − are observed in the more developed regions / high income countries. Rates in Central Asia and Eastern Europe / Commonwealth of Independent States countries are about three times that amount at 16 deaths per 1,000 live births (2012).[18] Improvements in the health system should lead to lower infant mortality rates over time. Assessing the infant mortality rate on every five years or so should give an indication if health outcomes are improving or worsening. **Rates tend to be higher for males** Newborn girls have a biological advantage in survival over newborn boys, with lesser vulnerability to conditions such as birth trauma, prematurity, and infectious diseases. So, in cases where boys and girls have the same access and quality of food and medical care, boys have higher mortality rates than girls, especially during infancy. Therefore the infant mortality rate for boys is typically higher than for girls.[19] **Examine variation between sub-populations** Infant mortality rates measure child survival and reflect the social, economic and environmental conditions in which children (and others in society) live, including their health care. Since data on the incidence and prevalence of diseases (morbidity data) frequently are unavailable, mortality rates are often used to identify vulnerable populations.[20] Preparing estimates of child mortality by characteristics such as geographical location, ethnicity, level of education of the mother, number of children in the family, and income levels, can point to groups that would benefit from targeted policies and services.
Policy implications	Child mortality rates are a key indicator of health and well-being, including nutrition status. Reducing them was one of the eight Millennium Development Goals (MDGs). Child mortality in the UNECE region is the lowest in the world, and in the EECCA countries the mortality rate has fallen in some cases by as much as 50 per cent over the last decade. Nevertheless, child mortality in these countries is still relatively high.[21] Monitoring infant and child mortality rates is an essential component of ensuring good health outcomes across the population. Policymakers should use mortality rates and other key health indicators, such as causes of death and morbidity, to determine health concerns and point to weaknesses in the health care system. Analysis of these indicators should include looking at variation between sub-populations (disaggregated data) so that policy interventions target those most in need.

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[18] UNICEF, WHO, World Bank, United Nations (2014). *Levels and Trends in Child Mortality 2014.* Estimates developed by the United Nations Inter-agency Group for Child Mortality Estimation (IGME) – Report 2014.
(http://www.unicef.org/media/files/Levels_and_Trends_in_Child_Mortality_2014.pdf).
[19] United Nations (2011). *Sex Differentials in Childhood Mortality.* United Nations Population Division, ST/ESA/SER.A/314
(www.un.org/en/development/desa/population/publications/pdf/mortality/SexDifferentialsChildhoodMortality.pdf).
[20] WHO (2011b). Indicator and Measurement Registry, Version 1.7.0
(http://apps.who.int/gho/indicatorregistry/App_Main/view_indicator.aspx?iid=1).
[21] UNECE (2012b). *The UNECE Report on Achieving the Millennium Development Goals in Europe and Central Asia*
(http://www.unece.org/index.php?id=30736).

2.3.3 Mean age at first marriage

How to calculate	The mean age at first marriage is the mean age of men or women at first marriage if subject throughout their lives to the age-specific marriage rates of first marriages only in a given year. It is derived from the distribution of first marriages by age-group of husband or wife. It relies on access to the unit record files (raw data) and so is usually produced by the relevant national statistical authority.
Data sources	- Civil registration systems - Population registers and sample registration systems - Household surveys such as the Demographic and Health Survey - Population and Housing Censuses – note that few countries ask this question in the population census (only Azerbaijan and Kazakhstan from this region). This information is more likely to come from the civil registration system or a sample survey.
Key definitions	**Marriage** The concept of marriage is based on the laws of each country and may include formal unions and customary unions that are recognized in law. In some countries, de facto or informal unions may also be recognized as marriage for statistical purposes. **Mean age** This is the mean average age calculated by adding together all the ages of the population being measured and then dividing the result by the number of people in the population. Median age at first marriage is an alternative indicator that can sometimes be used. Different to the mean, this gives the mid-way point or the age at which half the population is above (older) and half below (younger).
Be mindful of	**How marriage is defined** The concepts of marriage and families are changing in many societies, with de facto unions becoming more common. Check the definition of marriage to be sure about which unions are included and excluded. **Related indicators** **Singulate Mean Age at Marriage (SMAM)** is a similar measure that is the average length of single life expressed in years among those who marry before age 50. It is a synthetic indicator calculated from marital status categories of men and women aged 15 to 54 at the census or survey date. **Percentage ever married by age-group** is a measure of ever married men and women – persons who have been married at least once in their lives although their current marital status may not be not be "married". The data are presented in terms of percentages of ever married men and women by age-group. The numerator of each ratio is the sum of the number of persons who are married and those who are either divorced, widowed or separated. The denominator is the total number of persons in the corresponding age-group. When data on consensual unions or visiting partnerships are reported, they are added to the numerator. Note that the percentage of never married men and women can be obtained by subtracting the percentage of ever married women and men from 100. **Percentage of women 20-24 married/in union before age 18** is a measure that is used to monitor the prevalence of child or early marriage. It is typically calculated based on household surveys, such as the DHS.

Examples

Gender gap in age at first marriage greatest in Azerbaijan
Mean age at first marriage, selected countries, 2011
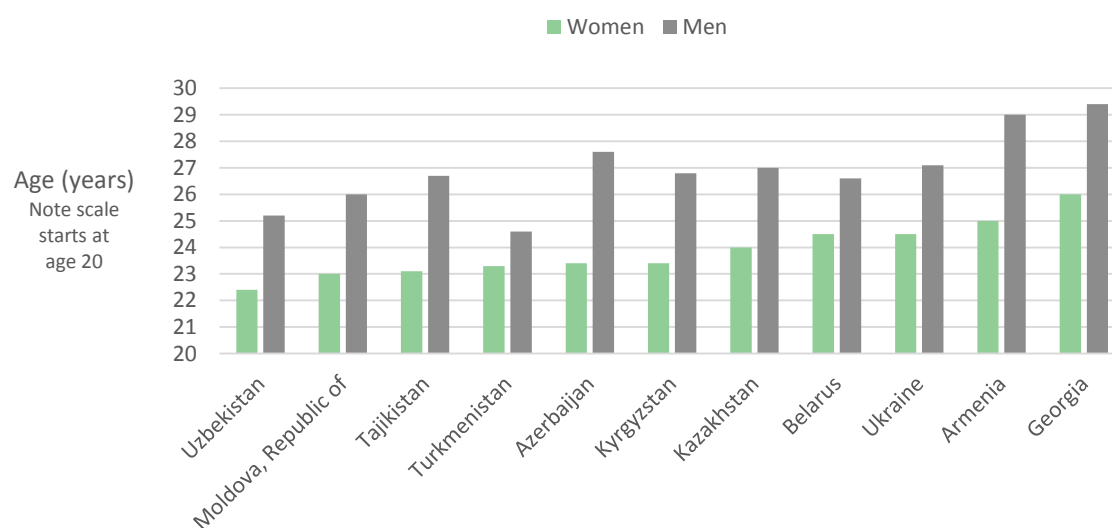
Notes: Data come from registers; Belarus - Data are based on events and include all ages; Uzbekistan and Turkmenistan – data are from 2006; Ukraine – data are from 2010.
Source: UNECE (2016a). UNECE Statistical Database (http://w3.unece.org/PXWeb/en) - compiled from national and international (UNICEF TransMONEE) official sources.

Key messages from graph above:

- Uzbekistan has the youngest age at first marriage for women (22.4 years) although the data is from 2006 and for other countries it is 2011. As the age at first marriage tends to change slowly over time the earlier data is unlikely to be misleading. In fact, checking 2006 figures for all countries, Uzbekistan still shows the lowest age.
- Across these countries, there is a consistent gap of about three years between the ages women marry compared to men.
- Georgia has the highest age at first marriage for both women (26.0 years) and men (29.4 years).

Armenians are now marrying later in life

Mean age at first marriage (years), Armenia, 1980-2011
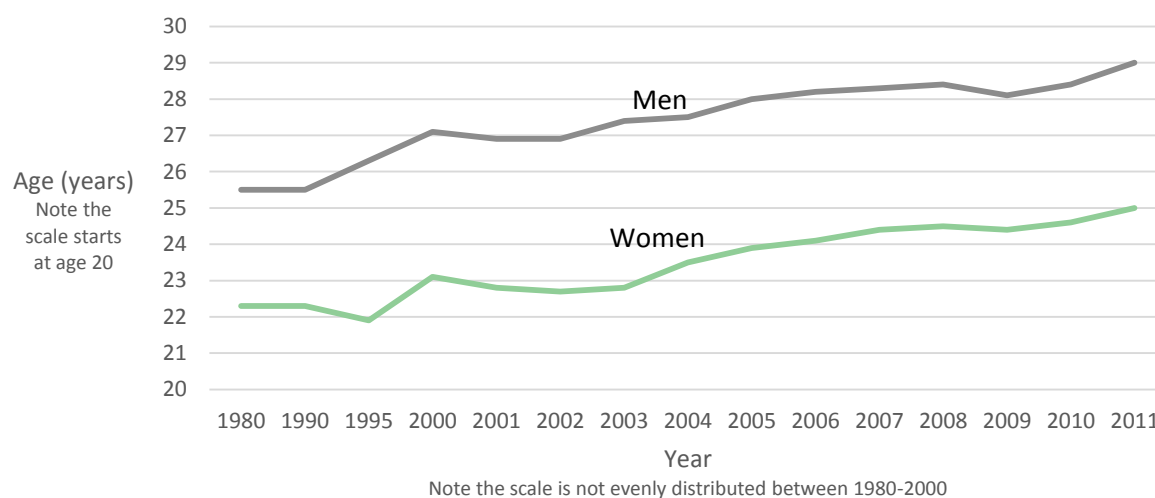
Notes: Data come from registers.
Source: UNECE (2016a). UNECE Statistical Database (http://w3.unece.org/PXWeb/en) - compiled from national and international (UNICEF TransMONEE) official sources.

Key messages from graph above:

- Mean age at first marriage for both men and women is gradually increasing over time.
- The gender gap is fairly consistent with men being around four years older than women when they first marry.

How to interpret this indicator	Age at first marriage for many women represents the time they are first exposed to risks of pregnancy and childbearing. Therefore, younger age of first marriage is generally associated with higher fertility rates. Globally, the trend over time is that the age at first marriage is increasing.[22]
	Child marriage
	Early marriage is an abuse of human rights. As of 2010, statistics show that around 13.5 million girls had entered into marriage before age 18 every year. This increases adolescent pregnancy rates, increases risks to maternal and child health and impacts on population growth.[23] Consequences may also include an early halt to education and starting childbearing from an early age, both of which have health consequences for the mother and child. Studies have shown there is a link between low education of the mother and poor health outcomes for children. Furthermore, starting childbearing early increases the duration over which women have children, leading to higher fertility rates and greater risks to health.
	A low mean age at first marriage (e.g. an average around the age of 20 or lower) indicates a higher incidence of child marriage among that population. This indicator can be used to identify populations at risk. Early marriage and large age difference

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[22] United Nations (2014). *World Fertility Report 2013: Fertility at the Extremes*. United Nations Population Division, ST/ESA/SER.A/331 (www.un.org/en/development/desa/population/publications/pdf/fertility/worldFertilityReport2013.pdf).

[23] UNFPA (2012). *Marrying Too Young: End Child Marriage* (www.unfpa.org/sites/default/files/pub-pdf/MarryingTooYoung.pdf).

between spouses is a gender issue because it can indicate less autonomy and authority for the younger spouse.[24]

Look at changes over time
Many societies are showing a gradually increasing mean age at first marriage for both women and men. This is the result of change in social attitudes to marriage and the acceptance of de facto living arrangements, as well as increasing education opportunities leading to later marriage. Comparing how the mean ages have changed over time can reveal how such trends differ between certain sub-groups of the population (e.g. based on urban / rural location, religious beliefs, ethnicity).

Look at differences between men and women
The mean age at first marriage tends to be lower for women than men by a few years. Looking at how the gender gap has changed over time provides insight into changing gender roles and increasing equality between males and females. Globally the mean difference in the age at first marriage of spouses has been narrowing over time. In countries where remarriage is widespread this indicator is less relevant as it does not take subsequent marriages into account.[25]

Consider related indicators
Singulate mean age at first marriage (SMAM) the percentage of women aged 20-24 years old who were married at or in a union before age 18 are two indicators that can used in conjunction with this one to examine the extent of early marriage.

Policy implications	Where ages at first marriage are low, this can suggest the need for policy intervention to discourage early marriage. Actions may include providing more education and employment opportunities for young people, which may delay their choice to marry and start a family.
	Increasingly higher ages at first marriage can also raise policy concerns, particularly where fertility rates are low and populations are ageing. In such cases, policymakers may choose to introduce financial incentives to support and encourage people to have more children.
	Depending on how marriage is defined, older ages can also indicate more informal unions and de facto living arrangements. This may raise the need for changes in legislation and policy to ensure those in de facto unions are protected by the law and have the same access to government services.

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[24] UNFPA (2014). *Methodological Guidelines for the Gender Analysis of National Population and Housing Census Data* (www.unfpa.org/publications/methodological-guidelines-gender-analysis-national-population-and-housing-census-data).
[25] Ibid.

2.3.4 Total fertility rate

How to calculate	The Total Fertility Rate (TFR) is calculated based on age-specific fertility rates and is expressed as the number of children per woman.
	Age-specific fertility rates are calculated by dividing the number of children born to women of a certain age-group (usually a single year age-group or a five-year age-group) in a calendar year, with the female population in that age-group in that year. It is usually expressed as the number of births per 1,000 women.
	If age-specific fertility rates are available for single age ranges, the TFR is produced by simply dividing the age-specific rates by 1,000 and then adding them up for all ages from 15 to 49. If the age-specific fertility rates are available for five-year age-groups, the same process is followed and then the result multiplied by 5.[26]
Data sources	- Civil registration systems - Household surveys - Population registers and sample registration systems - Population and Housing Censuses
Key definitions	**Total Fertility Rate** The total fertility rate is defined as the average number of children that would be born alive to a woman during her lifetime if she were to pass through her childbearing years conforming to the age-specific fertility rates of a given year.
Be mindful of	The TFR is different from other measures of fertility, such as the general fertility rate, or the lifetime fertility of a cohort (e.g. all women born in 1950). For more information on other measures of fertility, refer to the United Nations handbook on fertility and mortality data.[27]

Examples

Total Fertility Rate, selected countries, 1980-2010

Year	Armenia	Azer-baijan	Belarus	Georgia	Kazakh-stan	Kyrgyz-stan	Moldova	Russian Federation	Tajikistan	Turkmen-istan	Ukraine	Uzbeki-stan
1980	2.4	3.3	2.1	2.3	3.0	4.0	2.5	1.9	5.7	5.0	2.0	5.1
1985	2.5	3.0	2.1	2.3	3.0	4.1	2.6	2.1	5.5	4.7	2.1	4.5
1990	2.5	3.0	1.9	2.2	2.8	3.9	2.4	1.9	5.2	4.3	1.9	4.2
1995	1.8	2.6	1.5	1.9	2.2	3.3	1.9	1.3	4.6	3.5	1.4	3.5
2000	1.3	2.0	1.2	1.6	1.9	2.7	1.6	1.2	4.0	2.8	1.1	2.7
2005	1.4	2.0	1.3	1.7	2.3	2.6	1.5	1.3	3.6	2.6	1.3	2.5
2010	1.6	2.0	1.5	1.8	2.5	3.0	1.5	1.6	3.8	2.4	1.4	2.4

Data source: Gapminder.org (2015). Children per woman (total fertility rate), Documentation 008 – version 6 (http://www.gapminder.org/data/documentation/gd008/).

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[26] UNFPA (2014). *Methodological Guidelines for the Gender Analysis of National Population and Housing Census Data* (www.unfpa.org/publications/methodological-guidelines-gender-analysis-national-population-and-housing-census-data).
[27] United Nations (2004). *Handbook on the Collection of Fertility and Mortality Data*. United Nations Statistics Division, ST/ESA/STAT/SER.F/92 (http://unstats.un.org/unsd/pubs/gesgrid.asp?id=325).

Key messages from the table above:

- Fertility is highest in Tajikistan, with an average of 3.8 children per woman in 2010.
- Fertility is low in Armenia, Azerbaijan, Belarus, Georgia, Republic of Moldova, Russian Federation, and Ukraine, with rates at or below 2.0 children per woman since 2000.
- Changes in fertility tend to take place slowly over time, although rates have declined swiftly in Uzbekistan, Turkmenistan and Tajikistan since 1980.

How to interpret this indicator	Fertility, migration and death rates are the three factors that influence population growth or decline. Replacement level of fertility is 2.1 children per woman. Countries that have a TFR of 2.1 will not have population growth/decline that is impacted by fertility, although high/low net migration and death rates will affect it.

Low fertility countries are those with a TFR of 2.0 or lower and this is becoming the norm for many countries, including those outside of Europe. Although 39 of the 70 low fertility countries in 2005–2010 are in Europe, 16 are in Asia and 12 are in Latin America and the Caribbean. In the EECCA region, Armenia, Azerbaijan, Belarus, Georgia, Republic of Moldova, Russian Federation, and Ukraine are all classified as low fertility countries in the United Nations *World Fertility Report 2013*.[28]

High fertility is defined as a TFR of 3.2 or higher. Of the 66 high fertility countries in the world, rates are highest in Eastern Africa, Middle Africa, and Western Africa. In the EECCA region, Tajikistan is the only high fertility country.

Gender issues impact on fertility
Fertility is essential to gender analysis due to the different biological and socially constructed roles women and men play in childbearing and childrearing. A high fertility rate increases the chances of poor health outcomes for the mother and her children. It may also limit employment opportunities and can lead to lower incomes and higher rates of poverty among populations with high fertility rates.

Factors that could be considered in analysis of trends in fertility:[29]
- Status of women – this has been found to be a leading determinant in fertility, for example, in studies of the impact of education or female disadvantage in inheritance rights on fertility rates. The lower the status of women, the higher the fertility rate.
- Marital status – where informal unions or polygamy is common, women may have a higher number of children than those in formal, monogamous relationships due to more frequent changes in partner and the perceived need to have a child with the new partner.
- Son preference – in societies with a strong preference for sons exists, fertility rates are higher as families continue having children until they produce the desired amount sons.

Family planning
Gender analysis of fertility issues leads to examine indicators relating to family planning, such as the use of contraceptives, birth spacing, and the prevalence of unplanned pregnancies. These indicators provide insight into the extent that fertility rates reflect desired fertility levels or are being inflated by social norms and/or |

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[28] United Nations (2014). *World Fertility Report 2013: Fertility at the Extremes*. United Nations Population Division, ST/ESA/SER.A/331
(www.un.org/en/development/desa/population/publications/pdf/fertility/worldFertilityReport2013.pdf).
[29] UNFPA (2014). *Methodological Guidelines for the Gender Analysis of National Population and Housing Census Data*
(www.unfpa.org/publications/methodological-guidelines-gender-analysis-national-population-and-housing-census-data).

limited access to family planning services.

Adolescent fertility rate (see section 5.3.1)
This is the age-specific fertility rate for the age-group 15-19. It is an important indicator of the status of women as women who start childbearing early tend to limit their education and face greater health risks, as outlined earlier.

Male fertility
Few countries produce information on the number of children men have during their lifetime. Exceptions to this include Norway and Sweden, which both publish fertility rates by sex based on vital registration records. This has revealed that the main difference between men and women is that men tend to have children at older ages.

Policy implications	Fertility preferences form the basis of population policies and service delivery associated with family planning and reproductive health. Exploring fertility patterns by characteristics such as age, geographical location, religious beliefs, can provide insight into the status of women and potential gender and human rights concerns that require policy intervention. Such interventions may include sex education for adolescents, family planning education, advocacy and services, and legalisation of safe abortion.
	Fertility rates are also essential for monitoring and predicting demand for health, education and other basic services. Knowing how the average number of children per woman over time and for different areas of the country (e.g. urban versus rural) allows policymakers to plan and allocate resources to support areas where population growth or decline is likely.

2.4   Exercise: Relationship between infant mortality and total fertility rates

Objective	**Discuss the relationship between infant mortality and total fertility rates**
Preparation	This session involves showing an online video, so check the internet is working and watch the video through to make sure it plays at normal speed without interruption. Make copies of the handouts
Time required	Approximately 1 hour and 5 minutes • Video (5 minutes) • Questions / comments and explanation of task (10 minutes) • Group work (20 minutes) • Discuss answers (15 minutes) • Summary discussion (15 minutes)

Task	a) Watch the video called 'Will saving poor children lead to overpopulation?' at http://www.gapminder.org/videos/will-saving-poor-children-lead-to-overpopulation/ (duration 3 minutes 31 seconds)[30]
	b) Ask the participants what they thought of the video – encourage questions and comments.
	c) Circulate the handouts below with data on:
	   1. Total Fertility Rate
	   2. Under-five mortality rate
	   3. Infant mortality rate (as this data is scarce, under-five mortality rate is provided)
	d) Work in pairs or small groups to answer the following questions:
	   1. Which country has the highest fertility rate in 2010?
	      Answer: Tajikistan with 3.78 children per woman.
	   2. Which has the highest infant mortality rate in 2010?
	      Answer: Tajikistan with 52.1 deaths per 1,000 live births.
	   3. Which has the highest under-five mortality rate in 2010? *Answer:* Turkmenistan with 61.0 deaths per 1,000 live births.
	   4. Which country has achieved the fastest lowering of the under-five mortality rate between 1990 and 2013?
	      Answer: Tajikistan's rate has dropped by 60.5 and Azerbaijan's by 60.3.
	   5. How has Armenia's fertility and child mortality rates changed over the last 110 years (1900-2010)?
	      Answer: The TFR was the highest among these countries in 1900 (8.1) and it is now one of the lowest (1.6 in 2010; IMR is now one of the lowest in the region (14.7 in 2012).
	e) Regroup and go through the answers to each of the questions. Check if the participants have any questions, other observations about the data, or comments on using the data.
	f) Discussion: what impacts on fertility and child survival in their countries? Possible points to discuss are:
	   1. Poverty – economic opportunities tend to drive down fertility
	   2. Health care system – quality and accessibility
	   3. Increasing urbanization of employment opportunities leads to disparities between urban and rural areas with rates of change being higher in urban areas than rural
	   4. Attitudes to family size – changes over time; outside influences
	   5. Overall, rates of change tend to be slow and this means that data remain current for around five years

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[30] Gapminder.org (2014). 'Will saving poor children lead to overpopulation?', Video (http://www.gapminder.org/videos/will-saving-poor-children-lead-to-overpopulation/).

Handout for practical exercise

Task: using the three data tables below, answer the following:

1. Which country has the highest fertility rate in 2010?

2. Which has the highest infant mortality rate in 2010?

3. Which has the highest under-five mortality rate in 2010?

4. Which country has achieved the fastest lowering of the under-five mortality rate between 1990 and 2013?

5. How has Armenia's fertility and child mortality rates changed over the last 110 years (1900-2010)?

Total Fertility Rate (TFR) with projections

The Total Fertility Rate (TFR) is the average number of children per woman. It is calculated based on age-specific fertility rates. It is the average number of children that would be born alive to a woman during her lifetime if she were to pass through her childbearing years conforming to the age-specific fertility rates of a given year.

Year	Armenia	Azerbaijan	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russian Federation	Tajikistan	Turkmen-istan	Ukraine	Uzbek-istan
1900	8.1	8.0	6.0	7.8	6.4	6.6	6.3	7.4	5.9	6.2	6.7	5.7
1905	8.0	7.8	5.8	7.4	6.4	6.6	6.2	6.7	5.9	6.2	6.4	5.7
1910	8.0	7.7	5.7	7.0	6.4	6.6	6.0	7.2	5.9	6.2	6.0	5.7
1915	7.9	7.5	5.5	6.7	6.3	6.6	5.9	3.4	5.9	6.2	5.7	5.7
1920	7.9	7.4	5.4	6.3	6.3	6.6	5.7	6.7	5.9	6.2	5.4	5.7
1925	7.8	7.2	5.2	5.9	6.3	6.6	5.6	6.8	5.9	6.2	5.0	5.7
1930	7.0	6.9	4.7	5.5	6.0	5.9	4.9	5.8	5.9	6.2	4.4	5.7
1935	6.3	6.6	4.2	4.6	5.8	5.1	4.2	4.2	5.9	6.2	3.8	5.7
1940	5.5	6.3	3.6	3.7	5.5	4.4	3.4	4.2	5.9	6.2	3.1	5.7
1945	2.4	6.0	3.1	3.4	4.9	4.4	3.4	1.9	5.9	6.2	2.9	5.7
1950	4.5	5.6	2.5	3.1	4.3	4.5	3.5	2.9	5.9	6.2	2.7	5.7
1955	4.5	5.4	2.7	2.9	4.5	4.6	3.5	2.8	6.1	5.9	2.8	6.3
1960	4.6	5.6	2.7	3.0	4.6	5.2	3.3	2.6	6.2	6.4	2.4	6.7
1965	4.0	5.4	2.5	2.8	4.1	5.3	2.9	2.1	6.5	6.6	2.0	6.7
1970	3.2	4.6	2.3	2.6	3.5	4.9	2.6	2.0	6.9	6.3	2.0	6.5
1975	2.7	4.0	2.2	2.5	3.2	4.4	2.5	2.0	6.4	5.8	2.0	6.0
1980	2.4	3.3	2.1	2.3	3.0	4.0	2.5	1.9	5.7	5.0	2.0	5.1
1985	2.5	3.0	2.1	2.3	3.0	4.1	2.6	2.1	5.5	4.7	2.1	4.5
1990	2.5	3.0	1.9	2.2	2.8	3.9	2.4	1.9	5.2	4.3	1.9	4.2
1995	1.8	2.6	1.5	1.9	2.2	3.3	1.9	1.3	4.6	3.5	1.4	3.5
2000	1.3	2.0	1.2	1.6	1.9	2.7	1.6	1.2	4.0	2.8	1.1	2.7
2005	1.4	2.0	1.3	1.7	2.3	2.6	1.5	1.3	3.6	2.6	1.3	2.5
2010	1.6	2.0	1.5	1.8	2.5	3.0	1.5	1.6	3.8	2.4	1.4	2.4
2015(p)	1.7	1.9	1.5	1.8	2.4	3.0	1.5	1.6	3.8	2.3	1.5	2.2
2020(p)	1.7	1.8	1.6	1.8	2.3	2.8	1.5	1.6	3.5	2.2	1.5	2.1
2030(p)	1.8	1.8	1.7	1.8	2.2	2.6	1.6	1.7	3.1	2.0	1.6	1.9
2040(p)	1.8	1.8	1.7	1.8	2.1	2.4	1.6	1.8	2.8	1.9	1.7	1.8
2050(p)	1.8	1.8	1.8	1.9	2.0	2.2	1.7	1.8	2.6	1.8	1.8	1.8
2070(p)	1.8	1.8	1.8	1.9	1.9	2.0	1.8	1.9	2.2	1.8	1.8	1.8
2080(p)	1.8	1.8	1.8	1.9	1.9	2.0	1.8	1.9	2.1	1.8	1.8	1.8
2099(p)	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	2.0	1.8	1.9	1.8

Note: (p) Data based on medium estimate projections of the United Nations Population Division.
Data source: Gapminder.org (2015). Children per woman (total fertility rate), Documentation 008 – version 6
(http://www.gapminder.org/data/documentation/gd008/).

Under-five mortality rate

The probability that a child born in a specific year will die before reaching the age of five if subject to current age-specific mortality rates. It is expressed as a rate per 1,000 live births. Note that the under-five mortality rate (U5MR) is the sum of the infant mortality rate and the child mortality rate (probability of dying between age 1 and before age 5).

Live births

Refers to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life - e.g. beating of the heart, pulsation of the umbilical cord or definite movement of voluntary muscles - whether or not the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered live born.

Year	Armenia	Azerbaijan	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russian Federation	Tajikistan	Turk-menistan	Ukraine	Uzbekistan
1900	325.7	312.9	364.9	321.9	469.0	375.5	329.5	409.3		472.6	360.2	379.3
1905			329.7		448.3			441.7			358.1	
1910			295.5		428.1			440.1			354.6	
1915			264.0		397.8						350.4	
1920			233.6		370.3						346.2	
1925			205.1		343.0						253.8	
1930	227.5	233.5	178.6	239.5	309.9		221.5				226.1	
1935			153.9		276.9						212.8	
1940			130.9		242.6						204.2	
1945			110.4		201.5						338.9	
1950	109.6	143.0		124.2	164.3	182.1	135.9			194.0	95.2	
1955	95.6	126.9		109.9	146.3	162.3	119.6			174.4	73.2	
1960	79.1	108.1	46.4	92.0	124.5	139.1	102.0	56.3		150.8	53.6	
1965	63.6	89.9	29.8					39.2		128.4		
1970		74.8	27.9			120.3		44.7				
1975			25.4	68.1	77.7	110.1	56.3	36.8	138.6		30.4	
1980	74.7		23.3	57.6	69.8	98.0	48.5	33.1	129.7	124.2	27.5	118.7
1985	61.3	100.7	19.4	50.2	59.1	78.9	39.0	29.9	121.6	103.6	22.8	85.2
1990	49.7	94.5	16.6	47.3	52.6	65.7	32.3	26.0	108.2	90.7	19.6	71.4
1995	38.6	94.0	17.9	44.1	52.7	61.1	36.2	26.3	119.7	89.7	20.5	69.7
2000	30.1	74.1	14.4	35.7	43.5	49.2	30.6	23.2	93.5	81.9	18.4	63.9
2005	23.4	51.7	9.4	24.6	32.5	39.6	22.2	16.7	65.4	71.0	14.5	54.9
2010	18.1	38.9	6.1	16.4	21.6	30.3	17.4	11.8	52.7	61.0	11.8	46.8
2011	17.2	37.2	5.6	15.1	19.6	28.1	16.7	11.2	51.0	59.0	11.2	45.4
2012	16.4	35.6	5.2	14.0	17.9	26.1	16.0	10.6	49.3	57.0	10.6	43.9
2013	15.6	34.2	4.9	13.1	16.3	24.2	15.4	10.1	47.7	55.2	10.0	42.5

Data source: Gapminder.org (2015). Children per woman (total fertility rate), Documentation 008 – version 6 (http://www.gapminder.org/data/documentation/gd008/).

Infant mortality rate

Infant mortality rate is the probability of a child born in a specific year or period dying before reaching the age of one, expressed as rate per 1,000 live births.

Live births

Refers to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life - e.g. beating of the heart, pulsation of the umbilical cord or definite movement of voluntary muscles - whether or not the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered live born.

Year	Armenia	Azerbaijan	Belarus	Georgia	Kazakh-stan	Kyrgyzstan	Moldova	Russian Federation	Tajikistan	Turkmeni-stan	Ukraine	Uzbek-istan
1900								252.0				
1905								272.0				
1910								271.0				
1915												
1920												
1925												
1930												
1935												
1940												
1945												
1950												
1955												
1960		-										
1965												
1970						92.8	50.0	35.6	108.0		27.9	
1975					63.4	88.4	43.2	30.2	106.9		24.8	
1980	60.9	95.0	19.5	48.0	57.9	81.6	38.1	27.3	99.4	95.4	22.8	86.9
1985	51.0	78.5	16.0		50.4	67.9	31.6	24.9	92.5	81.2	19.3	68.9
1990	42.2	74.1	13.5	30.4	45.8	58.0	26.6	22.0	82.4	72.4	16.8	60.5
1995	33.5	72.2	14.4	38.6	45.5	54.5	29.6	22.1	89.3	71.2	17.7	56.9
2000	26.5	59.2	11.4	29.8	38.1	42.4	25.3	19.7	72.9	64.1	15.9	51.3
2005	20.8	43.6	7.30	22.8	28.9	34.3	19.5	14.4	60.7	55.1	12.5	43.1
2010	16.2	33.4	4.7	19.1	19.5	26.9	16.1	10.0	52.1	47.6	10.2	36.7
2011	15.4	32.0	4.3	18.5	18.1	25.1	15.6	9.4	50.6	46.2	9.7	35.5
2012	14.7	30.8	3.9	17.8	16.7	23.6	15.1	8.9	49.0	44.8	9.2	34.4

Module 3: Measuring work and economic activity

What is covered in this module	**Materials**
	3.1 Relationship between gender and economic activity
	3.2 Overview of how economic activity is measured

- Productive, non-productive, economic and non-economic activities
- Labour force (employed + unemployed) and economic inactivity (outside the labour force)

3.3   Data sources

3.4   Understanding the key indicators

Practical exercises

3.5   Exercise: Making a direct contribution to the economy: classifying individuals undertaking different forms of work as employed, unemployed or economically inactive

3.6   Exercise: Applying labour force statistics to policies for women's economic empowerment

3.1   Gender and economic activity

Gender roles impact on economic activity

There are many kinds of work, both paid and unpaid, and in most societies, there are differences and inequalities between the activities undertaken by women and men.[31] Gender roles and economic activity are deeply entwined. Expected roles impact the types of work people do, such as whether they are employed, run their own business, or stay at home to take care of children; whether they work full-time or a few hours per week; and which particular occupations and industries they work in.

Typical gender gaps in economic activity:
- Women are less likely to participate in the labour force than men
- Employed women work less hours in employment than men
- Women earn less income than men
- Men are more likely to work in mining and construction industries
- Women are more likely to work in the services sector

3.2   Overview of how economic activity is measured

Measuring economic activity involves clear definitions of work

Only certain forms of work are deemed to make a direct contribution to the economy. Measuring the size of the economy involves gathering information on the type of activities people undertake and determining whether they fall in the category of those that contribute to economic production. It is essential that policymakers have a general understanding of how economic activity is measured and what constitutes employment, unemployment, inactivity and underemployment.

Everyone in society falls into one of three categories; they are either employed, unemployed, or are outside of the labour force (also called economically inactive). Each of these concepts is precisely defined based on

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[31] UN Women, Training Centre (n.d.). Glossary (https://trainingcentre.unwomen.org/mod/glossary/view.php?id=36).

international standards agreed through the International Labour Organization (ILO) and the United Nations System of National Accounts (SNA).[32]

These definitions have been long criticized for being gender biased, as they deem work typically done by women, such as caring for children and the elderly, cooking, cleaning and other tasks around the home as "non-economic production". The indirect economic contribution of these types of activities can be measured, for example, through time use surveys, and calculated, but that is a separate exercise to measuring economic production.

The important point to emphasise here is that only certain activities contribute to the economy and within those there are only certain types of work that constitute employment.

Activities are either productive or non-productive

Everything we do during the day and night can be classified as either a productive or non-productive activity. **Productive activities** are those that produce some kind of good or service, either for own-use or for others. Examples of productive activities include cooking a meal, running a small business, growing vegetables for the family to eat, or working as an employee of a bank.

Non-productive activities are things like sleeping, grooming, eating, watching television and studying for an exam. What distinguishes non-productive activities from productive activities is the fact that they cannot be performed by a third person (e.g. you cannot employ someone to sleep or eat for you).

Activities that are considered as 'economic production' count towards the gross domestic product (GDP)

All productive activities can be classified as either **economic** or **non-economic production**. As shown in Figure 1, economic production involves producing goods and services to be sold or exchanged (for the market) or for own use.

The SNA production boundary determines what is considered economic production, meaning that the value of that work is counted towards the national gross domestic product (GDP). Employment work is a subset of activities within the SNA production boundary, as explained in the next section.

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[32] ILO (2013c). *Resolution concerning statistics of work, employment and labour underutilization*, adopted by the 19th International Conference of Labor Statisticians (http://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/normativeinstrument/wcms_230304.pdf); United Nations (n.d.c). The System of National Accounts (SNA). United Nations Statistics Division (http://unstats.un.org/unsd/nationalaccount/sna.asp).

Figure 1 **Economic production as defined by the current system of national accounts**
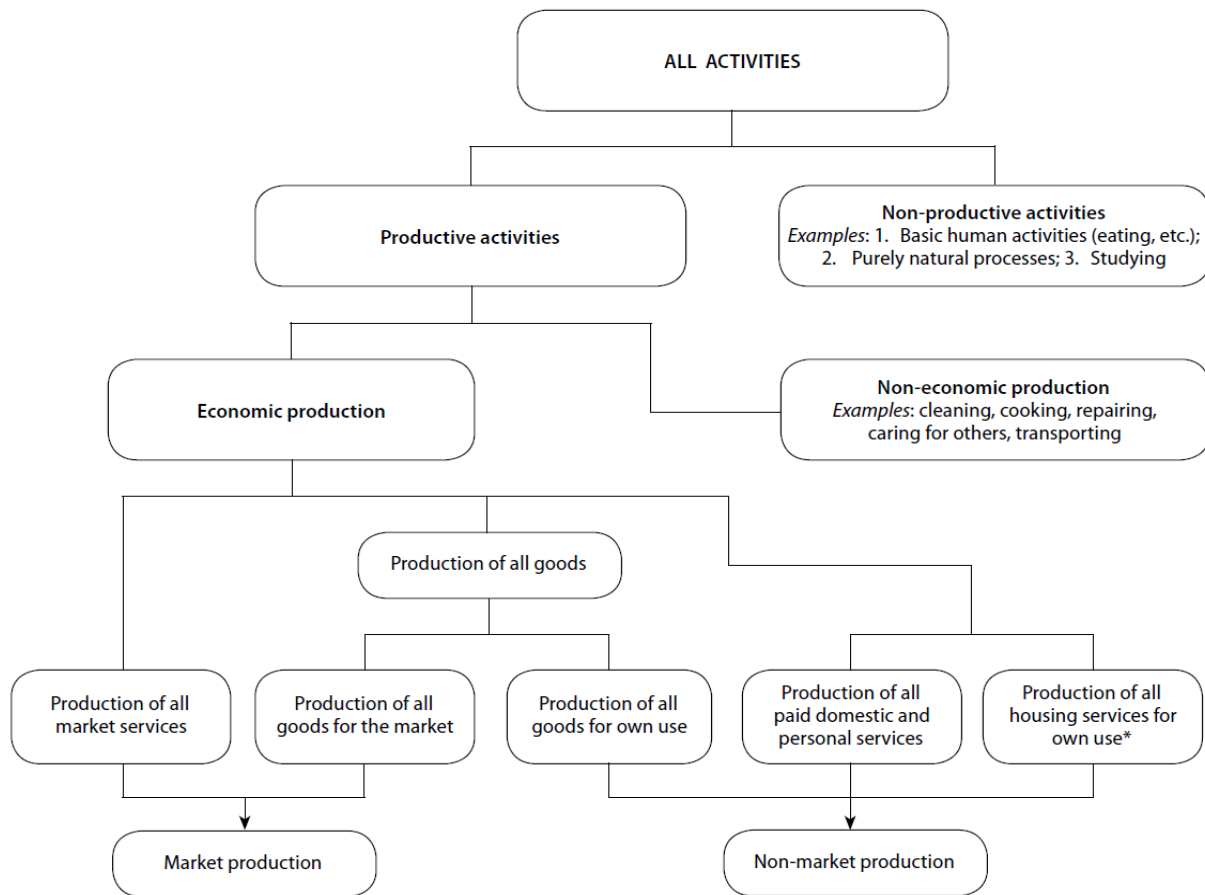
* No labour input.

Source: United Nations (2008). *Principles and Recommendations for Population and Housing Censuses, Revision 2.* United Nations Statistics Division, ST/ESA/STAT/SER.M/67/Rev.2 (http://unstats.un.org/unsd/publication/seriesM/seriesm_67Rev2e.pdf).

Different forms of work   According to the ILO standards for measuring work adopted in 2013,[33] there are five different forms of work:

1. **own-use production work** comprising production of goods and services for own final use
2. **employment work** comprising work performed for others in exchange for pay or profit
3. **unpaid trainee work** comprising work performed for others without pay to acquire workplace experience or skills
4. **volunteer work** comprising non-compulsory work performed for others without pay
5. **other work** activities (not defined in the ILO resolution).

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[33] ILO (2013c). *Resolution concerning statistics of work, employment and labour underutilization*, adopted by the 19th International Conference of Labor Statisticians (http://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/normativeinstrument/wcms_230304.pdf).

Figure 2 **Forms of work and relationship to the SNA production boundary**

Intended destination of production	for own final use		for use by others						
Forms of work	**Own-use production work**		**Employment** (work for pay or profit)	**Unpaid trainee work**	**Other work activities**	**Volunteer work**			
	of services	of goods				in market and non-market units	in households producing		
							goods	services	
Relation to 2008 SNA		*Activities within the SNA production boundary*							
	Activities inside the SNA General production boundary								

Source: ILO (2013c). *Resolution concerning statistics of work, employment and labour underutilization*, adopted by the 19th International Conference of Labor Statisticians (http://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/normativeinstrument/wcms_230304.pdf).

As shown in Figure 2, most, but not all, work activities fall within the SNA production boundary and are counted towards national GDP. Excluded from the production boundary (but still within the General production boundary) are activities that involve producing **services** either for own use, or as part of volunteer work in other households.

Examples of such activities include:
- managing the household budget and paying bills
- shopping for the household
- preparing and/or serving meals
- disposing of household waste and recycling
- cleaning, decorating and gardening
- maintaining one's own dwelling or premises, durables and other goods
- childcare, and
- transporting and caring for elderly, dependent or other household members and domestic animals or pets.

These activities are only excluded from the production boundary when performed for one's own household, or for another household as a volunteer. If someone is providing such services as a domestic cleaner or babysitter and being paid (either in cash or in kind), then these activities would instead count as employment.

Employment work is the focus of labour force statistics

Statistics can be collected on all these forms of work. However, the focus of labour force statistics, and of many of the indicators in this module, is on employment work.

Definitions of key concepts[34]

Labour force or the economically active population consists of all people who are 'employed' and 'unemployed', based on the following definitions:

> **Employed** persons are those above a certain age (usually 15 years old) who, during a specified period (usually the previous seven days), performed some work for a wage, salary, profit or family gain, be it in cash or in kind. Also included are those people who had a job, farm or business but were temporarily absent from work for some reason (e.g. holidays or short-term illness).
>
> **Unemployed (looking for work)** are persons of a certain age who were not employed during the reference period, but who are currently available and actively seeking work.

Outside the labour force are those people who are not classified as employed or unemployed. This includes children and people not working or looking for work for reasons included being a student, retired, a homemaker, having an illness or disability that prevents them from being able to work, or choosing not to work.
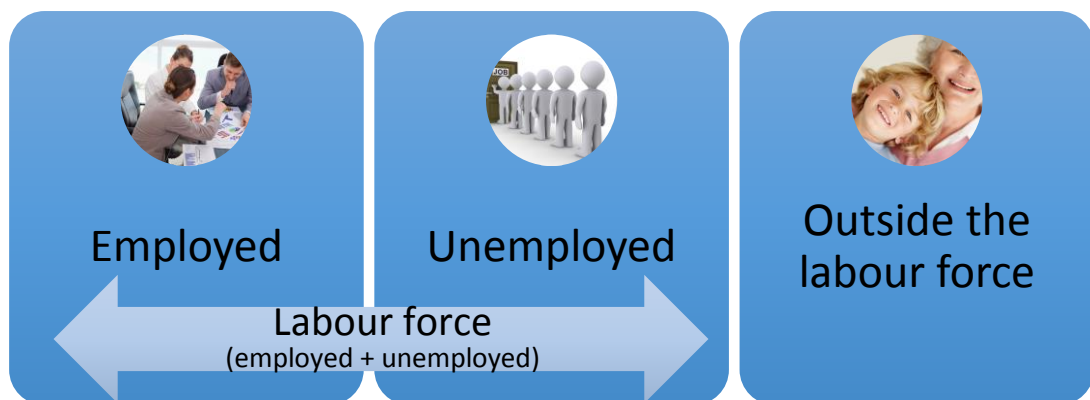
Choosing the right classification

People can hold several jobs and do different forms of work at the same time. When classifying an individual based on their activities, priority should be given to employment over being unemployed or outside the labour force, and to unemployment over outside of the labour force. For example, if someone is retired they are usually classified as outside the labour force. But, if they are actively seeking to return to work, and are available to work if offered a job, they should be classified as unemployed instead.

Persons may also be classified according to their main form of work (e.g. mainly in own use production work, or mainly in employment work). Priority is given to any work activity over non-productive activities. So, for example, if someone is mainly a student or a homemaker, but they do some unpaid work in the family business, they are classified as mainly in employment work, even though they may spend less time doing that form of work than other activities.

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[34] Definitions for concepts such as employment and unemployment can differ slightly from country to country. For example, the age limits for inclusion in each category or the types of unpaid work that is counted as 'employment'.

Examples

The size of the population versus the labour force in the Republic of Moldova, 2010

In 2010, there were just over 1.4 million men aged 15 and above in Moldova.

Of these, 573,000 were employed (41%) and a further 57,000 were unemployed.

The male labour force therefore comprises 630,000 men, or about 45% of the men population.

Men aged 15+
1,410,000

Unemployed
57,000

Employed
573,000

Women aged 15+
1,522,000

Unemployed
35,000
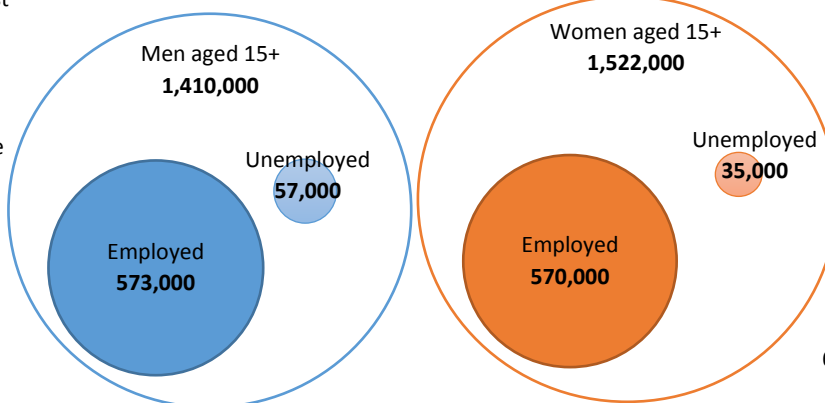
Employed
570,000

In 2010, there were just over 1.5 million women aged 15 and above in Moldova.

Of these, 570,000 were employed (37%) and a further 35,000 were unemployed.

The female labour force therefore comprises 605,000 women, or about 40% of the women population.

Data source: UNECE (2016a). UNECE Statistical Database (http://w3.unece.org/PXWeb/en).

3.3   Where do the data come from?

Data sources

Surveys
Measuring the activities of individuals often involves some sort of household level data collection, with the most common being a Labour Force Survey. This gathers information to classify people as employed, unemployed or outside the labour force as well as their occupation, industry, and working conditions, such as hours worked, wages, contractual status, and whether they work in the informal or formal sector. They usually collect details on multiple jobs, as well as demographic and other socio-economic characteristics, such as education level and participation in technical and vocational training.

Establishment or business activity surveys are useful for measuring employment. These are surveys completed by business owners and usually collect information on the number and characteristics of their employees. These surveys will typically provide data on a part of the employed population, such as those businesses with a certain number of employees, and do not tend to reach informal businesses and the self-employed.

Censuses
The population and housing census gathers basic information about the economic activity of individuals, which allows for some analysis of labour force participation. This is useful but generally considered less accurate that surveys. This is because a census can only ask a relatively small number of questions and is not appropriate for asking the detailed questions required to accurately measure work and economic activity.

Administrative records

Administrative records maintained by government ministries are a valid source of labour statistics in some countries. For example, in Belarus, Kyrgyzstan, Ukraine and Uzbekistan, unemployment statistics have been based on data from unemployment registers. The accuracy of such registers depends on a number of factors, such as how likely people are to register their unemployment, and whether the registers reflect the statistical definition of unemployment (i.e. without work, available for work and actively seeking work). Studies have shown that for some countries in the UNECE region, such as Croatia, the number of registered unemployed far exceed the survey based estimates of active jobseekers by as much as 65%.[35]

3.4 Understanding the key indicators

Selected indicators

Labour force participation
- Inactivity rate (*)

Employment
- Employment rate (*)
- Status in employment (employees, own-account workers, employers and family workers) (*)
- Minimum number of occupations that account for half of the total employment
- Hourly gender pay gap (*)
- Proportion of employed working part-time (*)
- Proportion of employed in time-related underemployment
- Informal employment of workers in the non-agricultural sector
- Unemployment rate (*)

Unpaid work and work-life balance
- Proportion of workers working over 50 hours per week (paid work)
- Average hours per week spent in total work (employment and unpaid forms of work)
- Average hours spent in own-use production work
- Employment rate of 25-49 year olds
- Proportion of children aged 3 to mandatory school age in formal care

(*) Those indicators are further developed in this section

Entrepreneurship is another important of gender statistics but one that is still under development. The United Nations Evidence and Data for Gender Equality (EDGE) initiative (genderstats.org/EDGE) is working on developing standards and indicators for asset ownership and entrepreneurship. Until that work is further progressed, the UNECE set of gender indicators does not include anything directly related to entrepreneurship.

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[35] Kuddo, A. (2010). *Labor Market Monitoring in Eastern Europe and Central Asia Countries: Recent Trends (Round Three)*, World Bank.

3.4.1 Inactivity rate (%)

How to calculate	The inactivity rate is the share of persons outside the labour force (economically inactive) in a particular population (e.g. rural based women aged 15-49, or all men aged 15 and above). Inactivity rate is calculated by **dividing the number of people in the population who are outside the labour force, by the total population**. For example, the inactivity rate for women aged 15 and above in Moldova, is the number of women in this age-group who are economically inactive (numerator), divided by the total number of women in this age-group (denominator). $$\frac{\text{Women in Moldova aged 15+ not in the labour force}^{36} \: (\textbf{917,466})}{\text{All women in Moldova aged 15+ } (\textbf{1,522,172})} \times 100 = 60.3\%$$ The rate is calculated for men in the same way: $$\frac{\text{Men in Moldova aged 15+ not in the labour force } (\textbf{779,084})}{\text{All men in Moldova aged 15+ } (\textbf{1,409,368})} \times 100 = 55.3\%$$
Data sources	- Labour Force Survey, Population and Housing Census, other household survey that collects information on economic activity status (e.g. Living Standards Survey, Household Income and Expenditure Survey).
Key definitions	**Inactivity** Inactivity refers to economic inactivity and is a term encompassing people who are neither employed nor unemployed. This is not to be confused with lack of income, as economically inactive people may have an income, for example, a pension or an independent source of wealth. The changes to measuring work introduced by the ILO Conference of Labour Statisticians in 2013 have stopped the common use of the term economically inactive or inactive, instead describing this group as simply outside the labour force.
Be mindful of	**Limitations of survey data** If data are from a survey it may not be possible to provide accurate estimates for small areas or small population sub-groups. As survey data is collected on a sample of the population, they do not always capture enough responses from small groups to allow statistics to be produced (e.g. people with a disability). **Relationship to labour force participation** As those outside the labour force (inactive) and those in the labour force (employed and unemployed) are mutually exclusive and exhaustive categories (i.e. everyone must fall within one and one only of the three categories), the inactivity rate and the labour force participation rate for a given population should always add up to 100%. Note however that the inactivity rate + employment rate + unemployment rate will NOT add up to 100%. This is because the unemployment rate is not a calculation of unemployed to total population, but rather only the proportion of the labour force that is unemployed. The unemployment rate indicator is explained separately below.

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[36] Data source is the UNECE Statistical Database (UNECE, 2016b) with the population outside the labour force calculated manually based on total population minus the employed plus unemployed populations.

Examples

Data needed to calculate the inactivity rate

Resulting calculation

Inactivity rate (%) for population aged 15 and above, by sex, selected countries, year as indicated

	Year	Population age 15+		Outside the labour force age 15+		Inactivity rate (%)	
		Female	Male	Female	Male	Female	Male
Azerbaijan	2010	3,616,857	3,405,782	1,497,456	1,163,078	41.4	34.2
Belarus	2012	4,364,517	3,655,027	2,000,544	1,417,056	45.8	38.8
Georgia	2010	1,976,206	1,718,460	1,068,006	681,860	54.0	39.7
Kazakhstan	2012	6,632,986	5,930,058	2,215,880	1,365,383	33.4	23.0
Kyrgyzstan	2010	1,952,835	1,850,895	924,618	422,821	47.3	22.8
Moldova, Republic of	2010	1,522,172	1,409,368	917,466	779,084	60.3	55.3
Russian Federation	2010	66,242,404	54,929,054	29,376,629	16,354,511	44.3	29.8

Notes: Georgia – data do not cover Abkhazia AR and Tskhinvali regions; Republic of Moldova – data exclude the territory of the Transnistria and municipality of Bender; Russian Federation – data refer to the population aged 15-72 years; Ukraine – data do not cover the area of radioactive contamination from the Chernobyl disaster.
Source: UNECE (2016a). UNECE Statistical Database (http://w3.unece.org/PXWeb/en) - compiled from national and international (Eurostat) official sources.

Inactivity rate (%) for population aged 15 and above, by sex, various countries, year as indicated
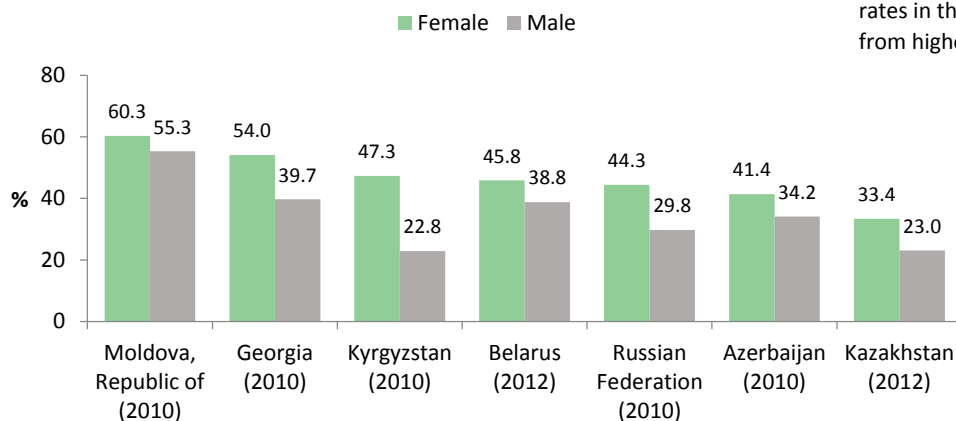
This graph shows the inactivity rates in the table above, sorted from highest to lowest.

Source: UNECE (2016a). UNECE Statistical Database (http://w3.unece.org/PXWeb/en) - compiled from national and international (Eurostat) official sources.

Gender gap in economic inactivity
Female minus male inactivity rate (percentage points difference)

Kyrgyzstan (2010)	24.5
Belarus (2012)	14.6
Kazakhstan (2012)	14.4
Georgia (2010)	10.4
Moldova, Republic of (2010)	7.3
Russian Federation (2010)	7.1
Azerbaijan (2010)	5.0

Percentage points difference
between female and male inactivity
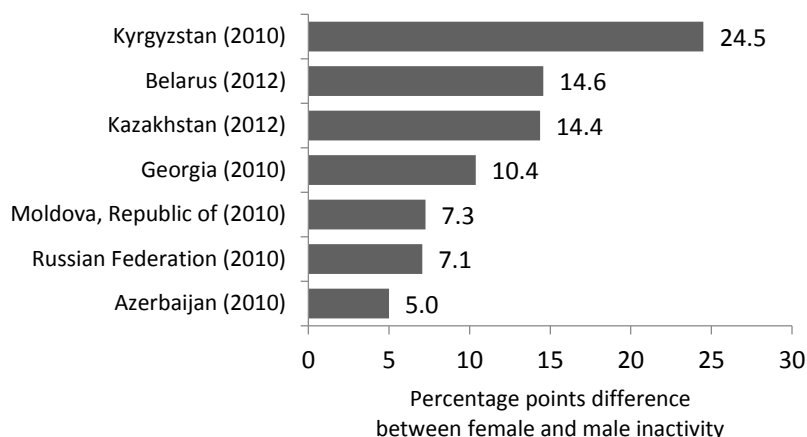
This graph adds new information to that shown above by highlighting the **gender gap** in inactivity rates (female inactivity rate minus male inactivity rate).

On its own, this graph lacks details of the inactivity rates themselves, so such as graph is best along with the table and/or graph above.

Source: UNECE (2016a). UNECE Statistical Database (http://w3.unece.org/PXWeb/en) - compiled from national and international (Eurostat) official sources.

Key messages from the graphs and table above:

- Gender gap in inactivity is highest in Kyrgyzstan.
- Moldova has the highest rates of economic inactivity, but one of the smallest gaps between women and men.
- Most women and men in Moldova are economically inactive.

How to interpret this indicator	**Look for differences between men and women** - The inactivity rate for women tends to be higher than for men, often due to the roles women are expected to play in raising children and around the home. Does the data confirm this? **Look at reasons for inactivity** – The inactivity rate is more interesting when combined with the underlying reasons for inactivity. Standard reasons for inactivity include studying, retirement, and home-making, being unable to work due to illness or disability, or choosing not to work. There are usually significant gender gaps in the reasons people give for being economically inactive.

Moldovan women more likely to be inactive due to homemaking responsibilities than men
Reasons for economic inactivity, Republic of Moldova, 2012

women aged 15 and above
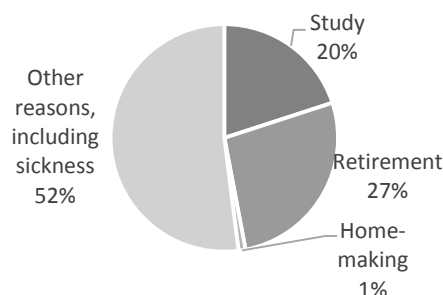
Other reasons, including sickness 25%
Home-making 17%
Retirement 40%
Study 18%

men aged 15 and above

Other reasons, including sickness 52%
Study 20%
Retirement 27%
Home-making 1%

Look for differences between certain age-groups and family situations – At the age when young people are starting a family (e.g. 25-40 years old) may be when women's employment rate is more likely to be lower than men's. Examining differences between different five-year age-groups and/or by the number of children of certain ages.

Consider the impacts of events – Major changes in the labour market will impact on the inactivity rate, such as external economic shocks (e.g. global financial crisis), changes in legislation, job creation initiatives, natural disasters, or trade agreements. Look at the date of these events and compare to any changes in trend around the same time.

Compare to other countries – Use international databases, such as the UNECE gender statistics database, and the ILO Statistics Database to look the inactivity rates of comparable countries.

Policy implications	Targeted employment and work-life balance policies can stimulate increased participation by certain sub-populations to narrow any gaps. Analysis of the inactivity rate for different sub-populations of men and women (e.g. location, age, education level, family situation) can point to where policy interventions may be needed.

3.4.2 Employment rate (%)

How to calculate	The employment rate is the share of employed persons in a particular population (e.g. rural based women aged 15-49, or all men aged 15 and above). It is also known as the employment to population ratio. Employment rate is calculated by **dividing the number of people in the population who are employed, by the total population**. For example, the employment rate for women aged 15-24 in Moldova, is the number of women in this age-group who are employed (numerator), divided by the total number of women in this age-group (denominator). $$\frac{\text{Employed women in Moldova aged 15-24[37] (\textbf{151,700})}}{\text{All women in Moldova aged 15-24 (\textbf{487,781})}} \times 100 = 31.1\%$$ As shown above, in 2014, there were 151,700 women aged 15-24 who were employed, out of a total of 487,781 women in this age-group. Dividing those figures and then multiplying by 100 to get a percentage tells us that 31.1% of young women were employed, or close to one third.
Data sources	- Labour Force Survey, Population and Housing Census, other household survey that collects information on economic activity status (e.g. Living Standards Survey, Household Income and Expenditure Survey).
Key definitions	**Employment** Persons in employment are those above a certain age (usually 15 years old) who, during a specified period (usually the previous seven days), performed some work for a wage, salary, profit or family gain, be it in cash or in kind. Also included are those people who had a job, farm or business but were temporarily absent from work for some reason (e.g. holidays or short-term illness). **In kind** Refers to receiving remuneration in a form other than cash, such as meals, free rent of a room or premises, use of a vehicle, etc. in exchange for work done to produce goods or services.
Be mindful of	**Limitations of survey data** If data are from a survey it may not be possible to provide accurate estimates for small areas or small population sub-groups. As survey data is collected on a sample of the population, they do not always capture enough responses from small groups to allow statistics to be produced (e.g. people with a disability). **Age ranges** Employment is usually measured for those aged 15 and above. Sometimes this will be restricted to a working age population that is relevant for the country, such as from when compulsory school age ends (e.g. age 15) until compulsory retirement age (e.g. age 64). **Inclusions/exclusions from the definition of employment** The activities considered a form of employment can vary from country to country. For example, some may count the own-use production of goods as a form of employment (e.g. growing food to feed oneself and other household members).

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[37] Data source is the National Bureau of Statistics of Republic of Moldova (2014), *Labour Force in the Republic of Moldova: Employment and Unemployment* (http://www.statistica.md/public/files/publicatii_electronice/ocupare_somaj/Forta_Munca_2014_en.pdf).

Examples

Data needed to calculate the employment rate

Resulting calculation

Employment rate (%) for population aged 15 and above, by sex, selected countries, year as indicated

	Year	Population age 15+		Employed age 15+		Employment rate (%)	
		Female	Male	Female	Male	Female	Male
Azerbaijan	2010	3,616,857	3,405,782	2,102,000	2,227,000	58.1	65.4
Belarus	2012	4,364,517	3,655,027	2,352,000	2,225,000	53.9	60.9
Georgia	2010	1,976,206	1,718,460	777,000	851,000	39.3	49.5
Kazakhstan	2012	6,632,986	5,930,058	4,131,000	4,376,000	62.3	73.8
Kyrgyzstan	2010	1,952,835	1,850,895	926,000	1,318,000	47.4	71.2
Moldova, Republic of	2010	1,522,172	1,409,368	570,000	573,000	37.4	40.7
Russian Federation	2010	66,242,404	54,929,054	34,304,000	35,500,000	51.8	64.6

Notes: Georgia – data do not cover Abkhazia AR and Tskhinvali regions; Republic of Moldova – data exclude the territory of the Transnistria and municipality of Bender; Russian Federation – data refer to the population aged 15-72 years.
Source: UNECE (2016a). UNECE Statistical Database (http://w3.unece.org/PXWeb/en) - compiled from national and international (Eurostat) official sources.

Employment rate (%) for population aged 15 and above, by sex, various countries, year as indicated
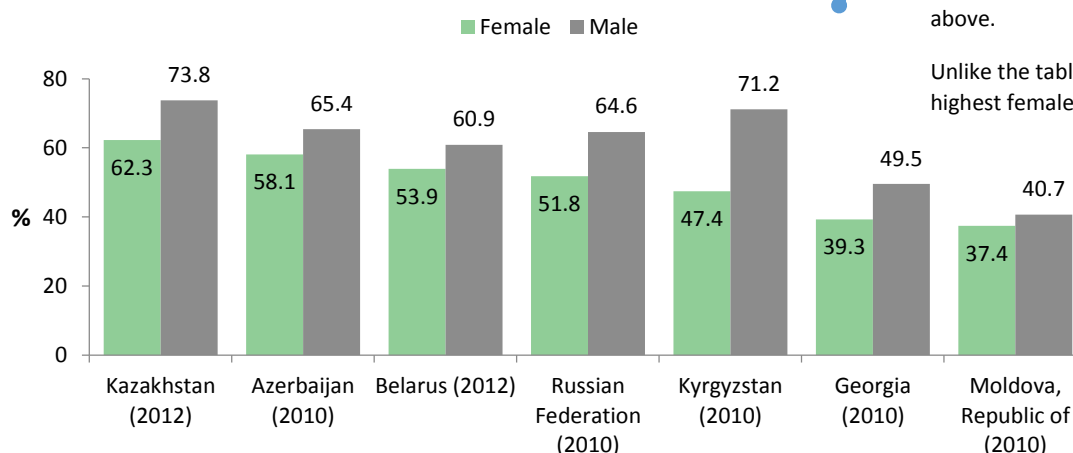
This graph gives a visual representation of the employment rates in the table above.

Unlike the table it is sorted by highest female rate to lowest.

Source: UNECE (2016a). UNECE Statistical Database (http://w3.unece.org/PXWeb/en) - compiled from national and international (Eurostat) official sources.

Key messages from the table and graph above:

- Of these countries, female employment rate is highest in Kazakhstan (62.3%) and lowest in Moldova (37.4%).
- Male employment rate is highest in Kazakhstan (73.8%) and Kyrgyzstan (71.2%).
- The gender gap is greatest in Kyrgyzstan and narrowest in Moldova. While possible to recognize this visually, the actual gap must be calculated manually (around 24 percentage points difference in Kyrgyzstan (71.2-47.4=23.8) and 3 in Moldova (40.7-37.4=3.3)).

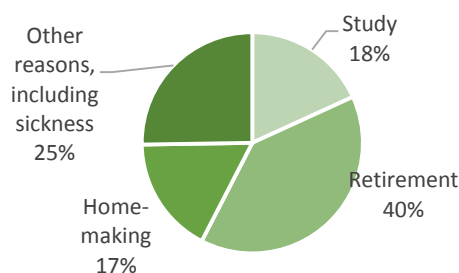| **How to interpret this indicator**	**Look for differences between men and women** - The employment rate for women tends to be lower than for men, often due to the roles women are expected to play in raising children and around the home. Does the data confirm this?

Look for changes over time – If the labour market is becoming more or less receptive to employing women or men this may be shown in changes in the employment rate over time. Most countries in the UNECE are collecting annual or quarterly labour force data and so new data are frequently available.

Employment declining at similar rate for both men and women
Employment rate (%) by sex, Republic of Moldova, 2000-2012
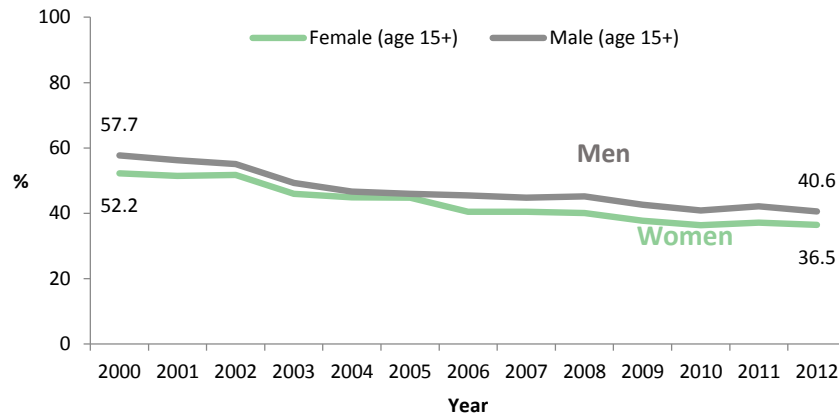
Source: UNECE (2016a). UNECE Statistical Database (http://w3.unece.org/PXWeb/en) - compiled from national and international (Eurostat) official sources.

Look for differences between certain age-groups and family situations – At the age when young people are starting a family (e.g. 25-40 years old) may be when women's employment rate is more likely to be lower than men's. Examining differences between different five-year age-groups and/or by the number of children of certain ages.

Consider the impacts of economic events – Major changes in the labour market due to external economic shocks (e.g. global financial crisis), natural disasters or trade agreements

Compare to other countries – Use international databases, such as the UNECE gender statistics database, and the ILO Statistics Database to look the employment rates of comparable countries.

Accuracy of the data – Look at the way in which the data on employment has been gathered. Is it possible that women or men could be under or over counted considering the methodology used? For example, if the question or method leads to categorization of individuals based on what they spend most of their time doing, rather than prioritising work and employment related activities above non-productive activities, regardless of time spent.

Policy implications	Targeted employment and work-life balance policies can stimulate increased participation by certain sub-populations to narrow any gaps. Analysis of the employment rate for different sub-populations of men and women (e.g. location, age, education level, family situation) can point to where policy interventions may be needed.

3.4.3 Status in employment

How to calculate	This indicator is based on the absolute number of employed people in each category. It is typically displayed in three ways:

a) **Absolute number in each status category**

Most women and men are employees
Status in employment (number), by sex, Republic of Moldova, 2013

Status	Women	Men
Employees	423,500	383,100
Employers	3,200	5,300
Own-account workers	136,400	196,000
Family workers	17,500	7,700
Total	580,700	592,000

Source: National Bureau of Statistics of Republic of Moldova (2014). *Labour Force in the Republic of Moldova: Employment and Unemployment* (http://www.statistica.md/public/files/publicatii_electronice/ocupare_somaj/Forta_Munca_2014_en.pdf).

b) **Percentage in each status category**

Women more likely to be employees than men
Status in employment (%), by sex, Republic of Moldova, 2013

Status	Women	Men
Employees	74	66
Employers	0	0
Own-account workers	23	33
Family workers	3	1
Total	100	100

Note: Less than 1% of women and men are employers.
Source: National Bureau of Statistics of Republic of Moldova (2014). *Labour Force in the Republic of Moldova: Employment and Unemployment* (http://www.statistica.md/public/files/publicatii_electronice/ocupare_somaj/Forta_Munca_2014_en.pdf).

c) **Women and men's share of each status category**

Majority of employers and own-account workers are men
Share of status in employment, by sex, Republic of Moldova, 2011

	Percent (%)		
Status	Women	Men	Total
Employees	53	47	100
Employers	38	62	100
Own-account workers	41	59	100
Family workers	69	31	100

Source: National Bureau of Statistics of Republic of Moldova (2014). *Labour Force in the Republic of Moldova: Employment and Unemployment* (http://www.statistica.md/public/files/publicatii_electronice/ocupare_somaj/Forta_Munca_2014_en.pdf).

Data sources	- Labour Force Survey
	- Population and Housing Census
	- Other household surveys that collect information on economic activity status (e.g. Living Standards Survey, Household Income and Expenditure Survey)

Key definitions

Employment

Persons in employment are those above a certain age (usually 15 years old) who, during a specified period (usually the previous seven days), performed some work for a wage, salary, profit or family gain, be it in cash or in kind. Also included are those people who had a job, farm or business but were temporarily absent from work for some reason (e.g. holidays or short-term illness).

Status

The status of employment provides a distinction between 'paid employment' and 'self-employment' jobs. Workers holding paid-employment jobs have explicit (written or oral) or implicit employment contracts which give them a basic remuneration not directly dependent upon the revenue of the unit for which they work. Self-employment jobs are jobs where the remuneration is directly dependent upon the profits derived from the goods and services produced.

There are five standard categories for status of employment:[38]

1   **Employees** – Workers who hold paid employment jobs.
2   **Employers** – Workers who hold self-employment jobs and have engaged, on a continuous basis, one or more persons to work for them in their business as employees.
3   **Own-account workers** – Workers who hold self-employment jobs and have not engaged, on a continuous basis, any employees to work for them during the reference period.
4   **Members of producers cooperatives** – Workers who hold self-employment jobs in a cooperative producing goods and services, in which each member takes part on an equal footing with other members in determining the organisation of production, sales and/or other work of the establishment, the investments and the distribution of the proceeds of the establishment amongst their members.
5   **Family workers** – Workers who hold self-employment jobs in a market-oriented establishment operated by a related person living in the same household, who cannot be regarded as partners because their involvement is not comparable to the head of the establishment.

Vulnerable employment

Own-account workers and contributing family workers are considered to be in vulnerable employment. According to the ILO, they are "less likely to have formal work arrangements, and are therefore more likely to lack decent working conditions, adequate social security and 'voice' through effective representation by trade unions and similar organizations. Vulnerable employment is often characterized by inadequate earnings, low productivity and difficult conditions of work that undermine workers' fundamental rights."[39]

Be mindful of

How the status categories are defined

Definitions may vary to what is given above. Check how each status has been defined and the methods used when gathering and coding data to ensure the approach to categorising status in employment is clear.

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[38] For additional information, see: ILO (1993). *Resolution concerning the International Classification of Status in Employment (ICSE)*, adopted by the 15th International Conference of Labour Statisticians (http://www.ilo.ch/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_087562/lang--en/index.htm).

[39] ILO (2010a). 'Vulnerable employment and poverty on the rise, Interview with ILO chief of Employment Trends Unit' (www.ilo.org/global/about-the-ilo/newsroom/features/WCMS_120470).

Examples

Status in employment (%) for employed population aged 15 and above, by sex, selected countries, 2010

	Armenia		Georgia		Russian Federation		Ukraine	
	Female	Male	Female	Male	Female	Male	Female	Male
Employees	50	62	39	37	94	92	80	82
Employers	0	1	1	2	1	2	1	1
Own-account workers	27	27	27	44	5	6	18	16
Members of producers cooperatives	0	0	..	..	0	0	0	0
Family workers	22	9	34	16	0	0	0	1
Unknown	0	0	0	0	0	0	0	0

Notes: '..' indicates data are not available; Ukraine - data do not cover the persons who are still living in the area of Chernobyl contaminated with radioactive material. Data do not cover the persons who are living in institutions and those who are working in the army. Data refer to the population aged 15-70.
Source: UNECE (2016a). UNECE Statistical Database (http://w3.unece.org/PXWeb/en) - compiled from national and international (Eurostat) official sources.

Distribution of status in employment, by sex, selected countries, 2010
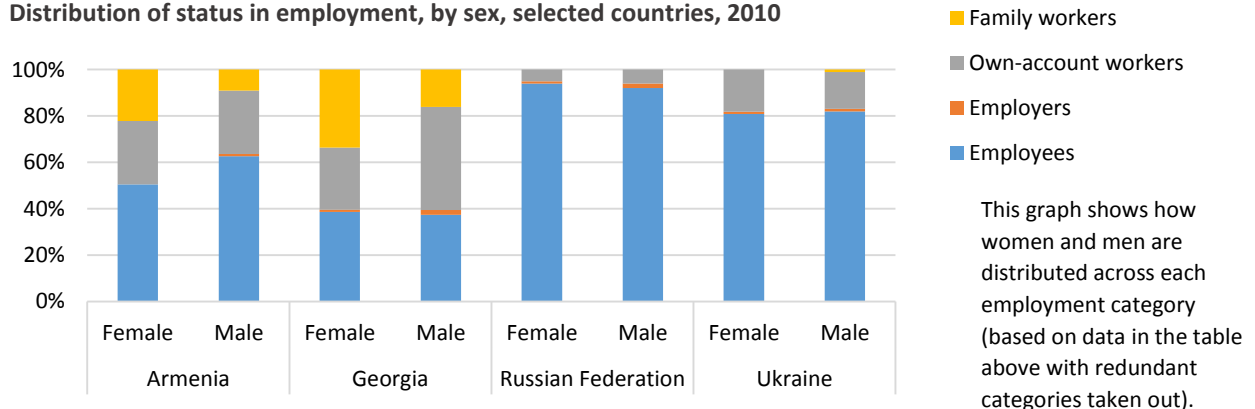
This graph shows how women and men are distributed across each employment category (based on data in the table above with redundant categories taken out).

Notes: Ukraine - data do not cover the persons who are still living in the area of Chernobyl contaminated with radioactive material. Data do not cover the persons who are living in institutions and those who are working in the army. Data refer to the population aged 15-70.
Source: UNECE (2016a). UNECE Statistical Database (http://w3.unece.org/PXWeb/en) - compiled from national and international (Eurostat) official sources.

Key messages from the table and graph above:

- Family workers and own-account workers are more commonly found in Georgia and Armenia than in the Russian Federation or Ukraine.
- Women are more likely than men to be contributing family workers.
- Georgia has the lowest percentage of secure paid employment with more than half of both men and women being self-employed or working in family businesses.
- A very small percentage of people are employers.

How to interpret this indicator	**Look for differences between men and women** – Status in employment tends to differ between men and women.

Consider the percentage in vulnerable employment – Combine the own-account and family worker categories to get the share of employed people in vulnerable employment. Are there differences between women and men?

Percentage of employed persons in vulnerable employment, selected countries, 2010
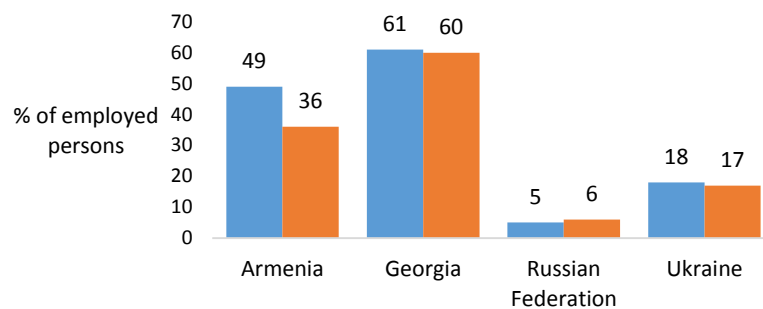
Notes:
- Vulnerable employment is the sum of own-account workers and family workers.
- Ukraine - data do not cover the persons who are still living in the area of Chernobyl contaminated with radioactive material. Data do not cover the persons who are living in institutions and those who are working in the army. Data refer to the population aged 15-70.
Source: UNECE (2016a). UNECE Statistical Database (http://w3.unece.org/PXWeb/en) - compiled from national and international (Eurostat) official sources.

Look for changes over time – If the labour market is becoming more or less receptive to employing women or men this may be shown in changes in the employment status over time. Most countries in the UNECE are collecting annual or quarterly labour force data and so new data are frequently available.

Compare to other countries – Use international databases, such as the UNECE gender statistics database, and the ILO Statistics Database to look the employment rates of comparable countries.

| **Policy implications** | Paid employees and employers are considered more secure forms of employment. Policies that stimulate the creation of employee jobs and support small business owners to grow their business through employing others could lead to increased proportion of the labour force in these two more secure categories.

Contributing family workers may be unpaid and financially dependent. Policies and programs that support the establishment of family partnerships in business (e.g. tax advantages) could minimise the number of women in family worker roles and provide them with a more equal footing in the family business. |
|---|---|

3.4.4 Hourly gender pay gap

How to calculate	The gender pay gap is the difference between average hourly wage rates of men and women, expressed as a percentage of average hourly wage rates of men. If a woman earns 70% percent of what a man earns, then the gender gap is 30 percentage points.[40] Gender pay gap is calculated using the following formula: $$\frac{\text{(Men's average hourly wage – women's average hourly wage)}}{\text{Men's average hourly rate}} \times 100$$ **Example** **Average gross wage rates and earnings (US\$), 2006** |	Hourly	Weekly
---	---	---
Male	14.44	546.80
Female	11.37	335.10	 $$\frac{\textbf{(14.44 – 11.37 = 3.07)}}{\textbf{(14.44)}} \times 100 = 21.2\%$$ Using the gross hourly wage rates above, the gender pay gap is 21.2%. In other words, women earn 79.8% of what men earn. The calculation is the same for other forms of gender pay gap. For example, average hourly wage could be replaced with average weekly earnings to find out the gender gap based on average weekly pay. Based on the data above, the gap would be 38.7%, which is much higher than that based on hourly earnings, as sign that women are more likely to work less hours (part-time) than men and therefore earn lower weekly incomes.
Data sources	- Household surveys such as the Labour Force Survey, Living Standards Survey, Household Income and Expenditure Survey - Enterprise surveys (of businesses or establishments) - Administrative records, such as social security or pension funds, taxation records, and records maintained by the ministry or department of labour/employment
Key definitions	**Gender pay gap** The difference between men's and women's average earnings from employment, shown as a percentage of men's average earnings. • **Gender Pay Gap in hourly wage rates** refers to the gender gap in average hourly earnings. This indicator aims to capture the difference between men's and women's overall position in the labour market. It measures the difference between men's and women's wage rates independent of the number of hours worked, the type of activity or the type of occupation. • **Gender Pay Gap in monthly earnings** refers to the gender gap in average monthly earnings. This indicator aims to capture the variance between men's and women's earnings over a specific period of time. It reflects differences in time worked and type of work performed, which translates into gender differences in economic autonomy.

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[40] ILO (2013a). *Equal Pay: an introductory guide* (http://www.ilo.org/global/publications/WCMS_216695/).

Wage rates

Earnings elements meant to be measured, as stipulated by the ILO *Resolution concerning an integrated system of wages statistics* (ILO, 1973),[41] in relation to an appropriate time period such as the hour, day, week, month or other customary period used for purposes of determining the wage rates concerned. In the case of these statistics, the reference time period is the hour.

Wage rates should include basic wages, cost-of-living allowances and other guaranteed and regularly paid allowances, but exclude overtime payments, bonuses and gratuities, family allowances and other social security payments made by employers. Ex gratia payments in kind, supplementary to normal wage rates, are also excluded.

Earnings

Remuneration in cash and in kind paid to employees, as a rule at regular intervals, for time worked or work done together with remuneration for time not worked, such as for annual vacation, other paid leave or holidays.

- **Earnings include** direct wages and salaries for the time worked, or work done, remuneration for time not worked, bonuses and gratuities and housing and family allowances paid by the employer directly to his employee.
- **Earnings exclude** employers' contributions in respect of their employees paid to social security and pension schemes and also the benefits received by employees under these schemes. Earnings also exclude severance and termination pay.

Gross earnings

Total earnings before any deductions are made by the employer in respect of taxes, contributions of employees to social security and pension schemes, life insurance premiums, union dues and other obligations of employees.

Net earnings

Pay allocated to the worker after deductions are made by the employer in respect of taxes, contributions of employees to social security and pension schemes, life insurance premiums, union dues and other obligations of employees.

Be mindful of	**Basis on which the pay gap has been calculated** Estimates of the gender pay gap differ widely depending on: • the data source (household or enterprise surveys or administrative sources) • the calculation method (use of the mean or median to calculate average wages) • the type of wages considered (hourly or monthly wages, net or gross wages, inclusion or not of additional benefits) • the categories of workers included in the calculation (often the gender pay gap is calculated for employees only since reliable data on the income from self-employment are often not available).[42] Avoid misinterpretation by making sure the wage rates used for women and men are comparable (e.g. come from the same data source) and that the basis on which the pay gap has been calculated is clear.

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[41] ILO (1973). *Resolution concerning an integrated system of wages statistics*, adopted by the 12th International Conference of Labour Statisticians (http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_087496/lang--en/index.htm).

[42] UNECE (2010). *Developing Gender Statistics: A practical tool* (http://www.unece.org/?id=17450).

Examples

Gender pay gap in average hourly wage rates, selected countries, 2003-2013
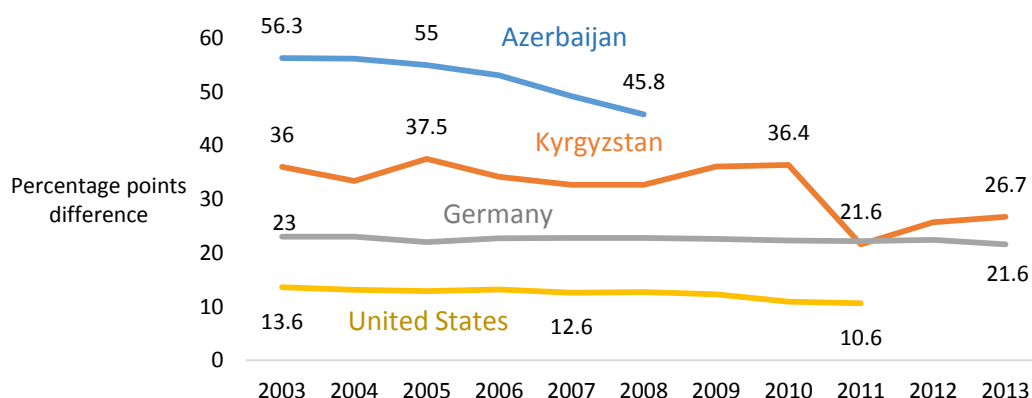
Notes: Data not available for Azerbaijan from 2009-2013, or for United States for 2012-2013; Germany - data from 2006 are compiled from European Structure of Earnings Surveys. Earlier data are compiled from national sources; Kyrgyzstan - Figures for hourly earnings are obtained by dividing the average monthly earnings by the average number of monthly working hours.
Source: UNECE (2016a). UNECE Statistical Database (http://w3.unece.org/PXWeb/en) - compiled from national and international official sources.

Key messages from the graph above:

- Gender pay gap varies widely between countries.
- Azerbaijan has the highest gap but is showing the most rapid lowering of the gap. If this trend continued from 2009, the gap may be lower than that seen in Kyrgyzstan.
- There is little change in the gender pay gap in hourly wages from year to year, except in Kyrgyzstan.

How to interpret this indicator	**Understand what the number represents** – Gender pay gap is one of the trickier indicators to understand. The number is the gap between men and women, so the higher the number, the more men earn relative to women. Much has been written on the gender pay gap. Some useful resources are:
	• ILO (2013a). *Equal Pay: an introductory guide* (http://www.ilo.org/global/publications/WCMS_216695/)
	• Eurostat (2015). Statistics Explained: Gender pay gap statistics (http://ec.europa.eu/eurostat/statistics-explained/index.php/Gender_pay_gap_statistics).
	Examine particular professions and industries – Gender pay gap can be calculated by occupation or industry, provided you have the data on average wages disaggregated to this level. Examining how the gap varies between particular industries and occupations can provide more detailed information for policymakers.
	Explore how the gap varies by age and family situation – Gender pay gap tends to widen with age, possibly due to career interruptions that women tend to experience when having children.

Policy implications	Pay is a vitally important aspect of realising benefits from employment, so gender differences in pay are central to evaluating gender equality in a work context. The gender pay gap has become a key indicator for assessing equality of opportunity and the extent of discrimination in the workplace. Policies to narrow the gender pay gap include offering maternity and paternity leave, child care and other family friendly policies that lessen career interruption for women encourage sharing of family responsibilities between women and men.

3.4.5 Proportion of employed working part-time (%)

How to calculate	This is calculated by dividing the number of employed people that work part-time by the total number of employed people. The indicator should be disaggregated by sex meaning that separate calculations are done for the female population and the male population.

$$\frac{\text{Number in employment who work part-time}}{\text{Number in employment}} \times 100$$

Examples

Hours worked per week by persons in employment, Republic of Moldova, 2013

					Age group			
		Total	15-24	25-34	35-44	45-54	55-64	65+
Male	Part-time	41,200	5,200	7,800	8,700	10,200	7,400	1,800
	Full-time	550,900	56,800	156,300	115,500	127,500	84,800	10,000
	Total	592,100	62,000	164,100	124,100	137,700	92,300	11,800
Female	Part-time	42,900	3,300	10,400	9,000	12,000	6,100	2,200
	Full-time	537,800	39,000	124,200	144,700	149,100	70,400	10,400
	Total	580,700	42,300	134,600	153,600	161,100	76,500	12,600

Source: National Bureau of Statistics of Republic of Moldova (2014). *Labour Force in the Republic of Moldova: Employment and Unemployment* (http://www.statistica.md/public/files/publicatii_electronice/ocupare_somaj/Forta_Munca_2014_en.pdf).

Proportion of employed working part-time (based on the table above)

$$\frac{\text{Women \textbf{aged 25-34 working part-time (}10,400\textbf{)}}}{\text{All employed women aged 25-34 (}134,600\textbf{)}} \times 100 = 7.7\%$$

$$\frac{\text{Men \textbf{aged 25-34 working part-time (}7,800\textbf{)}}}{\text{All employed men aged 25-34 (}164,100\textbf{)}} \times 100 = 4.7\%$$

Data sources	- Household surveys, such as the Labour Force Survey, Living Standards Survey, Household Income and Expenditure Survey
	- Enterprise surveys (of businesses or establishments)
	- Administrative records, such as those maintained by the ministry or department of labour/employment.

Key definitions	**Part-time**
	A part-time worker is an employed person whose normal hours of work are less than those of comparable full-time workers. In most countries, the distinction between part-time and full-time work is based on self-declaration. In a few countries, work is defined as part-time when the hours usually worked are below a fixed threshold, usually 30 or 35 hours per week.[43]

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[43] ILO (2004). 'Part-time work' Information Sheet No. WT-4, Conditions of Work and Employment Programme (http://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/publication/wcms_170717.pdf).

Be mindful of	**How many hours per week**
	Definitions vary between countries and part-time work may involve up to 30 hours per week or more. If possible, ask for a breakdown of people working 20 hours or less per week in order to get a clearer picture of the proportion that work few hours per week.
	How multiple jobs are treated
	It may be commonplace to hold several part-time jobs and end up working in more hours per week than someone who is full-time. Make sure the data take this into account so that the classification of part-time and full-time worker is based on the total hours work across all jobs.

Examples

Percentage of employed women who work part-time, 2002-2011
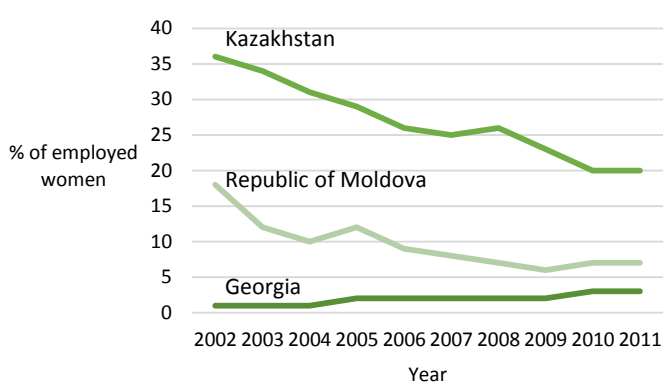
Percentage of employed men who work part-time, 2002-2011
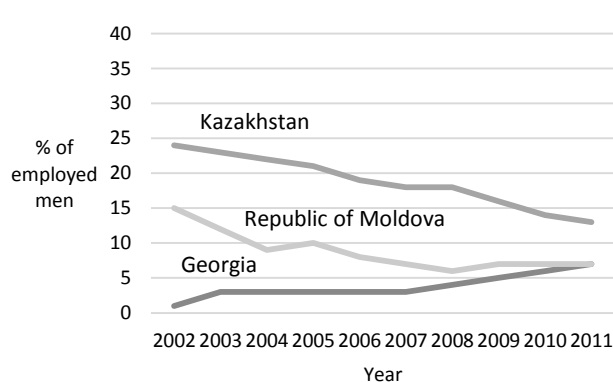
Notes: Georgia - Data do not cover Abkhazia AR and Tskhinvali Region; Republic of Moldova - Data exclude the territory of the Transnistria and municipality of Bender.
Source: UNECE (2016a). UNECE Statistical Database (http://w3.unece.org/PXWeb/en) - compiled from national and international (Eurostat) official sources.

Key messages from the graphs above:

- Part-time work is more common in Kazakhstan than in Moldova or Georgia, especially for women.
- Men in Georgia and Moldova are just as likely as women to be working part-time.
- The tendency to work part-time has been reducing in Kazakhstan and Moldova since 2002.

How to interpret this indicator	**Compare to time-related underemployment** – While part-time can be desirable and help achieve a greater work-life balance, it may represent limited opportunities. Analysing the extent to which women and men who report time-related underemployment (i.e. they wish to be working more hours than they currently are) are already part-time workers, together with any information on the amount of time they would prefer to be working, can give a greater insight to the relative advantage or disadvantage of those in part-time employment.
	Examine particular professions and industries – The ability to access part-time work opportunities is likely to vary between different occupations and industries. Looking at what the data reveals about this can point to reasons for high or low levels of part-time work and where policy interventions may be needed.

Explore variation by age and family situation – Access to part-time work is likely to be directly related to age and family situation (marital status and number of children). Analysing the data with this in mind will provide more information to help interpret the results.

Policy implications	The possibility to work part-time can provide advantages to people wanting shorter working hours in order to balance family or other responsibilities. It can also be a signal of disadvantage as part-time workers take home less pay and may prefer to be working longer hours. Therefore, this indicator is best considered together with time-related underemployment, which measures the proportion of the population who want more hours at work. The proportion of part-time workers is usually much higher among the female population that among the male population. Depending on the national context and the extent of time-related underemployment, policy interventions that impact on the availability of part-time work can lead to greater equality in work opportunities.

3.4.6 Unemployment rate (%)

How to calculate	This is calculated by dividing the number of unemployed people by the number of people in the labour force (i.e. employed + unemployed). The indicator should be disaggregated by sex meaning that separate calculations are done for the female population and the male population.

$$\frac{\text{Number of unemployed}}{(\text{Number of employed} + \text{number of unemployed})} \times 100$$

Data sources	- Household surveys such as the Labour Force Survey, Living Standards Survey, Household Income and Expenditure Survey - Population and housing censuses - Unemployment registers
Key definitions	**Unemployed** Persons of a certain age (usually age 15 years and above) who were not employed during the reference period, but who are currently available and actively seeking work.
Be mindful of	**Unemployment rate is different to the unemployment-to-population rate** The unemployment rate reflects the percentage of the **labour force** that is unemployed, not the percentage of the population. Be mindful that these two figures can be quite different. **Limitations of survey data** If data are from a survey it may not be possible to provide accurate estimates for small areas or small population sub-groups. As survey data is collected on a sample of the population, they do not always capture enough responses from small groups to allow statistics to be produced (e.g. people with a disability).

Example

Female unemployment lowest in Moldova, highest in Armenia
Unemployment rate (%) population aged 15+, by sex, selected countries, 2010

Global average (female) 6.5%

Global average (male) 5.8%

	Republic of Moldova	Azerbaijan	Kazakhstan	Russian Federation	Ukraine	Kyrgyzstan	Tajikistan	Georgia	Armenia
Female	6	7	7	7	7	10	10	14	21
Male	9	4	5	8	9	8	12	18	17
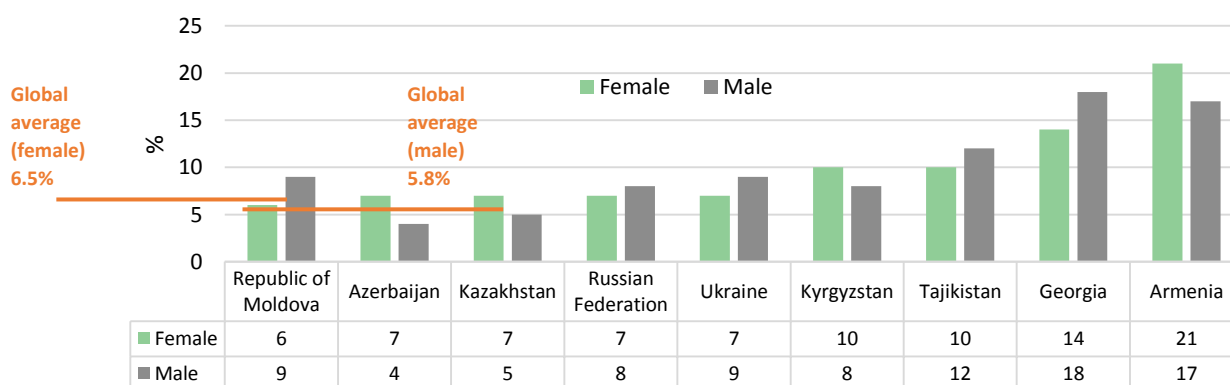
Notes: Armenia - data refer to the population aged 15-75; Georgia - data do not cover Abkhazia and South Ossetia (Tshinvali); Tajikistan – data refer to 2009; Ukraine - data refer to the population aged 15-70.
Data source: UNECE (2016a). UNECE Statistical Database (http://w3.unece.org/PXWeb/en) - compiled from national and international (Eurostat and ILO) official sources. Global averages are for 2010 and taken from ILO (2013b), Key Indicators of the Labour Market (KILM), 8th Edition.

Key messages from the graph above:

- Unemployment varies widely across the region.
- In Azerbaijan, Kazakhstan, Kyrgyzstan and Armenia, female unemployment is higher than for males.
- In Moldova, the Russian Federation, Tajikistan, Ukraine and Georgia, male unemployment is higher.
- The gender gap is biggest in Georgia (in favours of females) and Armenia (in favour of males) with a difference of 4 percentage points.

Unemployment rate, by 5-year age-groups and sex, selected countries, 2010

Unemployment rate (%), Armenia, 2010
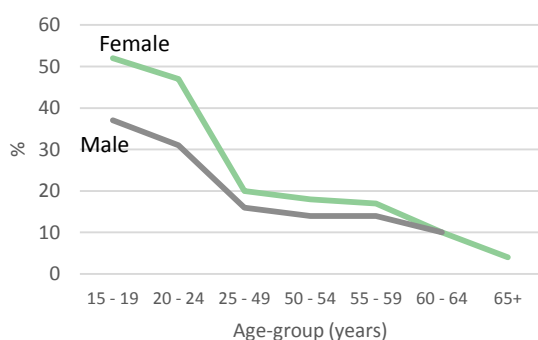
Unemployment rate (%), Georgia, 2010
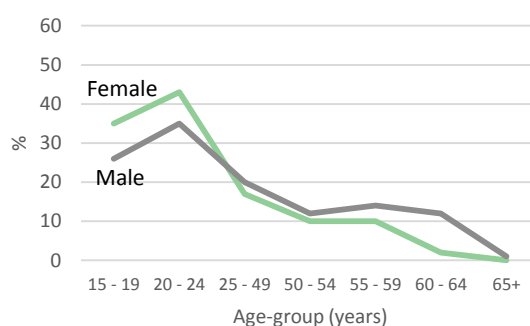
Unemployment rate (%), Azerbaijan, 2010
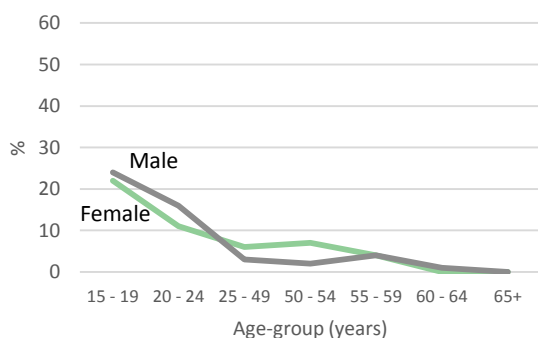
Unemployment rate (%), Republic of Moldova, 2010
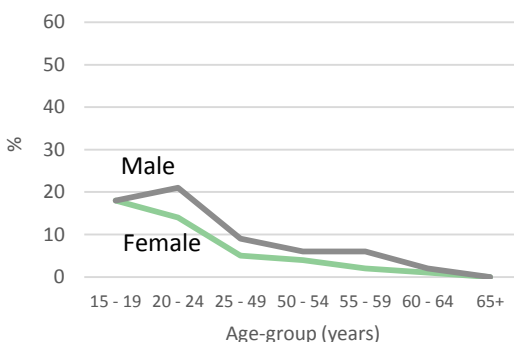
Data source: UNECE (2016a). UNECE Statistical Database (http://w3.unece.org/PXWeb/en) - compiled from national and international (Eurostat and ILO) official sources.

Key messages from the graphs above:

- Unemployment rates can vary significantly by age-group and between countries
- Young people are more likely to be unemployed than older people.
- In Armenia and Georgia, where employment rates are higher, women are more likely unemployed than men.
- When comparing data across multiple graphs like this, it is important to check that the scale is consistent (in this case starts at 0 and ends at 60 with all being same height).

How to interpret this indicator	**Understand the concept of labour utilization -** The unemployment rate is used to show the relative size of underutilized labour in the economically active population and provides a general reflection of the labour market and economic performance. It has been found to more relevant to developed economies and, although an important gender indicator to understand, it has limitations and should be treated with caution.

Considerable research has been done into the relationship between unemployment and other forms of *labour underutilization*. Due to the way unemployment is defined, it only captures a proportion of actual labour underutilization. In fact, studies suggest that in some cases less than 10% of underutilization is accounted for by 'unemployment'.

Other forms of labour underutilization that should be measured to give a broader picture of the potential labour force are:

- Time-related unemployment – employed persons working less than a specified number of hours (e.g. part-time) and who are willing and available to work more hours;
- Employed with low earnings;
- Employed with underutilized skills – employed persons with jobs that require skills lower than their education level; and
- Discouraged workers – inactive persons who did not seek employment because they have been discouraged by lack of employment prospects in the past.[44]

A labour utilization rate can be calculated based on the sum of the population falling into the categories above. As shown in the graph below, significant differences between unemployment and labour underutilization for both women and men were evident in the Republic of Moldova in 2007.

Unemployment only a small fraction of labour underutilization
Unemployment and labour utilization rates, Republic of Moldova, 2007

Source: ILO (2010b). *Women in labour markets: Measuring progress and identifying challenges* (http://www.ilo.org/empelm/pubs/WCMS_123835).

Look at differences between men and women – In many countries the unemployment rate is higher for women than for men. Reasons may be related to men being given preference for jobs (i.e. discrimination), also a higher level of education among women may lead to limited employment opportunities at the level for which they are skilled to work. In cases where unemployment is lower for women, it may be an indicator of disadvantage for men. It may also be that women are more likely not to participate in the labour force due to responsibilities in the home.

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[44] ILO (2010b). *Women in labour markets: Measuring progress and identifying challenges* (http://www.ilo.org/empelm/pubs/WCMS_123835).

Look at changes over time – Rates are intended to show variance over time and other dimensions (e.g. age, as discussed below). In more developed economies, the trend in unemployment rate shows the volatility of the labour market and whether the economy is improving or weakening. Most countries in the UNECE are collecting annual or quarterly labour force data and so new data are frequently available.

Another time-related measure is the length of time people spend being unemployed. Long-term unemployment (seeking work for over one year) is a measure of this and is one of the key gender and labour market indicators. Globally, most countries with data on this indicator show the rates of long-term unemployment are higher among males than females. A possible reason for this is women are more likely to give up the search for work earlier than men and therefore fall into another category. [45]

Consider the impacts of economic events – Major changes in the labour market due to external economic shocks (e.g. global financial crisis), natural disasters or trade agreements. When examining the changes in rates over time, identify if any such events may have impacted on unemployment and whether this is likely to have affected women or men differently.

Look for differences between certain age-groups and areas – Unemployment rate tends to be highest among young people who find it difficult to get work due to their limited experience. This can be particularly the case for those aged 15-19 who have most likely finished their education with a lower level of attainment in addition to having limited work experience. It may also be higher in urban centres, where people are more likely to migrate in search of employment. Examining differences in unemployment rates between five-year age-groups and between parts of the country can reveal patterns that are important to understand.

Consider the relationship to education – Examining the unemployed population by sex, age and level of education attainment can shed light on reasons for disparities. Those with a higher education may be more particular about the jobs they will accept. Jobs requiring a higher level of skill tend to be limited and recruitment processes lengthy and competitive, possibly leading to higher unemployment among this group. Age discrimination may also be a factor with the youngest and oldest of jobseekers being disadvantaged compared to others.

Compare to other countries – Use international databases, such as the UNECE gender statistics database, and the ILO Statistics Database to look the unemployment rates of comparable countries.

Policy implications	Addressing unemployment can involve a range of policy interventions. Creating jobs, providing skills training, and offering employment programs and services are among them. Policies on international labour migration (workers flowing into and out of the country) may also be connected with addressing high unemployment. Gender disparities might be addressed with legislation to prevent jobs from being advertised as suitable only for male or female applications, for example. Furthermore, encouraging employees to recruit casual or part-time workers and creating a regulatory and supportive environment to encourage entrepreneurship and the creation of small businesses can alleviate high unemployment for particular groups, such as parents of young children.

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[45] ILO (2010b). *Women in labour markets: Measuring progress and identifying challenges* (http://www.ilo.org/empelm/pubs/WCMS_123835).

3.5 Exercise: Making a direct contribution to the economy: classifying individuals undertaking different forms of work as employed, unemployed or economically inactive

Objective	**Cement the concepts involved in measuring work and employment so participants are clear on how people are classified as employment, unemployed or economically inactive.**
Preparation	Write out cards for each of the following individual work situations: 1. School teacher – two days per week / Homemaker rest of the time 2. University student (full-time) 3. Bus driver (full-time) 4. High school student with part-time job in a shop 5. Doctor 6. Civil servant 7. Unable to work due to long-term illness 8. Retired person receiving old-age pension 9. Farmer 10. Full-time mother 11. Child below age 15 12. Unpaid domestic helper who gets room and meals provided 13. Member of armed forces 14. Volunteer at local church 15. Engineer currently out of a job 16. Full-time father 17. Waitress who is actively looking for an office job 18. School leaver looking for a job 19. Homemaker who manages family business accounts in the evening 20. Wealthy socialite 21. Business owner Divide whiteboard or flip-chart paper into three sections (large enough for sticking up to eight of the cards) marked with the headings 'Employed', 'Unemployed' and 'Outside the labour force'. Make sure you have sticky tape or something to stick the cards on the board/paper.
Time required	Approximately 45 minutes • Categorization of cards and explanation (30 minutes) • Questions and discussion (15 minutes)
Task	a) Distribute the cards to the participants (either one per individual or a few for each table). b) Explain the activity: on each card is a brief description of the type of work or activity that someone does. We are going to classify each into the three categories: employed, unemployed or outside the labour force. c) Ask someone to start by calling out what is on their card and then getting them to come up and stick the card in the right category on the board or flip-chart. Correct their classification if needed and explain why people fall within each category. d) Repeat the exercise for all the cards, being sure to emphasise the priority is employment over the other two categories, and unemployment over being outside the labour force.
Possible extension of the activity	Once the task above is complete, take the exercise one step further by classifying all the employed people into the status categories of 'employee', 'employer', 'own-account worker' and 'family worker'.

3.6 Exercise: Applying labour force statistics to policies for women's economic empowerment

Objective	**Increase familiarity with key indicators through basic data analysis and discussions on application to policy issues.**
Preparation	Prepare copies of the handout below and data to be analysed (examples provided on following pages).
Time required	Approximately 1 hour and 45 minutes • Group work (60 minutes) • Presentations from the groups (30 minutes) • Summary discussion (15 minutes)
Task	a) Break participants into groups of 4-5 people (any larger and it becomes difficult to engage everyone in discussions). b) Each group will work on the same task (as per the handout). c) Allow about 60 minutes for the groups to complete their work. d) Each group will need to nominate a note-taker and rapporteur to give a five minute summary of their findings.
Summary discussion	After the groups have reported back, further questions for discussion could include: • How easy or difficult was it to use the data provided? • What recommendations would you have to improve the availability and use of statistics for informed policy making?

Handout for group activity

Applying labour force statistics to policies for women's economic empowerment

Task: using the data provided identify key findings that could be used to inform policies and programs that aim to increase women's economic activity and empowerment

a) Nominate someone as group facilitator, note-taker and rapporteur (it can be one person per role, or combine any of the roles)

b) Examine the data for each of the indicators – what can you find of interest? Remember to look at gaps and similarities between women and men, trends (changes over time), comparison to other countries, etc. (allow 20-30 minutes)

c) Questions for discussion (allow about 20 minutes)

    a. What does the data suggest about women and men's overall situation in the labour market?

    b. What further data or evidence would you need to understand the situation?

    c. What types of policies or programs should be considered to boost women's economic activity?

d) Prepare a five minute summary of the main points of discussion and recommendations

Table 11. Employed population by age group, status in employment, sex and area, year 2013

Sex, area, age group	Total	Status in employment			
		Employee	Own-account worker	Contributing family worker	Employer
Total	1172,8	806,7	332,4	25,2	8,5
15-24 years	104,3	74,4	25,3	4,6	-
25-34 years	298,7	222,3	70,1	5,6	0,0
35-44 years	277,8	190,2	79,7	4,8	3,1
45-54 years	298,8	199,8	90,5	5,3	3,3
55-64 years	168,8	111,2	52,4	3,9	0,0
65 years and over	24,4	8,8	14,5	0,0	0,0
Men	592,1	383,1	196,0	7,7	5,3
15-24 years	62,0	40,3	18,2	3,5	-
25-34 years	164,1	117,1	44,1	2,2	0,0
35-44 years	124,1	77,2	44,3	0,0	2,1
45-54 years	137,7	84,9	50,6	0,0	1,5
55-64 years	92,3	59,8	31,1	0,0	0,0
65 years and over	11,8	3,8	7,6	0,0	0,0
Women	580,7	423,5	136,4	17,5	3,2
15-24 years	42,3	34,1	7,1	0,0	-
25-34 years	134,6	105,2	25,9	3,3	0,0
35-44 years	153,6	113,0	35,4	4,2	0,0
45-54 years	161,1	114,8	39,9	4,7	1,7
55-64 years	76,5	51,5	21,3	3,4	0,0
65 years and over	12,6	4,9	6,9	0,0	-
Urban	550,5	479,9	62,8	1,8	6,0
15-24 years	44,8	40,7	3,6	0,0	-
25-34 years	168,4	150,5	17,1	0,0	0,0
35-44 years	131,5	111,9	17,0	0,0	2,3
45-54 years	123,5	104,9	16,2	0,0	2,1
55-64 years	74,3	65,0	8,1	0,0	0,0
65 years and over	7,9	7,0	0,0	-	0,0
Men	277,1	232,9	39,7	0,0	3,7
15-24 years	23,6	20,7	2,5	0,0	-
25-34 years	97,6	84,0	12,9	0,0	0,0
35-44 years	59,7	47,5	10,4	0,0	1,7
45-54 years	54,0	44,5	8,7	-	0,0
55-64 years	38,8	33,6	4,6	0,0	0,0
65 years and over	3,4	2,6	0,0	-	0,0
Women	273,4	247,0	23,1	0,0	2,3
15-24 years	21,2	20,0	0,0	0,0	-
25-34 years	70,8	66,5	4,2	0,0	0,0
35-44 years	71,8	64,4	6,6	0,0	0,0
45-54 years	69,5	60,4	7,5	0,0	0,0
55-64 years	35,5	31,5	3,5	0,0	0,0
65 years and over	4,5	4,3	0,0	-	-
Rural	622,3	326,8	269,6	23,4	2,6

Table 9. Population by participation in economic activity, by sex, area and marital status, year 2013

thousand persons

Sex, area, marital status	Active persons			Activity rate, %	Employment rate, %	ILO unemployment rate, %
	Total	Employed	ILO unemployed			
Total						
Single	1235,8	1172,8	63,1	41,4	39,3	5,1
Married	249,4	224,6	24,8	29,6	26,7	9,9
Widow(er)	846,4	815,7	30,7	50,8	49,0	3,6
Divorced	55,2	53,8	0,0	18,2	17,7	-
Men	84,9	78,7	6,2	48,4	44,9	7,3
Single	630,0	592,1	38,0	44,5	41,8	6,0
Married	154,3	138,6	15,7	31,3	28,1	10,2
Widower	436,8	417,7	19,1	54,1	51,8	4,4
Divorced	11,0	10,2	0,0	20,0	18,6	-
Women	28,0	25,6	2,4	46,1	42,2	8,4
Single	605,8	580,7	25,1	38,6	37,0	4,1
Married	95,0	86,0	9,0	27,3	24,7	9,5
Widow	409,6	398,0	11,6	47,7	46,3	2,8
Divorced	44,2	43,6	0,0	17,8	17,5	-
Urban	57,0	53,1	3,9	49,7	46,3	6,8
Single	587,3	550,5	36,8	45,6	42,8	6,3
Married	127,4	115,3	12,1	37,8	34,2	9,5
Widow(er)	383,8	364,8	19,0	53,5	50,9	5,0
Divorced	20,7	19,7	0,0	16,2	15,4	-
Men	55,3	50,7	4,6	52,5	48,2	8,3
Single	298,4	277,1	21,2	51,0	47,4	7,1
Married	72,6	65,5	7,1	39,4	35,6	9,8
Widower	207,1	195,1	12,0	59,4	56,0	5,8
Divorced	3,7	3,0	0,0	17,2	14,2	-
Women	14,9	13,4	0,0	48,8	43,9	-
Single	288,9	273,4	15,5	41,2	38,9	5,4
Married	54,8	49,8	5,0	35,9	32,7	9,0
Widow	176,7	169,7	7,0	48,0	46,1	4,0
Divorced	17,1	16,6	0,0	16,0	15,6	-
Rural	40,3	37,2	3,1	54,1	49,9	7,7
Single	648,6	622,3	26,3	38,1	36,6	4,1
Married	121,9	109,3	12,7	24,1	21,6	10,4
Widow(er)	462,5	450,8	11,7	48,7	47,5	2,5
Divorced	34,4	34,2	0,0	19,6	19,4	-
Men	29,7	28,0	1,7	42,3	40,0	5,6
Single	331,7	314,9	16,7	39,9	37,9	5,0
Married	81,7	73,1	8,6	26,4	23,6	10,5
Widower	229,7	222,5	7,1	50,1	48,6	3,1
Divorced	7,3	7,1	0,0	21,7	21,4	-
Women	13,0	12,2	0,0	43,4	40,5	-
Single	316,9	307,3	9,6	36,5	35,4	3,0
Married	40,2	36,2	4,1	20,6	18,5	10,2
Widow	232,9	228,3	4,6	47,5	46,5	2,0
Divorced	16,6	15,8	0,0	41,5	39,5	-

Source: National Bureau of Statistics of Republic of Moldova (2014). *Labour Force in the Republic of Moldova: Employment and Unemployment* (http://www.statistica.md/public/files/publicatii_electronice/ocupare_somaj/Forta_Munca_2014_en.pdf).

Table 31. Employed population by reason for working less than 40 hours/week, by age group, sex and area, year 2013

thousand persons

Sex, area, reason for working less than 40 hours/week	Total	Age group					
		15-24 years	25-34 years	35-44 years	45-54 years	55-34 years	65 years and over
Total	382,2	29,8	76,7	87,0	107,4	63,7	17,7
Usually works less than 40 hours/week	186,4	11,3	33,8	40,6	52,9	34,8	13,0
Technical unemployment	27,5	3,3	8,3	7,2	6,7	2,0	0,0
Seasonal work	76,5	6,0	13,4	18,2	22,8	13,6	2,6
Days off, holydays, variable time table	40,2	3,6	9,6	9,6	10,9	5,7	0,0
Family responsabilities	16,5	0,0	6,2	4,0	4,0	0,0	0,0
Bad weather conditions	27,8	2,4	4,6	6,4	8,3	5,3	0,0
Other	7,3	2,0	0,0	0,0	1,9	0,0	0,0
Men	164,2	17,1	34,5	31,1	44,1	29,6	7,9
Usually works less than 40 hours/week	62,5	5,6	12,6	9,2	16,2	13,2	5,6
Technical unemployment	20,5	2,5	6,0	5,5	4,8	1,6	0,0
Seasonal work	41,2	3,9	7,5	8,9	12,0	7,6	0,0
Days off, holydays, variable time table	17,4	2,2	4,6	3,0	4,6	2,6	0,0
Family responsabilities	3,1	0,0	0,0	0,0	0,0	0,0	0,0
Bad weather conditions	16,6	1,7	3,0	3,3	4,8	3,4	0,0
Other	3,0	0,0	0,0	0,0	0,0	0,0	0,0
Women	218,0	12,6	42,2	55,9	63,3	34,2	9,8
Usually works less than 40 hours/week	123,8	5,7	21,3	31,3	36,7	21,5	7,4
Technical unemployment	7,1	0,0	2,3	1,7	1,8	0,0	-
Seasonal work	35,3	2,2	5,8	9,3	10,8	5,9	0,0
Days off, holydays, variable time table	22,8	0,0	5,0	6,6	6,4	3,1	0,0
Family responsabilities	13,5	0,0	5,6	3,3	2,9	0,0	0,0
Bad weather conditions	11,2	0,0	1,6	3,2	3,4	2,0	0,0
Other	4,3	0,0	0,0	0,0	0,0	0,0	0,0
Urban	113,2	7,9	26,3	29,0	30,3	15,8	3,9

Source: National Bureau of Statistics of Republic of Moldova (2014). *Labour Force in the Republic of Moldova: Employment and Unemployment* (http://www.statistica.md/public/files/publicatii_electronice/ocupare_somaj/Forta_Munca_2014_en.pdf).

Table 74. Economically inactive population aged 20-49 years by relation with the labour market, number of pre-school children, sex and area, year 2013

thousand persons

Sex, area, relation with the labour market	Total	Number of pre-school children	
		Persons who do not have pre-school children	Persons who have at least one pre-school child
Total	836,1	570,6	265,5
Looking for a job but unavailable to start working	0,0	0,0	0,0
Not seeking but willing to work and available	16,7	12,5	4,2
Willing to work but not looking and unavailable	2,7	1,9	0,0
Not looking for a job and not willing to work	537,8	342,9	194,9
Persons working or looking for a job abroad	278,2	212,9	65,2
Men	415,5	321,4	94,1
Looking for a job but unavailable to start working	0,0	0,0	0,0
Not seeking but willing to work and available	7,9	5,7	2,2
Willing to work but not looking and unavailable	0,0	0,0	0,0
Not looking for a job and not willing to work	217,3	178,2	39,1
Persons working or looking for a job abroad	188,9	136,4	52,5
Women	420,6	249,2	171,4
Looking for a job but unavailable to start working	0,0	0,0	0,0
Not seeking but willing to work and available	8,8	6,8	2,0
Willing to work but not looking and unavailable	1,6	0,0	0,0
Not looking for a job and not willing to work	320,5	164,7	155,8
Persons working or looking for a job abroad	89,3	76,6	12,7
Urban	309,9	207,1	102,8
Looking for a job but unavailable to start working	0,0	0,0	0,0
Not seeking but willing to work and available	6,5	4,6	1,9
Willing to work but not looking and unavailable	0,0	0,0	0,0
Not looking for a job and not willing to work	226,5	143,4	83,1
Persons working or looking for a job abroad	75,5	58,0	17,4
Rural	526,2	363,4	162,7
Looking for a job but unavailable to start working	0,0	0,0	0,0
Not seeking but willing to work and available	10,2	7,9	2,3
Willing to work but not looking and unavailable	0,0	0,0	0,0
Not looking for a job and not willing to work	311,3	199,5	111,8
Persons working or looking for a job abroad	202,7	154,9	47,8

Module 4: Education and training

What is covered in this module	**Materials**
	4.1 Gender concerns in education
	4.2 Data sources
	4.3 International standards for education systems
	4.4 Understanding the key indicators
	Practical exercise
	4.5 Exercise: Analysing gender gaps in enrolment rates

4.1   Gender concerns in education

Priorities for gender equality

Education provides the basis for accessing opportunities to work. The education level of adults is also closely linked with positive outcomes for children – the higher the parents education the more likely children will enjoy a good standard of living.

Education encompasses compulsory primary and secondary school education, tertiary education at university or technical colleges, vocational education and training relating to a specific form of work, and adult education and lifelong learning.

The Millennium Development Goals but a focus on achieving universal primary education and gender parity in primary, secondary and tertiary education. Most countries in the UNECE region have achieved goals relating to primary and secondary education, but gender gaps in tertiary education, ensuring the quality of teaching, and achieving equity for minority groups remain a challenge.[46]

Monitoring the outcomes of education, such as literacy rates and how education attainment translates into employment opportunities, are also important for identifying and quantifying gender equality concerns.

4.2   Data sources

Administrative records

Records maintained by schools and education institutions provide the basis for many statistical indicators relating to education. Note that these must be compared with population estimates produced by the national statistical system to calculate enrolment rates (i.e. percentage of the population that is enrolled in formal education).

In some countries, the quality of data provided through the Ministry of Education and other official sources varies widely. The systems for reporting on participation and results of students can be hampered by decentralization and funding incentives that lead to under or over reporting. In such cases, alternative sources, such as household surveys, may provide a means to test quality and address disparities.

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[46] UNECE (2012b). *The UNECE Report on Achieving the Millennium Development Goals in Europe and Central Asia* (http://www.unece.org/index.php?id=30736).

Surveys and censuses Population censuses and household surveys typically collect data on participation in education and level attained. These are the only means for gauging the education level of the adult population at a given time.

Labour force Surveys provide insight into how education, qualifications and training relates to the work opportunities, highlighting the extent of skills mismatch (qualified/trained in a particular skill, but working in a different area) across the population.

4.3   International standards for education systems

Education systems vary from country to country, and sometimes within countries. In some countries primary school starts at age 5, in others it may be age 6 or 7; some countries might have 6 years of secondary school, others less. These variances are a challenge for producing comparable statistics on education.

International Standard Classification of Education (ISCED)
Standards developed through the United Nations system provide a way to map varying education systems to a consistent framework. The International Standard Classification of Education (ISCED) belongs to the United Nations International Family of Economic and Social Classifications, which are applied in statistics worldwide with the purpose of assembling, compiling and analysing cross-nationally comparable data. ISCED is the reference classification for organizing education programmes and related qualifications by education levels and fields. ISCED is a product of international agreement and adopted formally by the General Conference of UNESCO Member States.

ISCED is designed to serve as a framework to classify educational activities as defined in programmes and the resulting qualifications into internationally agreed categories. The basic concepts and definitions of ISCED are therefore intended to be internationally valid and comprehensive of the full range of education systems. [47]

Official age ranges
Many education indicators are based on specific age ranges that correlate to the standard ranges application to the national education system. To calculate enrolment rates for any level of education, for example, it is essential to know the official age ranges. These age ranges will vary from country to country. For example, in the Republic of Moldova, the age ranges are:
- Pre-primary – age 3
- Primary – age 7-10
- Lower secondary – age 11-15
- Upper secondary – 16-18
- Tertiary – age 19-24

The official age ranges are not mandatory and reflect the standard for age at entrance and duration of education at each level. Some students may start

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[47] UNESCO Institute for Statistics (2012). *International Standard Classification of Education: ISCED 2011* (http://www.uis.unesco.org/Education/Documents/isced-2011-en.pdf).

school earlier or later, some may repeat a year, or return to education after dropping out. These variations mean that students will fall outside the official age ranges.

Official start ages and duration of education are published in the UNESCO Institute of Statistics database under Education / System.[48]

4.4 Understanding the key indicators

Selected indicators
- Tertiary gross enrolment rate (*)
- Upper secondary gross enrolment rate (*)
- Graduation rate in tertiary education, by sex (*)
- Share of female tertiary graduates in science, engineering, manufacturing and construction
- Graduation rate in upper secondary education
- Distribution of 25-64 years old, by highest level of education attained and sex
- Young people (aged 15-24) not in employment and not in education and training, by sex (*)

(*) Those indicators are further developed in this section

4.4.1 Tertiary gross enrolment ratio

How to calculate	The tertiary gross enrolment ratio (GER) is the total number of tertiary students regardless of age, divided by the total population of tertiary education age[49] and then multiplied by 100 to give a percentage figure. The tertiary GER should be calculated separately for females and males.

$$\frac{\text{Total number of female/male tertiary students}}{\text{Total female/male population aged in the five-year age-group following upper secondary school leaving age}} \times 100$$

$$\frac{\text{Total number of female tertiary students in 2013 (67,948)}^{50}}{\text{Total female population aged 19-24 in 2013 (145,697)}} = 0.4663 \times 100 = \textbf{46.6\%}$$

$$\frac{\text{Total number of male tertiary students in 2013 (54,516)}^{51}}{\text{Total male population aged 19-24 in 2013 (150,990)}} = 0.3610 \times 100 = \textbf{36.1\%}$$

Data sources	- Enrolment data collected from tertiary institution records by the responsible authority for tertiary education (e.g. Ministry of Education) - Population estimates from national statistical system
Key definitions	**Tertiary education** Tertiary education builds on secondary education, providing learning activities in specialised fields of education. It aims at learning at a high level of complexity and specialisation. Tertiary education includes what is commonly understood as academic

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[48] UNESCO Institute for Statistics (n.d.). UIS.STAT Database (http://data.uis.unesco.org/).
[49] According to UNESCO, the age range for tertiary education is the five-year age-group following on from school leaving age, and so will vary from country to country. In Moldova for example, upper secondary school finishes at age 18, therefore the official age range for tertiary would be age 19-24.
[50] Data are from the UNESCO Institute for Statistics (n.d.), UIS.STAT Database (http://data.uis.unesco.org/).
[51] Ibid.

education but also includes advanced vocational or professional education. It comprises ISCED levels 5, 6, 7 and 8, which are labelled as short-cycle tertiary education, Bachelor's or equivalent level, Master's or equivalent level, and doctoral or equivalent level, respectively. The content of programmes at the tertiary level is more complex and advanced than in lower ISCED levels. [52]

Enrolment
Individuals officially registered in a given education programme, or stage or module thereof, regardless of age.

Note that enrolment differs from attendance and depending on at what point of the academic year enrolment figures relate (e.g. start, middle, end), the number of students enrolled may include students that have subsequently discontinued their studies during the year.

Ratio
This is a ratio rather than a rate because it involves the comparison of two different populations.

Be mindful of	**What is counted as tertiary education** GER at each level of education should be based on total enrolment in all types of schools and education institutions, including public, private and all other institutions that provide organized educational programmes. As defined above, tertiary education includes what is commonly understood as academic education but also includes advanced vocational or professional education. This would include some, but not all, technical and vocational education and training. To interpret this indicator correctly, it may be important to check which institutions and courses have been included and excluded from the calculation. **Accuracy of population estimates** Calculating enrolment rates relies on knowing the estimated population by sex and age. These estimates are usually produced by the national statistical office based on population censuses, population registers and birth, death and migration rates. If population estimates are not accurate, the enrolment rate will also be inaccurate (under or over-estimated). Ensure the population estimates are for the year corresponding to the enrolment data and have been produced by an authoritative source of official statistics. In the absence of national estimates, the UNESCO Institute of Statistics database can provide population data disaggregated by sex and age range for each level of education. [53] **Gross enrolment versus net enrolment** Gross enrolment ratios and net enrolment rates use the same denominator (the total population within the official age range for that level of education), but the numerator is different. For net enrolment, it is the number of students within the official age range, whereas for gross enrolment, it is the number of students regardless of age. As students may be younger or older than the official age range, the gross enrolment rate is typically higher than for net enrolment and can exceed 100%. This is more likely to occur at primary or secondary school level because most of the population are students, whereas universal participation is tertiary education is not common.

[52] UNESCO Institute for Statistics (2012). *International Standard Classification of Education: ISCED 2011* (http://www.uis.unesco.org/Education/Documents/isced-2011-en.pdf).
[53] See: UNESCO Institute for Statistics (n.d.). UIS.STAT Database (http://data.uis.unesco.org/).

Examples

Data needed to calculate the gross enrolment ratio

Resulting calculation

Tertiary gross enrolment ratios (GER), by sex, selected countries, 2013

	Tertiary students enrolled		Population in official age range		GER	
	Female	Male	Female	Male	Female	Male
Armenia	62,963	52,244	111,012	138,848	56.7	37.6
Kazakhstan	435,049	346,401	695,664	717,487	62.5	48.3
Republic of Moldova	67,948	54,516	145,697	150,990	46.6	36.1

Source: UNESCO Institute for Statistics (n.d.). UIS.STAT Database (http://data.uis.unesco.org/).

Tertiary Gross Enrolment Ratio (GER), Republic of Moldova and global, 1999-2013
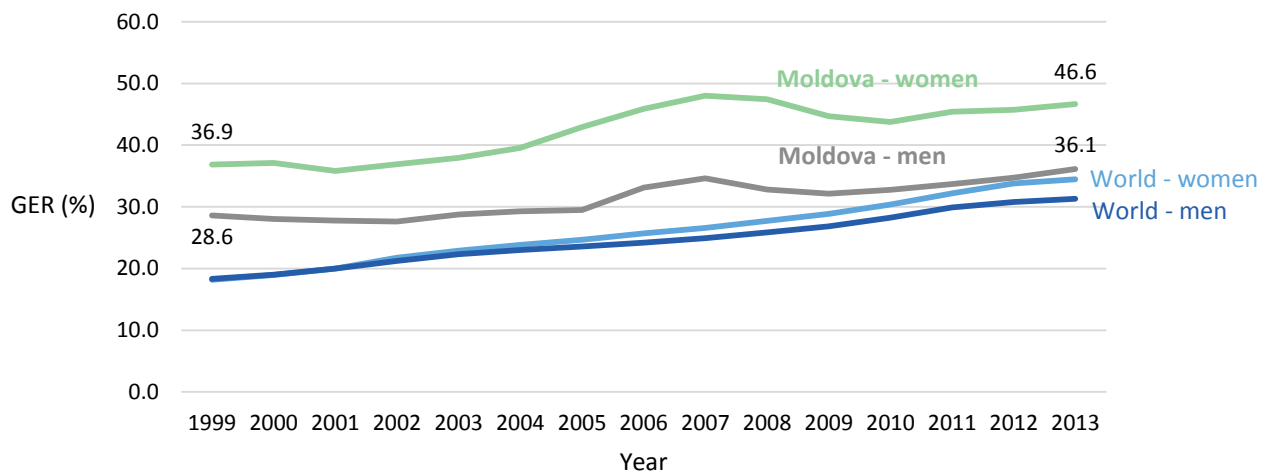
Source: UNESCO Institute for Statistics (n.d.). UIS.STAT Database (http://data.uis.unesco.org/).

Key messages from the table and graph above:

- Participation in tertiary education has been consistently higher for women than men
- The gender gap in Moldova has widened since 1999.
- Rates in Moldova have increased from 28.6 to 36.1 for men and from 37.1 to 46.6 for women (by 2013 men still haven't reached the rate women were at in 1999).
- Gross enrolment ratio in Moldova is above global average for both men and women.
- Globally the increase in tertiary enrolment since 1999 has been steeper than in Moldova.
- The gender gap at global level is much narrower than in Moldova.

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[54] UNESCO Institute for Statistics (2009). *Education Indicators: Technical guidelines* (http://www.uis.unesco.org/Library/Documents/eiguide09-en.pdf).

How to interpret this indicator	A high GER indicates a high degree of participation, whether students are in the official age-group or not. A GER value near 100% is unlikely at tertiary level given that participation in higher education is not universal.
	Globally, tertiary enrolments have increased hugely since the 1970s, particularly for women. The global GER for men went from 11% in 1970 to 26% in 2009. For women, it went from 8% to 28% during the same period. Central Asia and Eastern Europe has a long tradition of higher tertiary enrolment among women than men. In 1970 it was the only region in the world to have a higher female GER than male, but in 2009, other regions are showing similar results.[55]
	The gender gap in GER in the region suggests that more needs to be done to attract men to study at tertiary level. It may also indicate a lack of opportunity in the labour market for women is leading them to choose tertiary study. Further analysis is needed to understand gaps in participation, including looking at related indicators such as secondary enrolment and graduation rates, and the proportion of young people (aged 15-24) neither in education, employment or training (see 4.3.7 below).
	Gender analysis of the tertiary student population is also important for understanding disparities and areas where policy intervention may be needed. For example, although women are more likely to study at tertiary level, they tend to be in the minority at the highest levels of study (e.g. Ph.D) and they are less likely to study mathematics, science and technology.[56]
	Calculate a Gender Parity Index
	The gender gap in GER is often expressed at a Gender Parity Index (GPI). This is calculated by dividing the female GER by the male GER to produce an index that if equal to 1 indicates parity between the sexes. A GPI less than 1 means there is a disparity in favour of males; greater than 1 indicates disparity in favour of females.
Policy implications	Policies can provide incentives to attract people to study at tertiary level or pursue other opportunities. Enrolment statistics at tertiary level are an important indicator for policymakers to monitor human capital. When considered together with other education and labour statistics (e.g. participation in basic education, education attainment among adults and economic activity status), tertiary education statistics provide a picture of the skills and employment outcomes of the population. This is essential for monitoring the capacity and quality of the education system, and ensuring a match between skills and labour market demands.

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[55] UNESCO (2012). *World Atlas of Gender Equality in Education* (www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/ED/pdf/Atlas-education-gender-equality1.pdf).
[56] UNECE (2010). *Developing Gender Statistics: A practical tool* (http://www.unece.org/?id=17450).

4.4.2 Upper secondary gross enrolment ratio

How to calculate	The upper secondary gross enrolment ratio (GER) is the total number of upper secondary students regardless of age, divided by the total population of upper secondary school age[57] and then multiplied by 100 to give a percentage figure. The upper secondary GER should be calculated separately for females and males. $$\frac{\text{Total number of female/male upper secondary students}}{\text{Total female/male population of official upper secondary school age}} \times 100$$ **Republic of Moldova, 2013**[58] $$\frac{\text{Total number of female upper secondary students (\textbf{44,488})}}{\text{Total female population aged 16-18 (\textbf{47,104})}} = 0.9444 \times 100 = \textbf{94.4\%}$$ $$\frac{\text{Total number of male upper secondary students (\textbf{43,785})}}{\text{Total male population aged 16-18 (\textbf{49,082})}} = 0.8920 \times 100 = \textbf{89.2\%}$$
Data sources	- Enrolment data collected from tertiary institution records by the responsible authority for tertiary education (e.g. Ministry of Education) - Population estimates from national statistical system
Key definitions	**Upper secondary education** Upper secondary education (ISCED level 3) are programmes at typically designed to complete secondary education in preparation for tertiary education or provide skills relevant to employment, or both.[59] **Enrolment** Individuals officially registered in a given education programme, or stage or module thereof, regardless of age. Note that enrolment differs from attendance and depending on at what point of the academic year enrolment figures relate (e.g. start, middle, end), the number of students enrolled may include students that have subsequently discontinued their studies during the year. **Ratio** This is a ratio rather than a rate because it involves the comparison of two different populations.
Be mindful of	**Levels of secondary education** Secondary education is divided into lower and upper secondary. Gross enrolment ratios may be calculated for lower, upper, or the total secondary school population. When using secondary enrolment ratios and rates, ensure it is clear to which years of secondary education the indicator relates. **Accuracy of population estimates** Calculating enrolment ratios relies on knowing the estimated population by sex and age. These estimates are usually produced by the national statistical office based on

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[57] According to UNESCO, the age range for tertiary education is the five-year age-group following on from school leaving age, and so will vary from country to country. In Moldova for example, upper secondary school finishes at age 18, therefore the official age range for tertiary would be age 19-24.

[58] Data are from the UNESCO Institute for Statistics (n.d.), UIS.STAT Database (http://data.uis.unesco.org/).

[59] UNESCO Institute for Statistics (2012). *International Standard Classification of Education: ISCED 2011* (http://www.uis.unesco.org/Education/Documents/isced-2011-en.pdf).

population censuses, population registers and birth, death and migration rates. If population estimates are not accurate, the enrolment rate will also be inaccurate (under or over-estimated).

Ensure the population estimates are for the year corresponding to the enrolment data and have been produced by an authoritative source of official statistics. In the absence of national estimates, the UNESCO Institute of Statistics database can provide population data disaggregated by sex and age range for each level of education.[60]

Gross enrolment versus net enrolment
Gross enrolment ratios and net enrolment rates use the same denominator (the total population within the official age range for that level of education), but the numerator is different. For net enrolment, it is the number of students within the official age range, whereas for gross enrol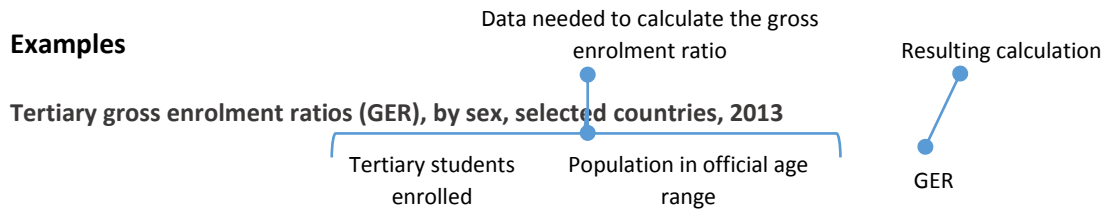ment, it is the number of students regardless of age. As students may be younger or older than the official age range, the gross enrolment rate is typically higher than for net enrolment and can exceed 100%. This is more likely to occur at primary or secondary school level because most of the population are students, whereas universal participation is tertiary education is not common.

Net enrolment rates should not exceed 100% but may do so due to inconsistencies between population and enrolment data.[61]

Examples

Upper secondary Gross Enrolment Ratio (GER), by sex, latest year available
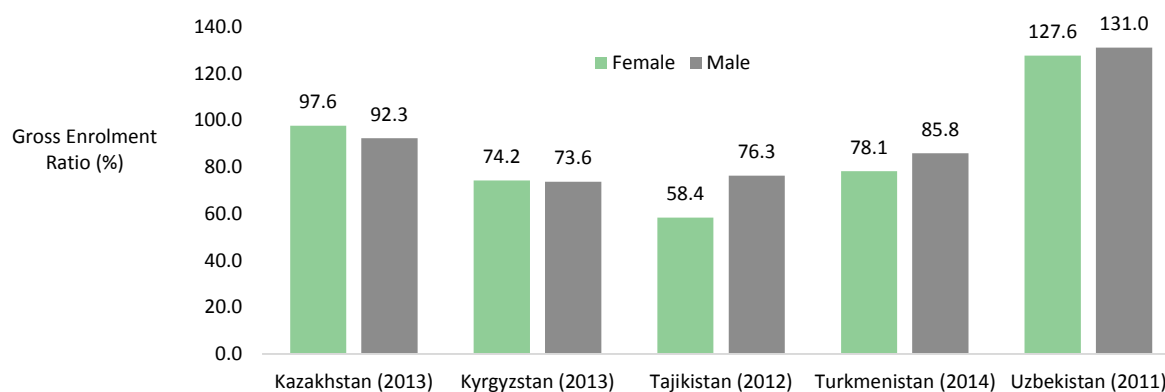
Source: UNESCO Institute for Statistics (n.d.). UIS.STAT Database (http://data.uis.unesco.org/) (data extracted on 18 August 2015).

Key messages from the graph above:

- The GER in Kazakhstan and Uzbekistan suggest that participation in upper secondary is particularly high in these countries.
- There is a significant gender gap in Tajikistan, with girls much less likely to participate than boys.
- The rates above 100% in Uzbekistan indicate a high proportion of over-aged and under-aged students. Additional information is needed to assess the extent of repetition, late entrants, etc. causing this high GER in Uzbekistan.

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[60] UNESCO Institute for Statistics (n.d.). UIS.STAT Database (http://data.uis.unesco.org/).
[61] UNESCO Institute of Statistics (2009), *Education Indicators: Technical Guidelines* (http://www.uis.unesco.org/Library/Documents/eiguide09-en.pdf).

How to interpret this indicator

A high GER generally indicates a high degree of participation, whether the students belong to the official age-group or not. Impacts on participation include whether upper secondary is compulsory, the tendency to go on to tertiary education, the quality of the education system, and the education requirements of the labour market. A GER value approaching or exceeding 100% indicates that a country is, in principle, able to accommodate all of its school-age population, but it does not indicate the proportion already enrolled. Achieving a GER of 100% is therefore a necessary but not sufficient condition for enrolling all eligible children in school.

When the GER exceeds 90%, the aggregate number of places for pupils is approaching the number required for universal access of the official age-group. However, this is only the case if the under-aged and over-aged enrolments are expected to decline in the future to free places for students from the expected age-group.[62]

Comparing the GER to the net enrolment rate (NER) will highlight the extent of over-aged and under-aged enrolment, because of early or late entrants, and grade repetition. A sharp discrepancy between the GER and the NER indicates that enrolled boys and girls enter late to the grades or do not progress regularly through the grades and that the system's internal efficiency could be improved. Analysts should also look at participation in lower secondary and how this varies from upper secondary. Analysis of the out-of-school population will also help to interpret what the enrolment statistics reveal about participation and non-participation in school.

Gross enrolment ratios are consistently lesser for upper secondary than lower secondary. Globally, there have been steady increases in enrolment over recent decades, but more than half of countries have an upper secondary GER of less than 80%. In Central Asia and in Central and Eastern Europe enrolment is relatively high (both in excess of 80% in 2009). The gap between lower and upper secondary enrolment is not as great as in other regions, as shown in the figure below from UNESCO.[63]

Significant enrolment increases at both lower and upper secondary levels

Gross enrolment ratio in lower and upper secondary education by region and worldwide, 1999–2009

○ 1999   △ 2009   ■ Lower secondary   ■ Upper secondary
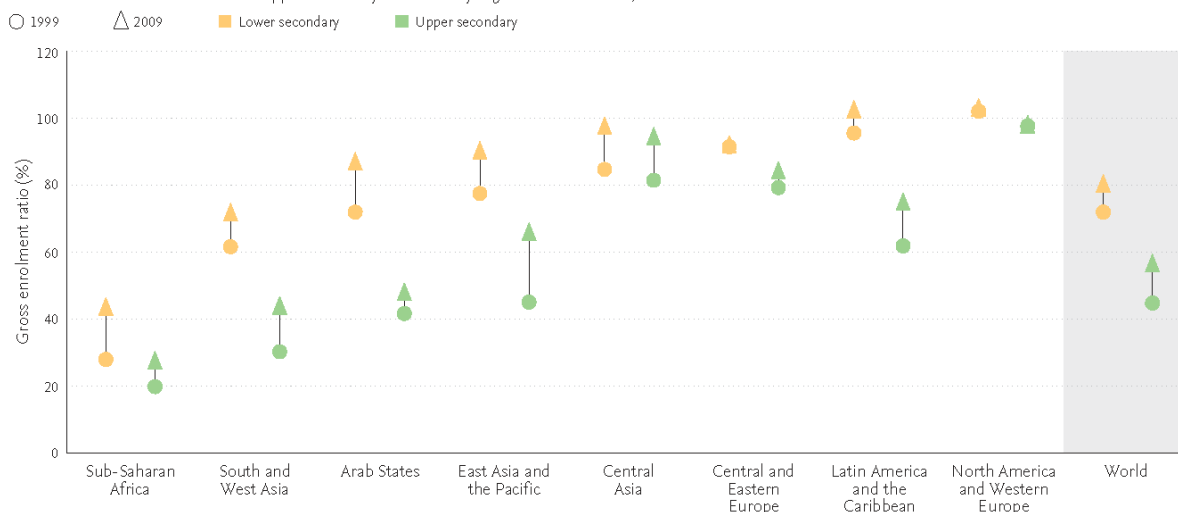
Source: UNESCO (2012). *World Atlas of Gender Equality in Education* (www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/ED/pdf/Atlas-education-gender-equality1.pdf).

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[62] UNESCO Institute of Statistics (2009), *Education Indicators: Technical Guidelines* (http://www.uis.unesco.org/Library/Documents/eiguide09-en.pdf).
[63] UNESCO (2012), *World Atlas of Gender Equality in Education* (www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/ED/pdf/Atlas-education-gender-equality1.pdf).

Calculate a Gender Parity Index

Key to interpreting this indicator for gender-related policy is to explore similarities and differences in enrolment patterns between girls and boys. The gender gap in GER is often expressed at a Gender Parity Index (GPI). This is calculated by dividing the female GER by the male GER to produce an index that if equal to 1 indicates parity between the sexes. A GPI less than 1 means there is a disparity in favour of males; greater than 1 indicates disparity in favour of females.

Policy implications	High participation in upper secondary school is a precursor for achieving high participation at tertiary level. Where significant gender gaps exist, further research to understand the reasons for the gap may be needed to inform the development of policies to retain certain groups in the education system. Increasing demands on the education system in light of population dynamics (growth, ageing, etc.) will impact on school infrastructure and quality of education delivery. This may be a factor limiting participation in upper secondary education.

4.4.3 Distribution of 25-64 years old, by highest level of education attained and sex

How to calculate

This indicator is calculated based on data gathered through household surveys, population censuses and similar collections that gather information on the education level of the representative population. If the indicator, or the information needed to calculate it, is not already published by the statistical authority, it may be requested.

Sex-disaggregated data needed to calculate the indicator are:
a) Total population aged 25-64
b) Population aged 25-64 with less than primary, primary and lower secondary education
c) Population aged 25-64 with upper secondary and post-secondary non-tertiary education
d) Population aged 25-64 with tertiary education
e) Population aged 25-64 that gave no response

The total population is then used as a basis for calculating the percentage distribution of population at each level of education:

$$\frac{\text{Females aged 25-64 with less than primary, primary and lower secondary education (\textbf{1,908,100})}}{\text{Total female population aged 25-64 (\textbf{5,913,100})}} = 0.3227 \times 100 = \textbf{32.2\%}$$

$$\frac{\text{Females aged 25-64 with upper secondary and post-secondary non-tertiary education (\textbf{3,374,100})}}{\text{Total female population aged 25-64 (\textbf{5,913,100})}} = 0.5706 \times 100 = \textbf{57.1\%}$$

$$\frac{\text{Females aged 25-64 with tertiary (\textbf{631,000})}}{\text{Total female population aged 25-64 (\textbf{5,913,100})}} = 0.1067 \times 100 = \textbf{10.7\%}$$

$$\frac{\text{Females aged 25-64 with unknown education attainment (not available)}}{\text{Total female population aged 25-64 (\textbf{5,913,100})}} = \text{Not available}$$

Key definitions

Highest level of education attained

The levels of education are based in the International Standard Classification of Education (ISCED). The levels of education attainment shown below are based on Eurostat standards. Data from 2014 onwards are based on ISCED 2011, whereas data up to 2013 should be based on ISCED 1997.

The table below outlines the three levels of education attained and how this differs between the two versions of the classification.

	ISCED 2011 (data from 2014 onwards)	ISCED 1997 (data up to 2013)
Low education	Less than primary, primary and lower secondary education (levels 0-2)	Pre-primary, primary and lower secondary education (levels 0-2)
Medium education	Upper secondary and post-secondary non-tertiary education (levels 3 and 4)	Upper secondary and post-secondary non-tertiary education (levels 3 and 4)
High education	Tertiary education (levels 5-8)	First and second stage of tertiary education (levels 5 and 6)

Source: Eurostat (n.d.b). "ISCED-Classification: Correspondence between ISCED 2011 and ISCED 1997 levels" (http://ec.europa.eu/eurostat/documents/1978984/6037342/Comparability_ISCED_2011_ISCED_1997.pdf).

The approach used by Eurostat to group levels of education attainment is one option. It is also possible to disaggregate education attainment by individual levels of education and regroup in any relevant combination. The UNESCO standard levels of education attainment are:

- No schooling
- Incomplete primary
- Primary (ISCED 1)
- Lower secondary (ISCED 2)
- Upper secondary (ISCED 3)
- Post-secondary non-tertiary (ISCED 4)
- Short-cycle tertiary (ISCED 5)
- Bachelor's or equivalent (ISCED 6)
- Master's or equivalent (ISCED 7)
- Doctoral or equivalent (ISCED 8)
- Unknown

Be mindful of

Education attainment categories add up to 100%
The categories of education level are mutually exclusive and exhaustive (each person falls into one category and one only), and so the calculations for each level should add up to 100%.

Age ranges used
The age range 25-64 is used because it represents the working age population from age 25, by when formal education is typically complete. Analysts may be interested in particular or other age ranges and it may be possible to calculate this indicator for other age-groups.

Examples

Education attainment level of the population aged 25-64, by sex, United Kingdom, 2014

	Actual number (thousands)			Distribution by level of education (% of total)		
	Female	Male	Total	Female	Male	Total
Total population	16,859.5	16,443.2	33,302.7	100.0	100.0	100.0
Less than primary, primary and lower secondary education (levels 0-2)	3,672.1	3,179.4	6,851.5	21.8	19.3	20.6
Upper secondary and post-secondary non-tertiary education (levels 3 and 4)	6,019.1	6,677.2	12,696.3	35.7	40.6	38.1
Tertiary education (levels 5-8)	6,983.8	6,345.4	13,329.2	41.4	38.6	40.0
No response	184.6	241.3	425.9	1.1	1.5	1.3

Source: Eurostat (n.d.a). Database (http://ec.europa.eu/eurostat/data/database).

Key findings from this table:

- Around 40% of the population aged 25-64 has a tertiary education.
- Women's and men's education levels are almost the same.

How to interpret this indicator	**Look for differences between women and men** – Levels of education attainment will be impacted if gender roles encourage one sex over the other to pursue higher levels of education.
	Look for changes over time – If the education system, opportunities and attitudes to education for women or men are changing, this may be reflected in changes in the education attainment over time. Most countries in the UNECE region are producing annual labour force data from which this indicator can be calculated, and so new data are frequently available.
	Compare to other countries – Use international databases, such as the UNECE gender statistics database, and the UNESCO Database to look the education attainment levels of comparable countries and regional averages.
	Explore variances within particular sub-groups – Further disaggregation of this indicator by characteristics such as geographical location, ethnicity, age of first marriage, and income levels, can provide more insight into gender disparities and point to groups that would benefit from targeted policies and opportunities to re-enter formal education.
Policy implications	The level of education attainment is a reflection of the population's achievements within the formal education system and an indication of their literacy, numeracy and ability to function in society. Education attainment gives a broad indication of the strength of human capital and how this differs between female and male populations. If large proportions of the working population have a low level of education, this may limit the possibilities for economic growth and point to the need for adult education programs.

4.4.4 Young people not in employment and not in education and training (NEET rate), by sex

How to calculate	**Also known as the NEET rate, this indicator is the share of youth which are neither in employment nor in education or training (numerator) in the youth population (denominator).**

$$\frac{\text{Unemployed non-students aged 15-24* + inactive non-students aged 15-24*}}{\text{Total population aged 15-24*}} \times 100 = \text{NEET rate (\%)}$$

* age range may vary, for example, 15-29 years old is also frequently used for this indicator

Data sources	- Population and housing censuses - Household surveys, such as labour force surveys

Key definitions	**Young people** The age range used for youth may vary. The standard suggests calculating this indicator separately for three age-groups: 15-19 years old; 20-24 years old; and 25-29 years old. **Not in employment and not in education and training** To be considered neither in employment nor in education or training, the young person must satisfy two criteria: 1. They must be not employed (that is they are either unemployed or economically inactive as per standard definitions of these concepts); and 2. They must have not participated in education or training during the four weeks preceding the survey or census. [64]

Be mindful of	**Only non-students should be included** A common miscalculation of this indicator is to include those people who are unemployed without ensuring they are also non-students. International standards call for employment and unemployment to take precedence over economic inactivity when classifying and individual's status. Therefore a part-time or full-time student who is looking for work should be classified as unemployed. Including young unemployed people and ignoring the strict definition by ensuring they are also non-students may significantly increase the resulting NEET rate. [65] **Varying age-groups** Age 15-24 is the widely used standard for youth, however common practice seems to be to use the population aged 15-29 when calculating this indicator. The important point is that the age range covered by this indicator can vary depending on the context and priorities of the region or country. Including people younger than age 15 may be difficult as censuses and surveys often only collect information on economic activity status for the population aged 15 and above.

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[64] ILO (2015a). *What does NEETs mean and why is the concept so easily misinterpreted?* Youth Employment Programme, Work4Youth Technical Brief No.1, ILO and The Master Card Foundation (http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_343153.pdf).
[65] Ibid.

Examples

Kyrgyzstan NEET rate spikes in 2011 and 2012
Share (%) of youth not in employment and not in education, by sex, Kyrgyzstan, 2009-2013
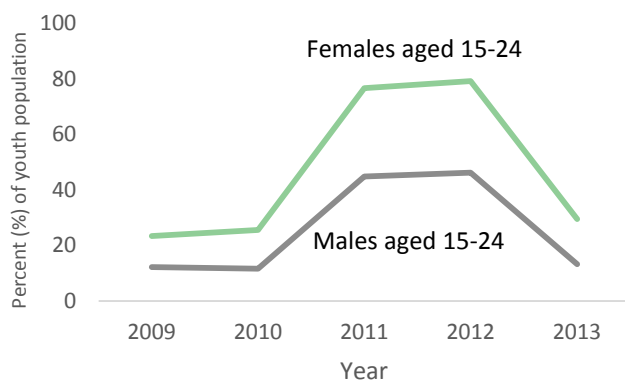
Republic of Moldova sees little change in NEET rate
Share (%) of youth not in employment and not in education, by sex, Republic of Moldova, 2009-2013
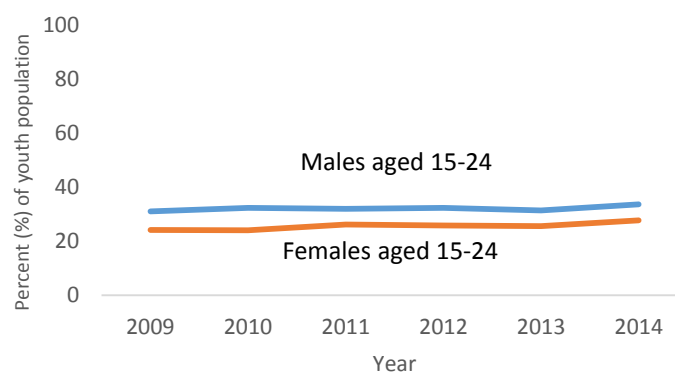
Note: Data are from annual labour force surveys; youth are defined as those aged 15-24 years old.
Source: International Labour Organization (ILO), ILOSTAT Database.

Key messages from the graphs above:

- NEET rates spiked considerably in Kyrgyzstan in 2011 and 2012, but the same did not happen in Moldova.
- There is a significant gender gap in favour of men in Kyrgyzstan, possibly due to higher rates of inactivity among women as a result of homemaker responsibilities.
- The gender gap in the Republic of Moldova is minimal and slightly in favour of women.

How to interpret this indicator	This indicator is difficult to interpret on its own as it merges the concepts of unemployment and exclusion from education. Blurring these issues can lead to misinterpretation. The reasons behind this are well explained in the ILO technical brief on this issue which is recommended reading for anyone working with this indicator.[66]
	High NEET rates may indicate unwanted exclusion from employment or education. They may be a sign of disenfranchisement amongst youth and/or a lack of suitable opportunities for young people. Higher rates for women may also be evident among populations that tend to marry and start childbearing relatively young, as responsibilities in the home may exclude these women from employment or continuing education.
	As a relatively new indicator, but one that has been recommended for inclusion as a Sustainable Development Goal indicator, there is little known yet about the ideal NEET rate and how and why this may vary. Eurostat have stated that in 2011, there were 7.5 million people aged 15-24 and an additional 6.5 million aged 25-29 who were excluded from employment and formal education in Europe, being a NEET rate

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[66] ILO (2015a). *What does NEETs mean and why is the concept so easily misinterpreted?* Youth Employment Programme, Work4Youth Technical Brief No.1, ILO and The Master Card Foundation (http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_343153.pdf).

of 13% and 20% respectively. This was a significant increase from the 2008 rates, which were 11% for 15-24 year olds and 17% for those aged 25-29.[67]

Disaggregated data is required
Accurately interpreting the NEET rate involves examining the underlying components (unemployment versus inactivity) by sex and age-group. This can reveal whether it is unemployment or inactivity that is the main factor and how this differs between men and women and between those aged 15-19, 20-24 and 25-29.

Reasons for inactivity
Where the NEET rate is made up of a significant proportion of inactive non-students (as opposed to those unemployed), the reasons for inactivity should be explored. In many cases this may differ between women and men, with a higher proportion of women likely to be inactive due to homemaking responsibilities.

Policy implications	High rates of young people not in employment or education suggest a need for policies to retain young people in education and/or provide appropriate employment opportunities. Not addressing this situation leads to the possibility of large numbers of disaffected youth. Before designing policy interventions it is essential to look beyond the broad measure that the NEET rate provides and examine the underlying reasons for lack of employment, as explained in the section above.
	Policy measures to address exclusion from employment and education need to be diverse in nature and pay particular attention to vulnerable groups. Long-term solutions are recommended, including equipping young people with the qualifications and skills needed to enter the labour market. Innovation is key to engaging with young people, particularly the disenfranchised.[68] Technology and social media will play an important role in skilling and engaging with young people in many societies.

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[67] Eurofound (2012). *NEETs – Young people not in employment, education or training: Characteristics, costs and policy responses in Europe*, Publications Office of the European Union, Luxembourg (www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef1254en.pdf).
[68] Ibid.

4.5 Exercise: Analysing gender gaps in enrolment rates

Objective	**Practice using enrolment data to calculate the Gender Parity Index in order to become more familiar and comfortable using key gender indicators.**
Preparation	Prepare copies of the handouts. Make sure participants have a calculator (e.g. on their smartphone).
Time required	Approximately 1.5 hours • Brief explanation of GPI and the group work task (5 minutes) • Group work (40 minutes) • Discussion of results (30 minutes)

Task	a) Before introducing the group work, explain what the GPI is:
	
	About the Gender Parity Index
	Key to interpreting this indicator for gender-related policy is to explore similarities and differences in enrolment patterns between girls and boys. The gender gap in GER is often expressed at a Gender Parity Index (GPI). This is calculated by dividing the female GER by the male GER to produce an index that if equal to 1 indicates parity between the sexes. A GPI less than 1 means there is a disparity in favour of males; greater than 1 indicates disparity in favour of females.
	
	GPI is usually expressed with two decimal places. For example, if the Female upper secondary GER is 94.4% and the male is 89.2%, the GPI is 94.4/89.2 = 1.05
	
	b) Explain to the participants that they will now work in pairs (or groups of 3-4 people) to practice calculating the GPI for selected countries and regions based on data from UNESCO Institute of Statistics (clarify that they will all need a calculator), and then discuss what the GER and GPI reveal about upper secondary school participation and gender.
	
	c) Distribute the handouts, check if there are any questions, and allocate 30-45 minutes for the groups to work.
	
	d) Regroup and discuss the findings
	
	    1. Give the answers for the GPI calculation (put the answers on the screen, or circulate on paper). One way to give the results is ask one person to read out the values for GPI per country/region (reading down the list from year 2004 to 2013) while the rest check their own results to see if they got it right). Check if anyone got different answers and, if so, find out what they did to arrive at that answer.
	
	    2. Go through the answers to each of the questions – some points that should come up in discussion are below (participants may raise other findings):
	
	       i. In which country is upper secondary gross enrolment highest?
	
	       • For the latest year available for the three countries (2011), the GER was highest in Uzbekistan (127.6 for females and 131.0 for males).
	       • Of the three regions, Central Asia has the highest average GER for both females and males (102.9 and 104.6 respectively).
	
	       ii. How has enrolment changed over time?
	
	       • The enrolment ratios have increased in all of these countries and regions, for both females and males, between 2004 and 2013.
	       • The increase has been biggest in Uzbekistan, which went from 94.2 Female GER in 2004 to 127.6 in 2013. Male GER also jumped

significantly from 105.7 to 131.0.

iii. In which of the three countries are the gender gaps the greatest?

- Moldova is the only country where the increase in GER was bigger for males than females. Male GER jumped 18.6 percentage points over the 10 year period, and Female GER jumped by 13.8 points.
- Armenia has a much shorter time series for comparison (2007-2012). After correcting for that (i.e. looking at the same restricted time period for other countries) Armenia shows a big gender difference in the extent of increase in the GER during this time, with females GER increasing by 9.3 percentage points, compared to male GER increase of 1.7.

iv. What does the GPI reveal about gender gaps in upper secondary education?

- The GPI shows that in Armenia and Moldova females are more likely to be enrolled in upper secondary education than males. Enrolment is close to gender parity (1.0) in Uzbekistan, but at less than 1.0 is slightly in favour of males.
- In Central Asia, the average GPI for upper secondary education shows that at 0.98, gender parity has pretty much been achieved.
- The average GPI for Central and Eastern Europe (0.95) is close to the global average (0.96), but Central Asia is doing better at achieving gender parity.
- In terms of changes over time, the GPI for Moldova shows the situation has been improving for males, with the GPI moving closer to 1.0 (parity) since 2004. In Armenia, the gender gap is increasing with males continuing to be disadvantaged.
- For the two regions and globally, there has been little change in the GPI between 2004 and 2013.

3. Discuss the potential policy implications of the findings above. The group is likely to come up with much more, but possible issues include:

- Policies needed to retain boys in education system
- Making upper secondary school compulsory, if not already
- One reason for gender gaps may be limited employment opportunities for women encourages them to remain in education
- Consider impact of technical and vocational education and training and whether this is adequately reflected in education statistics

e) Points to make in summary

- Alone the GPI doesn't reveal anything about the level of enrolment or participation. For example, if in Country A the female GER is 40% and the male is 34% (i.e. low enrolment), and in Country B, the female GER is 80% and the male is 68% (i.e. reasonably high levels of enrolment), the GPI for both countries would be 1.17.
- It is important to consider both the GPI and the enrolment ratios on which they are based in order to get an impression of participation issues.
- The GPI can be calculated for other levels of education (pre-primary, primary, etc.).

Handout for group activity

Analysing gender gaps in enrolment rates

About the Gender Parity Index

Key to interpreting this indicator for gender-related policy is to explore similarities and differences in enrolment patterns between girls and boys. The gender gap in GER is often expressed at a Gender Parity Index (GPI). This is calculated by dividing the female GER by the male GER to produce an index that if equal to 1 indicates parity between the sexes. A GPI less than 1 means there is a disparity in favour of males; greater than 1 indicates disparity in favour of females.

Task: In pairs (or groups of 3-4 people), work through the following

a) Using the data provided, calculate the Gender Parity Index (GPI) for each of the countries and regions for the years 2004-2013

b) Discuss your interpretation of both the GER and the GPI figures
   i. In which country is upper secondary gross enrolment the highest?
   ii. How has enrolment changed over time?
   iii. In which of the three countries are the gender gaps the greatest?
   iv. What does the GPI reveal about gender gaps in upper secondary education?

c) What are the potential policy implications of your findings?

Upper Secondary Gross Enrolment Ratio (GER) (%), selected countries and regions, 2004-2013

Year	Republic of Moldova			Armenia			Uzbekistan		
	Female GER	Male GER	GPI	Female GER	Male GER	GPI	Female GER	Male GER	GPI
2004	80.6	70.6					94.2	105.7	
2005	84.8	73.2					107.6	115.7	
2006	87.1	76.9					108.2	114.3	
2007	89.7	79.4		103.2	87.5		116.8	119.0	
2008	89.1	79.9		96.0	78.7		115.2	116.7	
2009	91.6	82.9		103.9	87.5		122.2	121.8	
2010	90.7	81.9		107.1	89.0		124.2	124.8	
2011	90.4	83.7		104.5	84.4		127.6	131.0	
2012	93.0	86.4		112.4	89.1				
2013	94.4	89.2							

Year	Central and Eastern Europe*			Central Asia*			World		
	Female GER	Male GER	GPI	Female GER	Male GER	GPI	Female GER	Male GER	GPI
2004	84.0	90.8		87.5	91.7		46.8	50.6	
2005	83.3	87.9		92.5	96.7		48.2	51.2	
2006	83.7	89.2		93.0	97.8		49.9	52.8	
2007	83.9	89.8		96.8	100.5		51.9	54.5	
2008	82.6	88.4		96.6	98.7		54.6	57.2	
2009	78.9	83.7		99.8	99.5		56.3	58.3	
2010	81.4	87.0		100.1	102.1		57.9	60.5	
2011	84.1	90.7		103.7	106.4		59.9	62.6	
2012	86.2	91.1		104.7	106.7		61.9	64.6	
2013	97.0	102.6		102.9	104.6		64.2	66.9	

Notes: * Regional groupings in this table are based on UNESCO regions; see: UNESCO (2009), *Regional overview: Central and Eastern Europe and Central Asia* (http://en.unesco.org/gem-report/sites/gem-report/files/181905E.pdf). Central and Eastern Europe comprises Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Montenegro, Poland, Republic of Moldova, Romania, Russian Federation, Serbia, Slovakia, Slovenia, TFYR Macedonia, Turkey, and Ukraine. Central Asia comprises Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Mongolia, Tajikistan, Turkmenistan, and Uzbekistan.
Data source: UNESCO Institute for Statistics (n.d.). UIS.STAT Database (http://data.uis.unesco.org/).

Answer sheet

Upper Secondary Gross Enrolment Ratio (GER) (%), selected countries and regions, 2004-2013

Year	Republic of Moldova			Armenia			Uzbekistan		
	Female GER	Male GER	GPI	Female GER	Male GER	GPI	Female GER	Male GER	GPI
2004	80.6	70.6	1.14				94.2	105.7	0.89
2005	84.8	73.2	1.16				107.6	115.7	0.93
2006	87.1	76.9	1.13				108.2	114.3	0.95
2007	89.7	79.4	1.13	103.2	87.5	1.18	116.8	119.0	0.98
2008	89.1	79.9	1.11	96.0	78.7	1.22	115.2	116.7	0.99
2009	91.6	82.9	1.10	103.9	87.5	1.19	122.2	121.8	1.00
2010	90.7	81.9	1.11	107.1	89.0	1.20	124.2	124.8	0.99
2011	90.4	83.7	1.08	104.5	84.4	1.24	127.6	131.0	0.97
2012	93.0	86.4	1.08	112.4	89.1	1.26			
2013	94.4	89.2	1.06						

Year	Central and Eastern Europe			Central Asia			World		
	Female GER	Male GER	GPI	Female GER	Male GER	GPI	Female GER	Male GER	GPI
2004	84.0	90.8	0.93	87.5	91.7	0.95	46.8	50.6	0.93
2005	83.3	87.9	0.95	92.5	96.7	0.96	48.2	51.2	0.94
2006	83.7	89.2	0.94	93.0	97.8	0.95	49.9	52.8	0.94
2007	83.9	89.8	0.93	96.8	100.5	0.96	51.9	54.5	0.95
2008	82.6	88.4	0.94	96.6	98.7	0.98	54.6	57.2	0.95
2009	78.9	83.7	0.94	99.8	99.5	1.00	56.3	58.3	0.97
2010	81.4	87.0	0.94	100.1	102.1	0.98	57.9	60.5	0.96
2011	84.1	90.7	0.93	103.7	106.4	0.97	59.9	62.6	0.96
2012	86.2	91.1	0.95	104.7	106.7	0.98	61.9	64.6	0.96
2013	97.0	102.6	0.95	102.9	104.6	0.98	64.2	66.9	0.96

Notes: * Regional groupings in this table are based on UNESCO regions; see: UNESCO (2009), *Regional overview: Central and Eastern Europe and Central Asia* (http://en.unesco.org/gem-report/sites/gem-report/files/181905E.pdf). Central and Eastern Europe comprises Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Montenegro, Poland, Republic of Moldova, Romania, Russian Federation, Serbia, Slovakia, Slovenia, TFYR Macedonia, Turkey, and Ukraine. Central Asia comprises Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Mongolia, Tajikistan, Turkmenistan, and Uzbekistan.
Data source: UNESCO Institute for Statistics (n.d.). UIS.STAT Database (http://data.uis.unesco.org/).

Module 5: Health

What is covered in this module	**Materials**
	5.1 Gender and health
	5.2 Data sources
	5.3 Understanding the key indicators
	Practical exercises
	5.4 Exercise: Changes in leading causes of death

5.1   Gender and health

Determinants of health   Sex is a determinant of health, as well as gender, poverty and equity.[69] Males and females face different health issues due to their biology (sex) at various stages of life. For example, women need specific services, such as access to health care during pregnancy and childbirth. And, biologically, male babies have lower survival rates than female babies.

Gender and health   Gender norms shape health outcomes through health seeking behaviour, which is the tendency to seek health care and the way in which they access the health system. For example, in some societies, women may not prioritise their own health when they are busy meeting the needs of their children, spouse and others, and this can prevent them from seeking health care in situations when they should. So too, men may delay seeking health care, ignore or putting up with symptoms rather than seeking care.

Gender norms can also increase risks to health, such as men being more likely to smoke and consume alcohol increasing their risk of disease and premature death. In some societies, masculine behaviour involves risk-taking activities that can lead to accidents and violence-related injuries and death.

Monitoring differences between males and females in health status, as well as specific health concerns to women and men, provides essential evidence to inform policies and the effective delivery of health services.

5.2   Data sources

Administrative records   Records from hospitals, health care centres and other providers of health care are an essential source of information on morbidity (disease) and mortality. They form the basis of many of the indicators used to monitor health of the population.

Civil registration systems provide data on births and deaths, including causes of death that are used to produce fertility and mortality needed to monitor and predict population change.

Surveys and censuses   Where administrative data sources are limited in coverage or have other quality issues, household surveys provide an alternative measure of health

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[69] WHO (2011a). *Gender mainstreaming for health managers: a practical approach. Facilitator's Guide* (http://www.who.int/gender-equity-rights/knowledge/health_managers_guide/en/).

issues. Household surveys are also used to monitor specific health concerns that may go unreported (e.g. gender based violence) or undetected, as well as attitudes and behaviours that impact on health outcomes (e.g. diet and nutrition).

Population censuses are used in some countries to gather information on fertility, mortality and the prevalence of disability. However, given the limited number of questions that can be asked in a population census, and the training of enumerators, censuses are not suited for collecting the detailed and sensitive information related to monitoring health concerns.

5.3   Understanding the key indicators

Selected indicators
- Healthy life years at birth
- Causes of death
- Adolescent fertility rate

5.3.1 Healthy life years at birth

How to calculate	Although men and women may be living longer than ever before, morbidity and other conditions may reduce the quality of life of the extra years gained. This indicator provides the average number of years that a person can expect to live in "full health" by taking into account years lived in less than full health due to disease and/or injury. Also known as health-adjusted life expectancy (HALE), the indicator is produced by combining life expectancy data with data on health or disability status. Information on the method of calculation is available in technical notes published by WHO.[70]
Data sources	- Produced by WHO using civil registration data - Produced by the European Union using information from surveys on self-perceived disability
Key definitions	**Healthy life years** The average number of years that a person can expect to live in "full health" by taking into account years lived in less than full health due to disease and/or injury.
Be mindful of	**Other measures of life expectancy** The World Health Organization releases statistics on life expectancy in the World Health Statistics publication released each May. Indicators are: • Life expectancy at birth, by sex • Life expectancy at age 60, by sex • The probability of dying between ages 15 and 60, by sex • The probability of dying between ages 0 and 5 (Under-five mortality rate) Life expectancy has limitations as an indicator of health status. It does not reflect certain aspects of well-being such as quality of life years, and growing recognition of healthy life expectancy has been the feature of health policy among developed nations (e.g. MIPAA, EU indicators for the Beijing Platform for Action).

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[70] WHO (2014b). *WHO methods for life expectancy and healthy life expectancy*. Global Health Estimates Technical Paper (http://www.who.int/healthinfo/statistics/LT_method.pdf).

Examples

Life expectancy compared to healthy life expectancy, by sex and country income level, 2013

Females

- ■ Life expectancy at birth (years)
- ■ Healthy life expectancy (HALE) at birth (years)

World Bank Income Group	Life expectancy	HALE
Low-income	64	54
Lower-middle-income	68	59
Upper-middle-income	76	68
High-income	82	72
Global	73	64

Males

- ■ Life expectancy at birth (years)
- ■ Healthy life expectancy (HALE) at birth (years)

World Bank Income Group	Life expectancy	HALE
Low-income	61	52
Lower-middle-income	64	56
Upper-middle-income	72	64
High-income	76	67
Global	68	60

Source: WHO (n.d.). Global Health Observatory data repository: Life expectancy (http://apps.who.int/gho/data/view.main.700).

Key messages from the graphs above:

- Life expectancy and health life expectancy increase with development (income level).
- Life expectancy measures are consistently higher for females than males.
- The gap between HALE and life expectancy does not vary much between income level groups.

How to interpret this indicator	Data on Healthy Life Years (or "disability-free life expectancy") indicates the number of years a person of a certain age can expect to live without disability. It is used for monitoring health as a productivity/economic factor, introduce the concept of quality of life, measure the employability of older workers, and monitoring progress made in access, quality and sustainability of healthcare.[71] In 2012, global healthy life expectancy at birth was 61.7 years, 8.7 years lower than total life expectancy. Healthy years for females (63.4 years) were only 3.3 years greater than for males (60.1 years).[72]
Policy implications	Where there are large gaps between healthy life years and life expectancy, this indicates high demand on health care systems as people spend more time in need of care. This indicator should be used as part of the range of health indicators needed to monitor demand for care and the quality of service delivery.

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[71] European Commission (n.d.). Public Health: Healthy Life Years (http://ec.europa.eu/health/indicators/healthy_life_years/index_en.htm).
[72] WHO (2014b). *WHO methods for life expectancy and healthy life expectancy*. Global Health Estimates Technical Paper (http://www.who.int/healthinfo/statistics/LT_method.pdf).

5.3.2 Causes of death

How to calculate	Cause of death (COD) statistics are produced using the age-standardized mortality rate (per 100,000 population) based on data on deaths by cause, age and sex collected using national death registration systems or sample registration systems.
Data sources	- Civil registration with complete coverage and medical certification of cause of death - Household surveys - Population census - Sample or sentinel registration systems - Special studies - Surveillance systems
Key definitions	**Death** The permanent disappearance of all evidence of life at any time after a live birth has taken place (post-natal cessation of vital functions without capability of resuscitation). This definition therefore excludes foetal deaths. **Causes of death (COD)** All diseases, morbid conditions or injuries that either resulted in or contributed to death, and the circumstances of the accident or violence that produced any such injuries. Symptoms or modes of dying, such as heart failure or asthenia, are not considered to be causes of death for vital statistics purposes. Causes are coded using the International Statistical Classification of Diseases and Related Health Problems (ICD). **Age-standardized mortality rate** The (age-) standardized death rate (SDR) is a weighted average of age-specific mortality rates per 100,000 population. The weighting factor is the age distribution of a standard reference population. The standard reference population used is the European standard population as defined by the World Health Organisation (WHO). As method for standardisation, the direct method is applied. As most causes of death vary significantly with age and sex, the use of standardised death rates improves comparability over time and between countries.
Be mindful of	**Coding causes of death** The ICD is in its tenth revision at the time of writing. Referred to as ICD-10, it includes more than 14,000 different causes of death grouped into 21 chapters. At the highest level of aggregation, cause of death codes fall into three broad categories: (1) Communicable, maternal, neonatal, and nutritional disorders; (2) non-communicable diseases; and (3) injuries. Diseases and external causes of death are coded differently in different versions of the International Classification of Diseases (ICD). For many diseases it is not possible to identify codes in different classification systems that would correspond precisely to the same disease or groups of diseases. Often the change in the trend of a certain cause-specific mortality rate may be the result of a changing ICD version or national death certification and coding practices, rather than an actual change in the mortality. **Under reporting of deaths** It should be noted that mortality rates for some countries may be biased due to the under-registration of death cases.

Examples

Death Rate by Country, Causes of Death, Year and Sex

Cause of death	Armenia (2012)		Kazakhstan (2010)		Republic of Moldova (2012)		Ukraine (2012)	
	Female	Male	Female	Male	Female	Male	Female	Male
Cerebrovascular diseases	82.2	98.5	159.4	222.0	155.6	204.4	121.2	173.5
Chronic liver disease and cirrhosis	14.2	35.0	..	..	70.8	95.6	..	..
Diseases of the blood, blood forming organs & certain immunity disorders	0.5	1.1	1.2	1.2	0.2	0.4	0.6	0.7
Diseases of the circulatory system	356.5	524.6	485.7	813.6	564.2	790.3	532.6	873.3
Diseases of the digestive system	40.4	69.0	44.0	87.6	84.5	126.4	32.6	77.6
Diseases of the genitourinary system	18.5	38.0	8.7	13.4	6.4	11.8	4.7	7.3
Diseases of the respiratory system	40.8	72.6	33.9	100.3	24.4	86.1	12.7	55.9
Endocrine, nutritional and metabolic diseases	46.4	36.8	11.4	10.6	12.3	13.6	4.5	4.8
External causes of injury and poisoning	19.7	72.4	48.9	198.1	38.3	139.8	31.8	145.2
Infectious and parasitic diseases	3.5	17.0	8.6	26.2	5.2	25.5	14.6	45.3
Ischaemic heart diseases	211.4	351.8	124.4	266.3	365.4	527.5	356.0	599.7
Malignant neoplasms	149.9	242.0	119.9	217.2	116.1	230.8	119.8	234.9
Suicide and intentional self-harm	1.2	4.4	7.6	40.8	5.4	26.9	5.7	32.5
Symptoms, signs, abnormal findings, ill-defined causes	11.1	19.4	155.4	197.4	3.7	12.1	19.7	26
Transport accidents	2.2	11.9	11.0	32.9	6.1	20.9	5.5	19.7

Note: '..' indicates that data are not available.
Source: UNECE (2016a). UNECE Statistical Database (http://w3.unece.org/PXWeb/en) - compiled from national and international (WHO European health for all and EUROSTAT database) official sources.

Key messages from the table above:

- Death rates vary significantly by sex and between countries.
- For females and males, diseases of the circulatory system are the leading cause of death in all of these countries, although there is a big gender gap in the death rate.

How to interpret this indicator	Causes of death differ from low to middle and high income countries. Globally, non-communicable diseases (NCDs), such as cardiovascular disease, cancers, diabetes and chronic lung diseases are the cause for the majority of deaths (64% in 2012). In high-income countries 87% of all deaths were caused by NCDs. Communicable disease (e.g. malaria, tuberculosis), maternal, neonatal (within first month of birth) and nutrition conditions were responsible for 23% of deaths globally in 2012. Injuries caused 9% of deaths.[73]

[73] WHO (2014a). "The top 10 causes of death" Fact sheet No. 310 (www.who.int/mediacentre/factsheets/fs310/).

Compare over time and between areas

As countries develop causes of death are more likely to be from non-communicable diseases and less from communicable diseases and injuries. Monitoring changes over time and between different geographical areas is necessary to identify specific health issues and increases in certain types of disease or disorders. Factors such as communicable disease, or environmental issues, can cause rapid changes in health status. Therefore, regular monitoring of changes in causes of death is needed for responsive policymaking.

Policy implications	Measuring how many people die each year and why they died is one of the most important ways for assessing the effectiveness of a country's health system. It helps shape public health policy and prioritise interventions to prevent, diagnose and treat disease.

5.3.3 Adolescent fertility rate (per 1,000 women aged 15-19 years)

How to calculate	The adolescent fertility rate (AFR) (or birth rate) is the age-specific fertility rate for women aged 15-19. The method of calculation depends on the source of data. For civil registration data, which is the source for most countries in the EECCA region, it is the number of registered births to women aged 15 to 19 years of age, divided by the total number of women aged 15-19 (using population estimates for example), then multiplied by 1,000 to get a rate per 1,000 women.

$$\frac{\text{Number of registered live births born to women aged 15-19 years}}{\text{Number of women aged 15-19 years}} \times 1000$$

	In the case of survey and census data, different methods are used to calculate the numerator based on the number of births reported by women who would have been aged 15-19 years at the time of the birth. These calculations are typically done by experts in the national statistical system, based on international standards.[74]
Data sources	- Population and housing census - Household surveys (e.g. Demographic and Health Survey) - Civil registration systems (where coverage is complete)
Key definitions	**Adolescent** Aged 15-19 years. Also sometimes referred to as teenagers. **Live births** Refers to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life - e.g. beating of the heart, pulsation of the umbilical cord or definite movement of voluntary muscles - whether or not the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered live born.
Be mindful of	**Limitations of civil registration data** Civil registration data are subject to limitations depending on the completeness of birth registration, the treatment of infants born alive but dead before registration or within the first 24 hours of life, the quality of the reported information relating to age of the mother, and the inclusion of births from previous periods. The population estimates may suffer from limitations connected to age misreporting and coverage.[75] **Birth rate** The adolescent fertility rate is also referred to as the birth rate.

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[74] For detailed information on the different methods of computation see: United Nations (2004), *Handbook on the Collection of Fertility and Mortality Data*. United Nations Statistics Division (http://unstats.un.org/unsd/pubs/gesgrid.asp?id=325). Indirect methods of estimation are analyzed in United Nations (1983), *Manual X: Indirect Techniques for Demographic Estimation* (http://www.un.org/esa/population/publications/Manual_X/Manual_X.htm).

[75] United Nations (n.d.a). Millennium Development Goals Indicators: Series metadata for 'Adolescent birth rate, per 1,000 women' (http://mdgs.un.org/unsd/mdg/Metadata.aspx).

Examples

Teenage pregnancy falls signficantly in some countries, rises in others
Adolescent fertility rate (births per 1,000 women aged 15-19), selected countries,
1990 and 2013
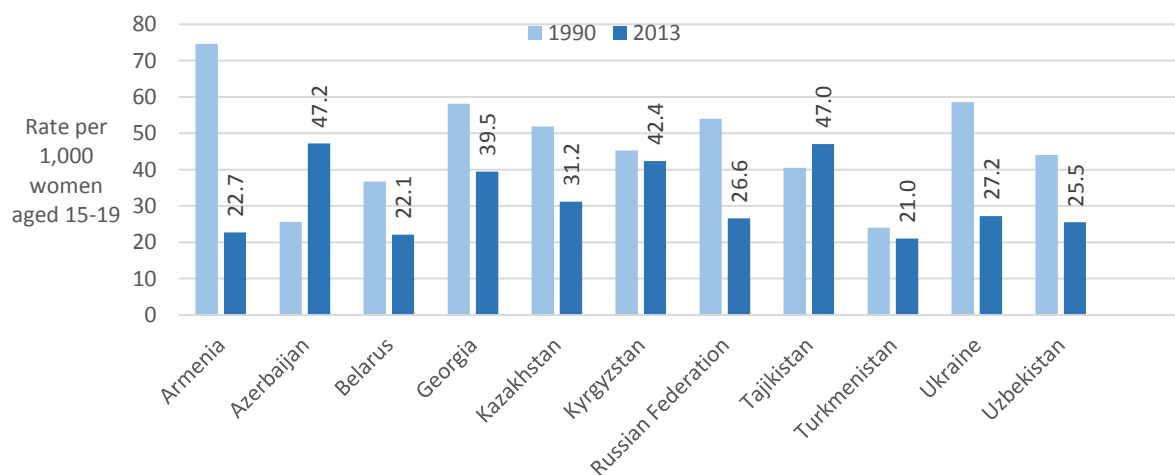
Source: United Nations (n.d.a). Millennium Development Goals Indicators: Series metadata for 'Adolescent birth rate, per 1,000 women'
(http://mdgs.un.org/unsd/mdg/Metadata.aspx).

Key messages from the graph above:

- Adolescent fertility has fallen significantly in Armenia, Russian Federation and Ukraine between 1990
  and 2013.
- Rates have increased during the same period in Azerbaijan and Tajikistan.

How to interpret this indicator	The adolescent birth rate provides a measure of reproductive health focusing on the vulnerable group of adolescent women. Women who become pregnant and give birth very early in their reproductive lives are subject to higher risk of complication during pregnancy and birth, as well as higher risk to child health.
	High adolescent fertility rates (AFR) are considered to be those above 80 births per 1,000 women aged 15-19, moderate rates fall between 19 and 80, and low rates are those below 19.[76] Countries in the EECCA region featured in the graph above report moderate rates of adolescent fertility with AFRs between 21.0 and 47.2.
	Compare with data early marriage Most adolescent childbearing occurs within marriage and therefore this indicator is closely related to measures of early marriage (see 2.3.3 Mean age at first marriage).
	Regional and global comparisons The global average for adolescent fertility rate is 51.0 births per 1,000 women aged 15-19 (2012). In developed regions the rate is 18.1 and in the least developed

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[76] United Nations (2013). Adolescent Fertility since the International Conference on Population and Development (ICPD) in
Cairo. United Nations Population Division, ST/ESA/SER.A/337
(http://www.un.org/en/development/desa/population/publications/pdf/fertility/Report_Adolescent-Fertility-since-
ICPD.pdf).

countries it is 112.9. In Caucasus and Central Asia, the average adolescent fertility rate had fallen from 44.6 in 1990 to 32.7 in 2012.[77]

Proxy measure of health system
The adolescent birth rate may also provide indirect evidence on the level of access that young people have to reproductive health services, including family planning and knowledge of contraception.[78]

Policy implications	Preventing births very early in a woman's life is an important measure to improve maternal health and reduce infant mortality. Women having children at an early age may limit their opportunities for socio-economic improvement, by ending their education early and, if they need to work, finding it difficult to combine family and work responsibilities.
	Reproductive and sexual health policies should incorporate strategies to achieve a low adolescent fertility rate. Actions may include providing more education and employment opportunities for young people, which may delay their choice to start a family and increase their knowledge of family planning methods. Increasing the accessibility and quality of the health care system, the availability of contraception and family planning services, providing sex education in schools, are also strategies that can impact fertility rates.

[77] United Nations (2015d). 'Millennium Development Goals, targets and indicators 2015: Statistical tables' Annex (http://mdgs.un.org/unsd/mdg/Resources/Static/Products/Progress2015/StatAnnex.pdf).
[78] WHO (2015b). *World Health Statistics 2015: Indicator Compendium* (www.who.int/gho/publications/world_health_statistics/WHS2015_IndicatorCompendium.pdf).

5.4 Exercise: Changes in leading causes of death

Objective	**Examine data on leading causes of death to identify changes over time and main differences between males and females.**
Preparation	Prepare copies of the handouts
Time required	Approximately 1 hour • Introduction and breaking into groups (5 minutes) • Group work (30 minutes) • Discussion of results (25 minutes)

Task	a) Explain to the participants that they will work in small groups (3-4 people) to look at how causes of death vary over time and between males and females.
	
	b) Distribute the handouts, check if there are any questions, and allocate 30 minutes for the groups to work. Their task is to:
	
	    • Review the top 10 causes of death for females and males in Moldova and Armenia
	    • What are the similarities and differences in causes of death between females and males within each country?
	    • How have the causes changed between 1990 and 2010?
	    • What are the main differences between causes of death in Moldova versus Armenia?
	
	c) Regroup and discuss the findings.
	
	Moldova
	
	Similarities and differences between males and females
	• Top four causes are the same.
	• Women die from breast and cervical cancer, and men from lung cancer.
	• Injuries (self-harm and road accidents) are leading killers of males, but not in the top 10 for females.
	
	Changes over time
	• HIV/AIDS has increased significantly.
	• Deaths from road accidents for men have fallen.
	• Overall, the top 10 causes have remained the same – just a shift in the order.
	
	Armenia
	
	Similarities and differences between males and females
	• Top two causes are the same.
	• Breast cancer is a leading killer for women and diarrheal disease is also in the top 10.
	• Neonatal encephalopathy (brain disorder in newborns) is a top 10 killer for males.
	• Injuries (road accidents and mechanical forces) are leading killers of males, but not in the top 10 for females.
	
	Changes over time
	• Deaths from diabetes and cirrhosis have increased significantly for both men and women.

- Top two causes of death have remained the same.
- Communicable diseases as leading killers have decreased.

Differences between Moldova and Armenia
- HIV/AIDS more of an issue in Moldova.
- Self-harm is not a major killer of men in Armenia.
- Cervical cancer is not a major killer of women in Armenia.
- Cirrhosis is more of an issue in Moldova for both women and men.

Handout for practical exercise

Task:

- Review the top 10 causes of death for females and males in Moldova and Armenia.
- What are the similarities and differences in causes of death between females and males within each country?
- How have the causes changed between 1990 and 2010?
- What are the main differences between causes of death in Moldova versus Armenia?

Female top 10 causes of death, Moldova, 1990 and 2010

Moldova ▼	Top 10 ▼	**Causes** Risks
Both Male **Female**	Deaths ▼	All ages ▼ 🔗

1990 Mean rank (95% UI)		2010 Mean rank (95% UI)		Median % change (95% UI)
1.0 (1-1)	1 Ischemic heart disease	1 Ischemic heart disease	1.0 (1-1)	11% (4 to 14)
2.0 (2-2)	2 Stroke	2 Stroke	2.0 (2-2)	-6% (-17 to 4)
3.0 (3-3)	3 Cirrhosis	3 Cirrhosis	3.0 (3-3)	-6% (-17 to 18)
4.0 (4-5)	4 COPD	4 COPD	4.1 (4-5)	-19% (-28 to -7)
5.6 (5-7)	5 Breast cancer	5 Breast cancer	5.0 (4-6)	2% (-13 to 19)
5.7 (5-7)	6 Lower respiratory infections	6 Colorectal cancer	6.2 (6-8)	0% (-20 to 22)
7.4 (7-10)	7 Colorectal cancer	7 HIV/AIDS	8.0 (6-11)	525% (-53 to 2346)
8.6 (5-15)	8 Stomach cancer	8 Lower respiratory infections	8.1 (7-11)	-45% (-60 to -33)
9.7 (7-13)	9 Congenital anomalies	9 Hypertensive heart disease	9.4 (6-14)	-2% (-25 to 263)
10.3 (7-16)	10 Cervical cancer	10 Cervical cancer	10.9 (7-17)	-28% (-41 to -1)
13.0 (8-20)	12 Hypertensive heart disease	11 Stomach cancer	11.2 (7-19)	-40% (-56 to -24)
40.2 (5-67)	40 HIV/AIDS	24 Congenital anomalies	23.7 (17-32)	-69% (-80 to -47)

Male top 10 causes of death, Moldova, 1990 and 2010

Moldova ▼	Top 10 ▼	**Causes** Risks
Both **Male** Female	Deaths ▼	All ages ▼ 🔗

1990 Mean rank (95% UI)		2010 Mean rank (95% UI)		Median % change (95% UI)
1.0 (1-1)	1 Ischemic heart disease	1 Ischemic heart disease	1.0 (1-1)	22% (14 to 26)
2.0 (2-2)	2 Stroke	2 Stroke	2.0 (2-2)	9% (-3 to 18)
3.0 (3-3)	3 Cirrhosis	3 Cirrhosis	3.0 (3-3)	28% (9 to 48)
4.2 (4-5)	4 COPD	4 COPD	4.2 (4-5)	-18% (-25 to -10)
5.3 (4-8)	5 Lung cancer	5 Lung cancer	5.5 (4-7)	-23% (-33 to 31)
6.3 (5-8)	6 Road injury	6 Lower respiratory infections	5.9 (4-8)	-2% (-39 to 20)
6.5 (5-8)	7 Lower respiratory infections	7 Self-harm	6.6 (4-9)	12% (-6 to 28)
7.9 (6-10)	8 Self-harm	8 Colorectal cancer	9.5 (8-13)	26% (-1 to 51)
9.1 (8-12)	9 Stomach cancer	9 Road injury	9.8 (7-12)	-55% (-62 to -14)
10.6 (9-13)	10 Congenital anomalies	10 HIV/AIDS	9.9 (8-12)	1298% (0 to 5459)
11.2 (10-14)	11 Colorectal cancer	12 Stomach cancer	12.6 (9-18)	-32% (-45 to -20)
48.7 (10-70)	49 HIV/AIDS	33 Congenital anomalies	31.3 (24-41)	-71% (-82 to -55)

■ Communicable, maternal, neonatal, and nutritional disorders   ■ Non-communicable diseases   ■ Injuries

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Note: COPD is Chronic Obstructive Pulmonary Disease which is a condition that limits airflow into the lungs (e.g. emphysema and chronic bronchitis). Congenital anomalies are also known as birth defects, congenital disorders or congenital malformations. Congenital anomalies can be defined as structural or functional anomalies (e.g. metabolic disorders) that occur during intrauterine life and can be identified prenatally, at birth or later in life.
Source: Institute for Health Metrics and Evaluation (IHME) (2015). Data Visualizations (http://vizhub.healthdata.org/irank/arrow.php).

Female top 10 causes of death, Armenia, 1990 and 2010

	Armenia ▾	Top 10 ▾	**Causes** Risks
Both Male **Female**	Deaths ▾	All ages ▾	👓

1990 Mean rank (95% UI)				2010 Mean rank (95% UI)		Median % change (95% UI)
1.0 (1-1)	1 Ischemic heart disease			1 Ischemic heart disease	1.0 (1-1)	34% (25 to 60)
2.0 (2-2)	2 Stroke			2 Stroke	2.0 (2-2)	46% (17 to 61)
3.0 (3-3)	3 Lower respiratory infections			3 Diabetes	3.1 (3-5)	148% (12 to 182)
4.9 (4-7)	4 Breast cancer			4 Breast cancer	4.3 (3-5)	53% (24 to 82)
4.9 (4-7)	5 COPD			5 COPD	4.7 (4-6)	44% (18 to 73)
5.9 (4-8)	6 Diabetes			6 Hypertensive heart disease	6.4 (5-9)	41% (19 to 71)
8.4 (4-11)	7 Congenital anomalies			7 Cirrhosis	7.2 (6-13)	107% (4 to 148)
9.2 (5-16)	8 Hypertensive heart disease			8 Lower respiratory infections	9.1 (7-15)	-59% (-79 to -47)
10.1 (5-19)	9 Stomach cancer			9 Colorectal cancer	9.4 (7-12)	34% (3 to 66)
10.3 (7-16)	10 Diarrheal diseases			10 Lung cancer	10.8 (8-18)	48% (-12 to 91)
14.5 (10-19)	15 Colorectal cancer			12 Stomach cancer	12.2 (7-18)	-20% (-38 to 18)
17.0 (11-20)	18 Cirrhosis			17 Congenital anomalies	17.5 (13-25)	-53% (-80 to -34)
18.6 (11-22)	20 Lung cancer			30 Diarrheal diseases	29.1 (24-33)	-78% (-85 to -65)

Male top 10 causes of death, Armenia, 1990 and 2010

	Armenia ▾	Top 10 ▾	**Causes** Risks
Both **Male** Female	Deaths ▾	All ages ▾	👓

1990 Mean rank (95% UI)				2010 Mean rank (95% UI)		Median % change (95% UI)
1.0 (1-1)	1 Ischemic heart disease			1 Ischemic heart disease	1.0 (1-1)	39% (33 to 47)
2.0 (2-2)	2 Stroke			2 Stroke	2.0 (2-2)	49% (23 to 62)
3.3 (3-5)	3 Lung cancer			3 Lung cancer	3.1 (3-4)	31% (-7 to 58)
4.1 (3-6)	4 Lower respiratory infections			4 COPD	3.9 (3-4)	17% (3 to 40)
4.8 (3-6)	5 COPD			5 Diabetes	5.7 (5-8)	184% (40 to 226)
6.1 (5-8)	6 Road injury			6 Cirrhosis	5.9 (5-9)	102% (4 to 130)
7.5 (6-11)	7 Mechanical forces			7 Road injury	7.6 (5-11)	-32% (-49 to 17)
8.5 (6-12)	8 Stomach cancer			8 Mechanical forces	9.1 (6-16)	-19% (-60 to 4)
9.7 (7-12)	9 Congenital anomalies			9 Stomach cancer	9.3 (7-14)	-14% (-37 to 4)
9.7 (7-15)	10 Neonatal encephalopathy			10 Lower respiratory infections	10.4 (7-15)	-58% (-75 to -45)
11.1 (8-13)	11 Cirrhosis			17 Congenital anomalies	19.6 (14-28)	-54% (-77 to -36)
14.5 (11-17)	14 Diabetes			22 Neonatal encephalopathy	23.9 (16-34)	-69% (-83 to -43)

🟥 Communicable, maternal, neonatal, and nutritional disorders   🟦 Non-communicable diseases   🟩 Injuries

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Note: COPD is Chronic Obstructive Pulmonary Disease which is a condition that limits airflow into the lungs (e.g. emphysema and chronic bronchitis). Congenital anomalies are also known as birth defects, congenital disorders or congenital malformations. Congenital anomalies can be defined as structural or functional anomalies (e.g. metabolic disorders) that occur during intrauterine life and can be identified prenatally, at birth or later in life.
Source: Institute for Health Metrics and Evaluation (IHME) (2015). Data Visualizations (http://vizhub.healthdata.org/irank/arrow.php).

Module 6: Power and decision-making in society

What is covered in this module	**Materials**
	6.1 Gender and decision-making
	6.2 Data sources
	6.3 Understanding the key indicators
	Practical exercise
	6.4 Exercise: Making the case for increasing women in politics

6.1   Gender and decision-making

Critical area of concern   The Beijing Platform for Action dubbed women in power and decision-making one of the twelve critical gender equality concerns. In 1995, 11.3% of national parliamentarians were women; in 2014 that figure has risen to 21.8%.[79]

Ensuring women have equal opportunities to work at the highest levels of decision making is essential to achieving gender equality. Male dominance in top positions in public and private life suggests that women have not achieved equality. They may be hampered by career breaks for childbirth and the unequal contribution of men to child care responsibilities, together with a lack of family friendly policies, make it more difficult for women balance work and family life in the way required by these types of jobs.

Decision-making in the home is another area of concern for gender equality and some surveys, such as the Demographic and Health Survey, collect valuable data on the role that women and men play in major household decisions.

6.2   Data sources

Surveys and censuses   Household surveys and the population census provide the basis for producing indicators on women's share of top positions (legislators, senior officials and managers). They collect occupation and industry information from the economically active population that can be used to determine women's share of high level jobs. They also collect other characteristics (education level and family situation) which can be used for cross tabulation and further comparison between women and men to reveal relative advantage or disadvantage.

Administrative records   Administrative records are the main source for producing the indicator on women's share of national parliament. So to, administrative records maintained by agencies such as the Civil Service Commission, are used to analyse women's share of civil service positions.

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[79] UN Women, The Beijing Platform for Action Turns 20 (n.d.). Women in Power and Decision-making (http://beijing20.unwomen.org/en/in-focus/decision-making).

6.3   Understanding the key indicators

Selected indicators
- Female legislators, senior officials and managers (% of total)
- Women's share of members of national parliament (%)
- Women's share of senior level civil servants (%)

6.3.1   Female legislators, senior officials and managers (% of total)

How to calculate	This is calculated by dividing the number of women with occupations that fall into the category of legislators, senior officials and managers (ISCO-88 Major Group 1) of the total number of people in this category (men + women) and then multiplying the result by 100 to get a percentage figure. $$\frac{\text{Women in legislator, senior officials and manager occupations}}{\text{Total number of people in legislator, senior officials and manager occupations}} \times 100$$
Data sources	- Labour Force Surveys and other household surveys that collect information on occupations in employment - Population and housing censuses

Key definitions	**Legislators, senior officials and managers (ISCO Major Group 1)**
	Legislators, senior officials and managers determine, formulate, direct or advise on government policies, as well as those of special-interest organisations, formulate laws, public rules and regulations, represent governments and act on their behalf, oversee the interpretation and implementation of government policies and legislation, or plan, direct, and coordinate the policies and activities of enterprises or organisations, or their internal departments or sections.[80]
	
	The International Standard Classification of Occupations (ISCO) is used to code each occupation. Updated regularly, there are currently two versions of the classification that are widely used (ICSO-88 and ISCO 08). The latest revision in 2008 (ISCO-08) saw a renaming of the first major group of occupations to 'Managers'. For ISCO 2008 the four main subgroups, termed second digit level are as follows:[81]
	1 Managers
	    11 Chief executives, senior officials and legislators
	    12 Administrative and commercial managers
	    13 Production and specialized services managers
	    14 Hospitality, retail and other services managers
	
	For ISCO 1988 the three main subgroups, termed second digit level are as follows:
	1 Legislators, senior officials and managers
	    11 Legislators and senior officials
	    12 Corporate managers
	    13 General managers

Be mindful of	**Latest version of ISCO Classification** Note that ISCO was updated in 2008 and ISCO-08 Major Group 1 is now called 'Managers'. It generally corresponds to ISCO-88 Major Group 1 of Legislators, Senior Officials, and Managers and contains similar subgroupings. For more information on

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[80] ILO (n.d.c). ISCO International Standard Classification of Occupations – Major Group 1: Legislators, Senior Officials and Managers (www.ilo.org/public/english/bureau/stat/isco/isco88/1.htm).

[81] ILO (n.d.b). ISCO International Standard Classification of Occupations – ISCO-08 Structure and preliminary correspondence with ISCO-88 (www.ilo.org/public/english/bureau/stat/isco/isco08/).

the latest classification and its correspondence to earlier version, see www.ilo.org/public/english/bureau/stat/isco/isco08/.

Coding procedures

The quality of information on occupations depends on the quality of the coding that is done when processing the survey or census results. As respondents provide a written or verbal response to the question on the occupation, a data entry clerk or similar has to interpret and allocate a code to that response based on the ISCO classification (or a national version of occupation classification).

Sometimes decisions are made to code occupations on to a certain level (e.g. 3-digit level instead of 4-digit). This can result in a loss of precision or accuracy as higher level codes are generalized. Higher level coding also limits the ability to disaggregate and better understand the occupations that women and men do.

Examples

High representation of women among the top jobs
Female share (%) of legislators, senior officials and managers, selected countries, latest year available
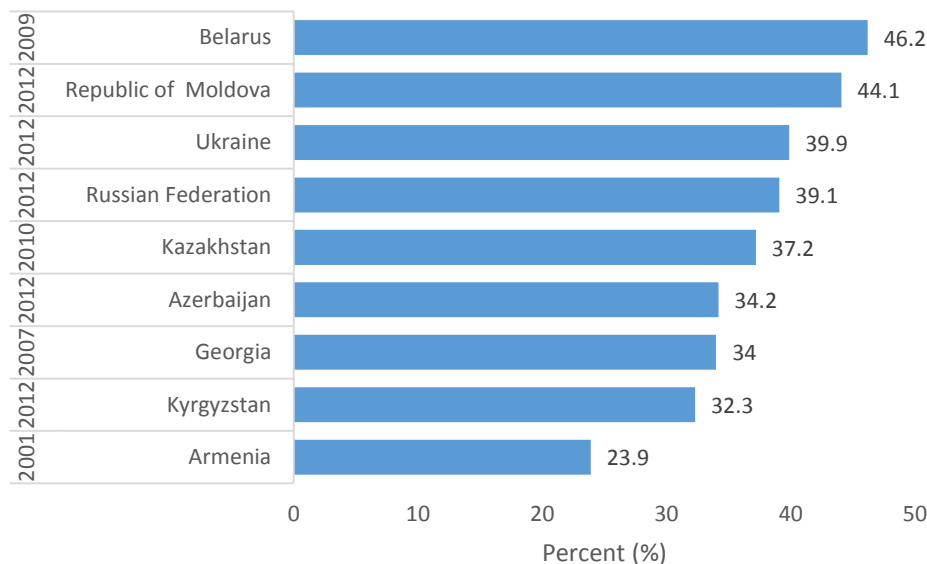
Source: ILO (2015b). *Women in Business and Management: Gaining momentum* (http://www.ilo.org/global/publications/ilo-bookstore/order-online/books/WCMS_316450/).

Key messages from the graph above:

- Belarus and the Republic of Moldova have almost achieved equal proportion of men and women in the most senior level occupations.
- Except for Armenia, for which data are old, the representation of women in these countries exceeds 30%.

| **How to interpret this indicator** | Women's participation in the top jobs varies widely across the globe, from them holding the majority in three countries (Jamaica: 59.3%; Colombia: 53.1%; and Saint Lucia: 52.3%), to holding a miniscule share in countries like Pakistan (3.0%), Algeria (4.9%), Jordan (5.1%), and Bangladesh (5.4%).

Examine changes over time
One of the important uses of this indicator is to determine whether women's share of top decision-making positions is increasing or decreasing over time. Consider this information together with changes in the job market, such as rising unemployment, to see if gender gaps change or remain stable.

Look at different forms of management
Disaggregating this indicator by the different sub-groups of managers (e.g. chief executives, general managers, and hospitality managers) can show women and men being more likely to occupy certain types of management positions. This can better inform the development of policies and programs to attract women and men into roles where they are underrepresented. |
| **Policy implications** | Where women's share is low, policy interventions may include affirmative action to attract and retain women in senior positions, leadership training for women and identifying role models and champions to encourage women to enter management. |

6.3.2 Women's share of members of national parliament (%)

How to calculate	This is calculated by dividing the number of women in national parliament (single or lower house only) by the total number of occupied parliamentary seats and then multiplying the result by 100 to get a percentage figure. $$\frac{\text{Women in national parliament}}{\text{Number of occupied seats in national parliament}} \times 100$$
Data sources	- Records of national parliaments
Key definitions	**Parliament** Parliaments vary considerably in their internal workings and procedures, however, generally legislate, oversee government and represent the electorate. National parliaments can be bicameral or unicameral (i.e. comprising one or two houses/chambers such as a lower and upper house). This indicator covers the single chamber in unicameral parliaments and the lower chamber in bicameral parliaments. It does not cover the upper chamber of bicameral parliaments.[82] **Seats** Seats refer to the number of parliamentary mandates, or the number of members of parliament. Seats are usually won by members in general parliamentary elections. Seats may also be filled by nomination, appointment, indirect election, rotation of members and by-election.[83]
Be mindful of	**Treatment of vacant seats** If seats are not occupied they are to be excluded from the calculation. **Infrequently updated** As national elections are typically held every 3-5 years, this indicator is usually only updated in the election year. There can be changes to the composition of parliament between elections, such as due to resignation or death of the sitting parliamentary member.

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[82] United Nations (n.d.b). Millennium Development Goals Indicators: Series metadata for 'Seats held by women in national parliament, percentage' (http://mdgs.un.org/unsd/mdg/Metadata.aspx).
[83] Ibid.

Examples

Women in Kyrgyzstan parliament just above global averaage
Women's share of members of national parliament (%), 2010-2015
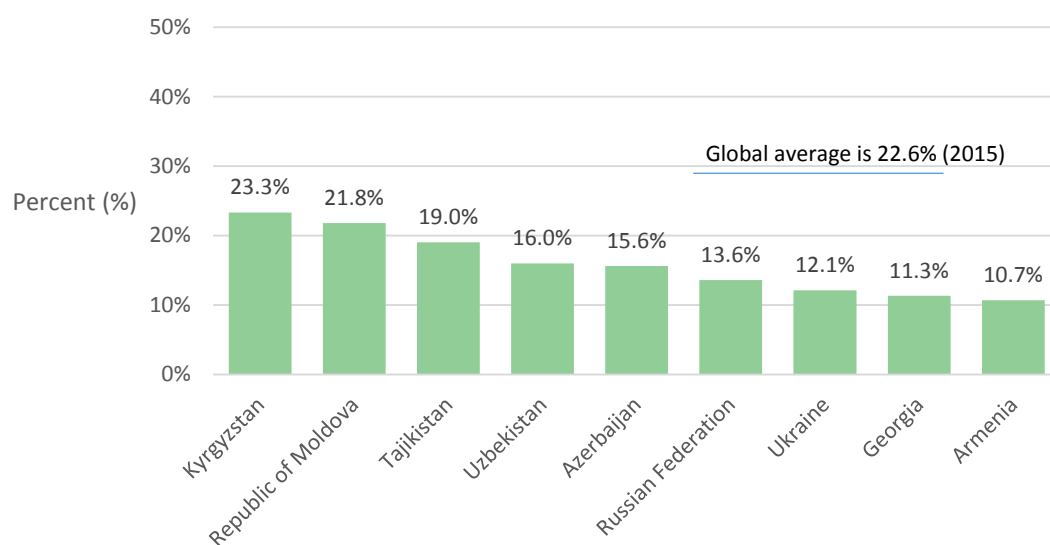
Notes: Azerbaijan and Kyrgyzstan data refers to 2010; for Russian Federation data refer to 2011; for Armenia and Georgia data refers to 2012; for Republic of Moldova, Ukraine and Uzbekistan data refers to 2014; and for Tajikistan data refer to 2015.
Source: IPU (2015). Women in national parliaments (www.ipu.org/wmn-e/classif.htm).

Key messages from the graph above:

- Women's representation in national parliament is low in most of these countries and a long way from equal (50%).
- Kyrgyzstan is the only country above the global average of 22.6%.

Women's share of members of national parliament (%), selected countries, 2000-2014

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Armenia	3	3	3	5	5	5	5	9	9	8	9	9	11	11	11
Azerbaijan	12	10	10	10	10	10	11	11	11	11	11	16	16	16	16
Belarus	5	10	10	10	10	29	29	29	29	32	32	32	32	27	27
Georgia	7	7	7	7	9	9	9	9	6	5	7	7	7	12	12
Kazakhstan	10	10	10	10	10	10	10	10	16	16	18	18	24	24	25
Kyrgyzstan	10	10	10	10	10	3	0	0	26	26	26	23	23	23	23
Moldova, Republic of	9	13	13	13	13	21	22	22	22	24	24	19	20	20	19
Russian Federation	8	8	8	8	10	10	10	10	14	14	14	14	14	14	14
Tajikistan	15	13	13	13	13	17	17	17	17	17	19	19	19	19	16
Turkmenistan	26	26	26	26	26	16	16	16	16	17	17	17	17	17	26
Ukraine	8	8	5	5	5	5	7	9	8	8	8	8	8	9	10
Uzbekistan	7	7	7	7	7	18	18	18	18	18	22	22	22	22	22

Note: Georgia - excluding Abkhaz AR and Tskhinvali Region.
Source: UNECE (2016a). UNECE Statistical Database (http://w3.unece.org/PXWeb/en) - compiled from national and international official sources (Inter-Parliamentary Union).

Key messages from the table above:

- There have been significant increases in women's representation in parliament in Belarus, Kazakhstan, Republic of Moldova, and Uzbekistan between 2000 and 2014.
- Women's share in Armenia has also increased markedly, but there the representation started low (3% in 2000) and remains low (11% in 2014).

How to interpret this indicator	As women comprise half the population in most countries, their representation in national decision-making should be a priority. However, this indicator may not be sufficient to measure women's contribution to political decision making as presence in parliament does not guarantee influence over its decision-making processes. Some women (and men) may face obstacles in fully and efficiently carrying out their parliamentary mandate. The use of quotas to increase women's representation in politics has been an effective measure in many countries. There are a variety of approaches, usually in the form of a certain percentage of seats that are reserved for women and other marginalised or groups. This indicator should be considered in light of the existence of any such quotas. For example, in the EECCA region, Armenia, Georgia, Kyrgyzstan, and Uzbekistan have some kind of legislated gender quota.[84] Understanding women's participation and influence in political life should also extend to sub-national and local government systems. Collated data on women's share of sub-national governments is difficult to find given the variation in definitions. However, data may be available at the national level. Political life also includes exercising the right to vote. Tracking voter turnout by sex can provide data on women's and men's involvement in politics, which may reveal gender gaps to be addressed.
Policy implications	Where women's representation is low, research may be required to understand the obstacles and barriers to women's participation. Policy interventions may include the introduction of quotas, as described briefly above. Other actions include advocacy for benefits of increasing women's representation, leadership training for women and identifying role models and champions to encourage women to enter politics. Information on common obstacles to women's participation and policies that have made a difference is available in publications such as the International Institute for Democracy and Electoral Assistance (IDEA) *Women in Parliament: Beyond Numbers*.[85]

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[84] International IDEA, Stockholm University and IPU (2015). QuotaProject: Global Database of Quotas for Women (www.quotaproject.org).

[85] International IDEA (2005). *Women in Parliament: Beyond Numbers, A Revised Edition* (www.idea.int/publications/wip2).

6.3.3   Women's share of senior level civil servants (%)

How to calculate	This is calculated by dividing the number of women senior government officials of the total number of people in this category (men + women) and then multiplying the result by 100 to get a percentage figure.

$$\frac{\text{Females in legislator, senior officials and manager occupations}}{\text{Females + males in legislator, senior officials and manager occupations}} \times 100$$

Data sources	- Administrative records from the national civil service authority (e.g. Civil Service Commission) - In the absence of administrative data, Labour Force Surveys and other household surveys that collect information on occupations in employment, as well as population and housing censuses may be used
Key definitions	**Senior level civil servants** Senior level civil servants are those in occupations defined according to **ISCO-88 1120 / ISCO-08 1112** (e.g. government administrators, administrators at intergovernmental organisations, ambassadors, consul-general, etc.).
Be mindful of	**Decentralized systems** If there is no central authority maintaining records on the number, level, sex and other basic characteristics of civil service employees, it may be difficult to obtain summary data in order to produce this indicator. In such cases a strategy to report basic information to a central authority, such as the statistics office, could be developed to fill data gaps. **Classification by civil service authority (or authorities)** Data recorded by the civil service authority may use different definitions or classifications to identify 'senior' civil servants to ISCO or the one used by the national statistical system. Ideally these classification systems should be aligned to ensure information is coherent and comparable. **Latest version of ISCO Classification** Note that ISCO was updated in 2008 and the code for senior level civil servants is different. In ISCO-08 the code is now 1112 and for ISCO-88 it is 1120.[86] **Coding procedures** When using data from surveys and censuses, be mindful that the quality of information on occupations depends on the quality of the coding that is done when processing the survey or census results. As respondents provide a written or verbal response to the question on the occupation, a data entry clerk or similar has to interpret and allocate a code to that response based on the ISCO classification (or a national version of occupation classification). Sometimes decisions are made to code occupations on to a certain level (e.g. 3-digit level instead of 4-digit). This can result in a loss of precision or accuracy as higher level codes are generalized. Higher level coding also limits the ability to disaggregate and better understand the occupations that women and men do.

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[86] For more information on the latest classification and its correspondence to earlier version, see: ILO (n.d.b), ISCO International Standard Classification of Occupations – ISCO-08 Structure and preliminary correspondence with ISCO-88 (www.ilo.org/public/english/bureau/stat/isco/isco08/).

Example

Women in senior civil service steadily increasing
Total number and women's share of senior civil service positions (%), Ukraine, 1995-2012
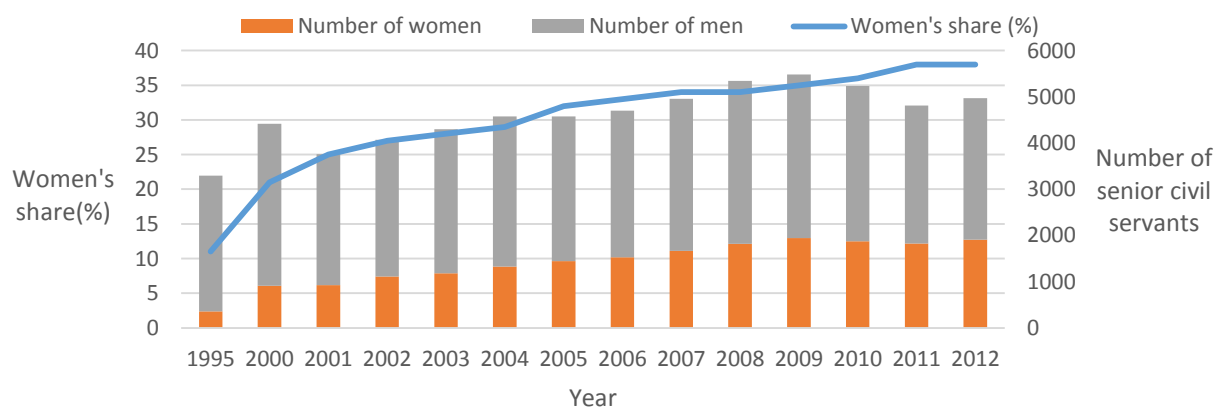
Source: UNECE (2016a). UNECE Statistical Database (http://w3.unece.org/PXWeb/en) - compiled from national official sources.

Key messages from the graph above:

- Women hold a minor share of senior civil service positions in all years
- Women's share is increasing from 11% in 1995 to 38% in 2012
- The total number of civil service positions has increased since 1995, but has remained reasonably steady between 2004 and 2012.

How to interpret this indicator	Women's share of top government jobs is often higher than for managers in the private sector. The public sector or civil service may provide more opportunities for women in senior management that the private sector. Government policies are usually faster and easier to implement within the public sector and may include affirmative action to attract women into senior management, as well as more family friendly policies. Examine changes over time.
Policy implications	Government policies on women's representation in senior civil service positions provide an opportunity to accelerate women's share of decision-making. As the policies relate to staffing across the system of government they can be easier to promulgate and enforce than policies that extend to the private sector. Policies to attract more women into management may include leadership training and positive discrimination, where women are the preferred recruits in cases where male and female applicants are similarly qualified and experienced. Family friendly policies, such as maternity and paternity leave, part-time work, and child care support, which allow women and men to balance work and family care responsibilities, can alleviate the burden on women to take time out from their career to raise children.

6.4 Exercise: Making the case for increasing women in politics

Objective	**Practice using statistics to make a case for change. Develop increased familiarity with standard indicators relating to women in decision-making.**
Preparation	Prepare copies of the handouts
Time required	Approximately 1 hour • Introduction and breaking into groups (5 minutes) • Group work (30 minutes) • Presentation of results (20 minutes)

Task	a) Explain the task (while showing it on a PowerPoint slide):
	    o Based on the data provided in the handouts, identify statistics you can use to argue the case for a policy to increase women's representation in national parliament (30 minutes).
	    o Prepare a brief (2-3 minute) presentation on flip chart paper to make a compelling case.
	b) Break participants into groups of five people.
	c) Distribute the handouts.
	d) Allow groups 30-45 minutes to complete the task.
	e) Regroup and give each group a maximum of five minutes to present their case.

Summary discussion	Discuss questions such as the following: • What are the barriers to political participation in your country? • What policy initiatives exist to encourage women into politics? • How effective are they? • What role does gender statistics play in making the case for increasing women's involvement and their influence? o Women in Parliament could be advocates for gender statistics

CEE AND CIS

	Table 16.15 Percentage Share of Women as Managers in the Private and Public Sector in CEE and CIS countries 2000-2012. ILO					
	Country	**Year**	**Percentage**	**Year**	**Percentage**	**% Change**
1	Albania	N/A		2009	22.5	
2	Armenia	2001	23.9		N/A	
3	Azerbaijan	2009	19.2	2012	34.2	+15
4	Belarus	N/A		2009	46.2	
5	Bosnia & Herzegovina	N/A		N/A		
6	Georgia	2000	19.0	2007	34.0	+15
7	Kazakhstan	2001	33.0	2010	37.2	+4.2
8	Kyrgyzstan	2002	27.7	2012	32.3	+4.6
9	Macedonia, FYR	2002	19.0	2012	23.1	+4.1
10	Moldova, Republic of	2000	33.2	2012	44.1	+10.9
11	Montenegro	2005	19.7	2012	27.3	+7.6
12	Russian Federation	2000	35.6	2012	39.1	+3.5
13	Serbia	2004	25.9	2012	29.1	+4.2
14	Tajikistan	N/A		N/A		
15	Turkey	2000	8.0	2012	12.2	+4.2
16	Turkmenistan	N/A		N/A		
17	Ukraine	2000	36.7	2012	39.9	+3.2
18	Uzbekistan	N/A		N/A		

Source: Legislators, Senior Officials and Managers, ILO Statistics, ISCO 88 and ISCO 08, ILO statistical database, June 2014

	Table 16.16 Percentage Share of Women as Employers in CEE and CIS Countries. 2000-2012. ILO					
	Country	**Year**	**Percentage**	**Year**	**Percentage**	**% Change**
1	Albania	2009	11	2012	29	+18
2	Armenia	2007	10	2012	25	+15
3	Azerbaijan	2003	41	2012	43	+2
4	Belarus	N/A		2009	31	
5	Georgia	2000	12	2012	23	+11
6	Kazakhstan	2001	27	2010	38	+11
7	Kyrgyzstan	2002	28	2012	27	-1
8	Macedonia, FYR	2002	17	2012	26	+9
9	Moldova, Republic of	2000	16	2012	41	+25
10	Russian Federation	2000	29	2012	36	+7
11	Serbia	2004	24	2012	27	+3
12	Tajikistan	N/A		2009	12	
13	Turkey	2000	4	2012	8	+4
14	Ukraine	N/A		2012	37	

Source: Employment, Occupation and Sex, ILO Statistics – Laborsta and ILO statistical database, June 2014
Highlighted country in green with decreased share of women as employers

Source: ILO (2015b). *Women in Business and Management: Gaining momentum* (http://www.ilo.org/global/publications/ilo-bookstore/order-online/books/WCMS_316450/).

EUROPEAN UNION AND WESTERN EUROPE

	Table 16.19 Percentage Share of Women as Managers in the Private and Public Sector in the European Union and Western Europe 2000-2012. ILO					
	Country	**Year**	**Percentage**	**Year**	**Percentage**	**% Change**
1	Austria	2000	30.1	2012	30.0	-0.1
2	Belgium	2000	32.1	2012	32.4	+0.3
3	Bulgaria	2000	29.8	2012	36.4	+6.6
4	Croatia	2000	24.7	2012	27.6	+2.9
5	Cyprus	2000	14.8	2012	15.8	+1.0
6	Czech Republic	2000	24.1	2012	26.2	+2.1
7	Denmark	2000	24.2	2012	28.4	+4.2
8	Estonia	2000	39.8	2012	32.8	-7.0
9	Finland	2000	26.6	2012	29.7	+3.1
10	France	2000	35.0	2012	39.4	+4.4
11	Germany	2000	27.1	2012	31.1	+4.0
12	Greece	2000	25.1	2012	25.1	0.0
13	Hungary	2000	33.5	2012	38.6	+5.1
14	Iceland	2000	29.0	2012	39.9	+10.9
15	Ireland	2000	26.5	2012	32.6	+6.1
16	Israel	2000	27.2	2012	31.8	+4.6
17	Italy	2000	14.3	2012	25.8	+11.5
18	Latvia	2000	37.1	2010	41.2	+4.1
19	Lithuania	2000	42.7	2012	38.8	-3.9
20	Luxembourg	2000	26.9	2012	18.0	-8.9
21	Malta	2000	17.6	2012	27.0	+9.4
22	Netherlands	2000	25.3	2012	29.0	+3.7
23	Norway	2000	25.0	2010	34.7	+9.7
24	Poland	2000	32.5	2012	37.8	+5.3
25	Portugal	2000	31.1	2012	34.6	+3.5
26	Romania	2000	26.8	2012	31.4	+4.6
27	Slovakia	2000	31.2	2012	33.1	+1.9
28	Slovenia	2000	29.6	2012	39.0	+9.4
29	Spain	2000	31.5	2012	30.0	-1.5
30	Sweden	2000	30.7	2012	35.5	+4.9
31	Switzerland	2000	23.4	2012	33.2	+9.7
32	United Kingdom	2000	34.5	2012	34.2	-0.3

Source: Legislators, Senior Officials and Managers, ISCO 88 and ISCO 08, ILO statistical database, June 2014
Highlighted in green countries with decreased share of women in management.

Source: ILO (2015b). *Women in Business and Management: Gaining momentum* (http://www.ilo.org/global/publications/ilo-bookstore/order-online/books/WCMS_316450/).

	Country	Year	Percentage	Year	Percentage	% Change
Table 16.20 Percentage Share of Women as Employers in the European Union and Western Europe 2000-2012. ILO						
1	Austria	2000	29	2012	24	-5
2	Belgium	2001	30	2012	23	-7
3	Bulgaria	2003	25	2012	29	+4
4	Croatia	2000	29	2012	31	+2
5	Cyprus	2000	11	2012	16	+5
6	Czech Republic	2000	23	2012	23	0
7	Denmark	2000	16	2012	21	+5
8	Estonia	2000	28	2012	19	-9
9	Finland	2000	31	2012	23	-8
10	France	2000	2	2012	24	+2
11	Germany	2000	23	2012	24	+1
12	Greece	2000	18	2012	24	+6
13	Hungary	2000	26	2012	28	+2
14	Iceland	2000	26	2012	26	0
15	Ireland	2000	19	2012	23	+4
16	Israel	2000	14	2012	19	+5
17	Italy	2000	24	2012	24	0
18	Latvia	2000	29	2012	34	+5
19	Lithuania	2000	32	2012	30	-2
20	Luxembourg	2000	25	2012	25	0
21	Malta	2001	15	2012	16	+1
22	Netherlands	2000	23	2012	24	+1
23	Norway	2001	26	2012	26	0
24	Poland	2000	32	2012	30	-2
25	Portugal	2000	25	2012	31	+6
26	Romania	2000	23	2012	28	+5
27	Slovakia	2000	29	2012	27	-2
28	Slovenia	2000	28	2012	26	-2
29	Spain	2000	21	2012	30	+9
30	Sweden	2000	26	2012	22	-4
31	Switzerland	2000	23	2012	24	+1
32	United Kingdom	2000	24	2012	26	+2

Source: Laborsta and ILO statistical database, June 2014

Highlighted in green countries with decreased share of women as employers

Source: ILO (2015b). *Women in Business and Management: Gaining momentum* (http://www.ilo.org/global/publications/ilo-bookstore/order-online/books/WCMS_316450/).

Table 8.1 Percentage of senior civil servants who are women in selected countries, 2011-2013					
Country	**% Women 2013**	**Country**	**% Women 2012**	**Country**	**% Women 2011**
Canada	44	Croatia	30	Belgium	17
Cyprus	37	Hungary	77	Estonia	57
Denmark	22	Israel	32	Finland	38
Ireland	19	Netherlands	26	France	23
Kazakhstan	40	Norway	22	Sweden	42
Lithuania	60	Spain	33		
Russian Federation	62	Switzerland	31		
Slovenia	53	Ukraine	38		
U.K.	36				

Source: UNECE Statistical Database, compiled from national official sources. Accessed June 2014

Source: ILO (2015b). *Women in Business and Management: Gaining momentum* (http://www.ilo.org/global/publications/ilo-bookstore/order-online/books/WCMS_316450/).

Women in National Parliaments: Situation as of 1 August 2015

		WORLD CLASSIFICATION							
Rank	**Country**	**Lower or single House**				**Upper House or Senate**			
		Elections	**Seats***	**Women**	**% W**	**Elections**	**Seats***	**Women**	**% W**
1	**Rwanda**	9 2013	80	51	63.8%	9 2011	26	10	38.5%
2	**Bolivia**	10 2014	130	69	53.1%	10 2014	36	17	47.2%
3	**Cuba**	2 2013	612	299	48.9%	---	---	---	---
4	**Seychelles**	9 2011	32	14	43.8%	---	---	---	---
5	**Sweden**	9 2014	349	152	43.6%	---	---	---	---
6	**Senegal**	7 2012	150	64	42.7%	---	---	---	---
7	**South Africa** [1]	5 2014	396	166	41.9%	5 2014	54	19	35.2%
8	**Ecuador**	2 2013	137	57	41.6%	---	---	---	---
9	**Finland**	4 2015	200	83	41.5%	---	---	---	---
10	**Iceland**	4 2013	63	26	41.3%	---	---	---	---
"	**Namibia**	11 2014	104	43	41.3%	11 2010	26	6	23.1%
"	**Nicaragua**	11 2011	92	38	41.3%	---	---	---	---
11	**Spain**	11 2011	350	144	41.1%	11 2011	266	90	33.8%
12	**Mozambique**	10 2014	250	99	39.6%	---	---	---	---
"	**Norway**	9 2013	169	67	39.6%	---	---	---	---
13	**Andorra**	3 2015	28	11	39.3%	---	---	---	---
"	**Belgium**	5 2014	150	59	39.3%	7 2014	60	30	50.0%
14	**Ethiopia**	5 2015	546	212	38.8%	5 2010	135	22	16.3%

Rank	Country	Lower or single House				Upper House or Senate			
		Elections	Seats*	Women	% W	Elections	Seats*	Women	% W
15	**Timor-Leste**	7 2012	65	25	38.5%	---	---	---	---
16	**Denmark**	6 2015	179	67	37.4%	---	---	---	---
17	**Netherlands**	9 2012	150	56	37.3%	5 2015	75	26	34.7%
18	**Angola**	8 2012	220	81	36.8%	---	---	---	---
19	**Slovenia**	7 2014	90	33	36.7%	11 2012	40	3	7.5%
20	**Germany**	9 2013	631	230	36.5%	N.A.	69	28	40.6%
21	**Burundi**	6 2015	121	44	36.4%	7 2015	43	18	41.9%
22	**Argentina**	10 2013	257	93	36.2%	10 2013	72	28	38.9%
23	**United Republic of Tanzania**	10 2010	350	126	36.0%	---	---	---	---
24	**Guyana**	5 2015	37	13	35.1%	---	---	---	---
25	**Uganda**	2 2011	386	135	35.0%	---	---	---	---
26	**Serbia**	3 2014	250	85	34.0%	---	---	---	---
27	**Costa Rica**	2 2014	57	19	33.3%	---	---	---	---
"	**Grenada**	2 2013	15	5	33.3%	3 2013	13	2	15.4%
"	**The F.Y.R. of Macedonia**	4 2014	123	41	33.3%	---	---	---	---
28	**El Salvador**	3 2015	84	27	32.1%	---	---	---	---
29	**Algeria**	5 2012	462	146	31.6%	12 2012	144	10	6.9%
30	**Zimbabwe**	7 2013	270	85	31.5%	7 2013	80	38	47.5%
31	**New Zealand**	9 2014	121	38	31.4%	---	---	---	---
32	**Portugal**	6 2011	230	72	31.3%	---	---	---	---
"	**Tunisia**	10 2014	217	68	31.3%	---	---	---	---
33	**Cameroon**	9 2013	180	56	31.1%	4 2013	100	20	20.0%
34	**Italy**	2 2013	630	195	31.0%	2 2013	321	91	28.3%
35	**Austria**	9 2013	183	56	30.6%	N.A.	61	18	29.5%
36	**Sudan**	4 2015	426	130	30.5%	6 2015	54	19	35.2%
"	**Switzerland**	10 2011	200	61	30.5%	10 2011	46	9	19.6%
37	**Nepal**	11 2013	599	177	29.5%	---	---	---	---
38	**United Kingdom**	5 2015	650	191	29.4%	N.A.	782	192	24.6%
39	**Trinidad and Tobago**	5 2010	42	12	28.6%	6 2010	31	6	19.4%
40	**Luxembourg**	10 2013	60	17	28.3%	---	---	---	---

Rank	Country	Lower or single House				Upper House or Senate			
		Elections	Seats*	Women	% W	Elections	Seats*	Women	% W
41	**Afghanistan**	9 2010	249	69	27.7%	1 2015	102	18	17.6%
42	**Belarus**	9 2012	110	30	27.3%	8 2012	58	19	32.8%
43	**Philippines**	5 2013	290	79	27.2%	5 2013	24	6	25.0%
44	**Australia**	9 2013	150	40	26.7%	9 2013	76	29	38.2%
45	**Iraq**	4 2014	328	87	26.5%	---	---	---	---
"	**South Sudan**	8 2011	332	88	26.5%	8 2011	50	5	10.0%
46	**France**	6 2012	577	151	26.2%	9 2014	348	87	25.0%
"	**Kazakhstan**	1 2012	107	28	26.2%	10 2014	47	3	6.4%
47	**Croatia**	12 2011	151	39	25.8%	---	---	---	---
"	**Honduras**	11 2013	128	33	25.8%	---	---	---	---
"	**Turkmenistan**	12 2013	124	32	25.8%	---	---	---	---
48	**Suriname**	5 2015	51	13	25.5%	---	---	---	---
49	**Canada**	5 2011	304	77	25.3%	N.A.	85	33	38.8%
"	**Singapore**	5 2011	99	25	25.3%	---	---	---	---
50	**Mauritania**	11 2013	147	37	25.2%	11 2009	56	8	14.3%
51	**Lao People's Democratic Republic**	4 2011	132	33	25.0%	---	---	---	---
"	**Lesotho**	2 2015	120	30	25.0%	3 2015	33	8	24.2%
52	**Viet Nam**	5 2011	498	121	24.3%	---	---	---	---
53	**Israel**	3 2015	120	29	24.2%	---	---	---	---
54	**Poland**	10 2011	460	111	24.1%	10 2011	100	13	13.0%
55	**Equatorial Guinea**	5 2013	100	24	24.0%	5 2013	73	10	13.7%
56	**Estonia**	3 2015	101	24	23.8%	---	---	---	---
57	**China**	3 2013	2959	699	23.6%	---	---	---	---
58	**Lithuania**	10 2012	141	33	23.4%	---	---	---	---
59	**Kyrgyzstan**	10 2010	120	28	23.3%	---	---	---	---
60	**Greece**	1 2015	300	69	23.0%	---	---	---	---
61	**Peru**	4 2011	130	29	22.3%	---	---	---	---
62	**Eritrea**	2 1994	150	33	22.0%	---	---	---	---
63	**Dominica**	12 2014	32	7	21.9%	---	---	---	---
"	**Guinea**	9 2013	114	25	21.9%	---	---	---	---

Rank	Country	Lower or single House				Upper House or Senate			
		Elections	Seats*	Women	% W	Elections	Seats*	Women	% W
	WORLD CLASSIFICATION								
64	**Republic of Moldova**	11 2014	101	22	21.8%	---	---	---	---
65	**Bosnia and Herzegovina**	10 2014	42	9	21.4%	1 2015	15	2	13.3%
66	**Cabo Verde**	2 2011	72	15	20.8%	---	---	---	---
"	**Dominican Republic**	5 2010	183	38	20.8%	5 2010	32	3	9.4%
"	**Monaco**	2 2013	24	5	20.8%	---	---	---	---
67	**Albania**	6 2013	140	29	20.7%	---	---	---	---
68	**Pakistan**	5 2013	340	70	20.6%	3 2015	104	19	18.3%
69	**Madagascar**	12 2013	151	31	20.5%	---	---	---	---
70	**Bulgaria**	10 2014	240	49	20.4%	---	---	---	---
71	**Cambodia**	7 2013	123	25	20.3%	1 2012	61	10	16.4%
72	**Bangladesh**	1 2014	350	70	20.0%	---	---	---	---
"	**Czech Republic**	10 2013	200	40	20.0%	10 2014	81	15	18.5%
"	**Liechtenstein**	2 2013	25	5	20.0%	---	---	---	---
73	**Colombia**	3 2014	166	33	19.9%	3 2014	102	23	22.5%
"	**Saudi Arabia**	1 2013	151	30	19.9%	---	---	---	---
74	**Kenya**	3 2013	350	69	19.7%	3 2013	68	18	26.5%
75	**United States of America**	11 2014	434	84	19.4%	11 2014	100	20	20.0%
76	**Tajikistan**	3 2015	63	12	19.0%	3 2015	32	2	6.3%
77	**Slovakia**	3 2012	150	28	18.7%	---	---	---	---
78	**Panama**	5 2014	71	13	18.3%	---	---	---	---
79	**Sao Tome and Principe**	10 2014	55	10	18.2%	---	---	---	---
80	**Latvia**	10 2014	100	18	18.0%	---	---	---	---
81	**Turkey**	6 2015	550	98	17.8%	---	---	---	---
82	**Togo**	7 2013	91	16	17.6%	---	---	---	---
83	**United Arab Emirates**	9 2011	40	7	17.5%	---	---	---	---
84	**Montenegro**	10 2012	81	14	17.3%	---	---	---	---
85	**Indonesia**	4 2014	555	95	17.1%	---	---	---	---
86	**Morocco**	11 2011	395	67	17.0%	10 2009	270	6	2.2%
"	**Venezuela**	9 2010	165	28	17.0%	---	---	---	---
87	**Barbados**	2 2013	30	5	16.7%	3 2013	21	5	23.8%

Rank	Country	Lower or single House				Upper House or Senate			
		Elections	Seats*	Women	% W	Elections	Seats*	Women	% W
"	**Malawi**	5 2014	192	32	16.7%	---	---	---	---
"	**Saint Lucia**	11 2011	18	3	16.7%	1 2012	11	3	27.3%
"	**San Marino**	11 2012	60	10	16.7%	---	---	---	---
88	**Democratic People's Republic of Korea**	3 2014	687	112	16.3%	---	---	---	---
"	**Ireland**	2 2011	166	27	16.3%	4 2011	60	18	30.0%
"	**Republic of Korea**	4 2012	300	49	16.3%	---	---	---	---
89	**Uruguay**	10 2014	99	16	16.2%	10 2014	31	9	29.0%
90	**Fiji**	9 2014	50	8	16.0%	---	---	---	---
"	**Libya**	6 2014	188	30	16.0%	---	---	---	---
"	**Uzbekistan**	12 2014	150	24	16.0%	1 2015	100	17	17.0%
91	**Chile**	11 2013	120	19	15.8%	11 2013	38	6	15.8%
92	**Azerbaijan**	11 2010	122	19	15.6%	---	---	---	---
93	**Paraguay**	4 2013	80	12	15.0%	4 2013	45	9	20.0%
94	**Chad**	2 2011	188	28	14.9%	---	---	---	---
"	**Mongolia**	6 2012	74	11	14.9%	---	---	---	---
95	**Gabon**	12 2011	120	17	14.2%	12 2014	99	18	18.2%
96	**Somalia**	8 2012	275	38	13.8%	---	---	---	---
97	**Guinea-Bissau**	4 2014	102	14	13.7%	---	---	---	---
"	**Romania**	12 2012	401	55	13.7%	12 2012	168	13	7.7%
98	**Russian Federation**	12 2011	450	61	13.6%	N.A.	170	29	17.1%
99	**Burkina Faso**	11 2014	90	12	13.3%	---	---	---	---
"	**Guatemala**	9 2011	158	21	13.3%	---	---	---	---
"	**Niger**	1 2011	113	15	13.3%	---	---	---	---
"	**Saint Kitts and Nevis**	2 2015	15	2	13.3%	---	---	---	---
100	**Bahamas**	5 2012	38	5	13.2%	5 2012	16	4	25.0%
101	**Saint Vincent and the Grenadines**	12 2010	23	3	13.0%	---	---	---	---
102	**Malta**	3 2013	70	9	12.9%	---	---	---	---
103	**Djibouti**	2 2013	55	7	12.7%	---	---	---	---
"	**Jamaica**	12 2011	63	8	12.7%	9 2007	21	6	28.6%
"	**Zambia**	9 2011	158	20	12.7%	---	---	---	---

WORLD CLASSIFICATION

		Lower or single House				Upper House or Senate			
Rank	Country	Elections	Seats*	Women	% W	Elections	Seats*	Women	% W
104	Cyprus	5 2011	56	7	12.5%	---	---	---	---
105	Sierra Leone	11 2012	121	15	12.4%	---	---	---	---
"	Syrian Arab Republic	5 2012	250	31	12.4%	---	---	---	---
106	Ukraine	10 2014	422	51	12.1%	---	---	---	---
107	India	4 2014	543	65	12.0%	1 2014	243	31	12.8%
"	Jordan	1 2013	150	18	12.0%	10 2013	75	8	10.7%
108	Mauritius	12 2014	69	8	11.6%	---	---	---	---
109	Georgia	10 2012	150	17	11.3%	---	---	---	---
110	Antigua and Barbuda	6 2014	18	2	11.1%	6 2014	17	7	41.2%
111	Liberia	10 2011	73	8	11.0%	12 2014	30	3	10.0%
112	Ghana	12 2012	275	30	10.9%	---	---	---	---
113	Armenia	5 2012	131	14	10.7%	---	---	---	---
114	Malaysia	5 2013	222	23	10.4%	N.A.	65	15	23.1%
115	Hungary	4 2014	198	20	10.1%	---	---	---	---
116	Brazil	10 2014	513	51	9.9%	10 2014	81	13	16.0%
117	Botswana	10 2014	63	6	9.5%	---	---	---	---
"	Japan	12 2014	475	45	9.5%	7 2013	242	38	15.7%
118	Gambia	3 2012	53	5	9.4%	---	---	---	---
119	Cote d'Ivoire	12 2011	251	23	9.2%	---	---	---	---
120	Democratic Republic of the Congo	11 2011	492	44	8.9%	1 2007	108	5	4.6%
121	Mali	11 2013	147	13	8.8%	---	---	---	---
122	Kiribati	10 2011	46	4	8.7%	---	---	---	---
123	Bhutan	7 2013	47	4	8.5%	4 2013	25	2	8.0%
124	Bahrain	11 2014	40	3	7.5%	12 2014	40	9	22.5%
125	Congo	7 2012	136	10	7.4%	10 2014	72	14	19.4%
126	Benin	4 2015	83	6	7.2%	---	---	---	---
127	Tuvalu	3 2015	15	1	6.7%	---	---	---	---
128	Myanmar	11 2010	420	26	6.2%	11 2010	215	4	1.9%
"	Swaziland	9 2013	65	4	6.2%	10 2013	30	10	33.3%
129	Samoa	3 2011	49	3	6.1%	---	---	---	---

WORLD CLASSIFICATION

		Lower or single House				Upper House or Senate			
Rank	Country	Elections	Seats*	Women	% W	Elections	Seats*	Women	% W
"	**Thailand**	8 2014	197	12	6.1%	---	---	---	---
130	**Maldives**	3 2014	85	5	5.9%	---	---	---	---
131	**Sri Lanka**	4 2010	225	13	5.8%	---	---	---	---
132	Nigeria	3 2015	360	20	5.6%	3 2015	108	7	6.5%
133	**Nauru**	6 2013	19	1	5.3%	---	---	---	---
134	Haiti	11 2010	95	4	4.2%	11 2010	20	0	0.0%
135	Belize	3 2012	32	1	3.1%	3 2012	13	5	38.5%
"	**Iran (Islamic Republic of)**	5 2012	290	9	3.1%	---	---	---	---
"	**Lebanon**	6 2009	128	4	3.1%	---	---	---	---
136	**Comoros**	1 2015	33	1	3.0%	---	---	---	---
"	**Marshall Islands**	11 2011	33	1	3.0%	---	---	---	---
137	**Papua New Guinea**	6 2012	111	3	2.7%	---	---	---	---
138	**Solomon Islands**	11 2014	50	1	2.0%	---	---	---	---
139	**Kuwait**	7 2013	65	1	1.5%	---	---	---	---
140	**Oman**	10 2011	84	1	1.2%	10 2011	83	15	18.1%
141	**Micronesia (Federated States of)**	3 2015	14	0	0.0%	---	---	---	---
"	**Palau**	11 2012	16	0	0.0%	11 2012	13	3	23.1%
"	**Qatar**	7 2013	35	0	0.0%	---	---	---	---
"	**Tonga**	11 2014	26	0	0.0%	---	---	---	---
"	**Vanuatu**	10 2012	52	0	0.0%	---	---	---	---
"	**Yemen**	4 2003	300	0	0.0%	4 2001	111	2	1.8%
?	**Mexico**	6 2015	500	?	?	7 2012	128	43	33.6%

Notes:
*   Figures correspond to the number of seats currently filled in Parliament.
(1) South Africa: The figures on the distribution of seats do not include the 36 special rotating delegates appointed on an ad hoc basis, and all percentages given are therefore calculated on the basis of the 54 permanent seats.
Source: IPU (2015). Women in national parliaments (www.ipu.org/wmn-e/classif.htm).

Abbreviations

AFR	Adolescent fertility rates
CES	Conference of European Statisticians
COD	Cause of death
DHS	Demographic and Health Survey
EECCA	Eastern Europe, Caucasus and Central Asia
EU	European Union
GDP	Gross domestic product
GER	Gross Enrolment Ratio
GPI	Gender Parity Index
ICD	International Classification of Diseases
IDEA	Institute for Democracy and Electoral Assistance
ILO	International Labour Organization
IMR	Infant mortality rate
IPU	Inter Parliamentary Union
ISCED	International Standard Classification of Education
ISCO	International Standard Classification of Occupations
ISIC	International Standard Industry Classification
MDG	(United Nations) Millennium Development Goals
NCD	Non-communicable disease
NEET	Young people not in employment, education or training
NER	Net Enrolment Rate
NSO	National Statistical Office
OECD	Organisation for Economic Cooperation and Development
SMAM	Singulate mean age at marriage
SNA	(United Nations) System of National Accounts
SDR	(Age-) standardized death rate
TFR	Total Fertility Rate
U5MR	Under-five mortality rate
UN WOMEN	United Nations Entity for Gender Equality and the Empowerment of Women
UN DESA	United Nations Department of Economic and Social Affairs
UNECE	United Nations Economic Commission for Europe
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
WHO	World Health Organization

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Annex 1: Example of training needs questionnaire

Training on Gender Statistics

Training sessions on developing gender statistics will be offered to government and development partners. Please complete the form below so we can ensure the training meets your needs.

Name:

Department / Organization:

Job title / role:

1. Please indicate whether you are a:

☐ User of statistics related to gender equality issues

☐ Producer of statistics related to gender equality issues

☐ Both a user and a producer

☐ Just interested in knowing more about gender statistics

2. Please indicate which training topics are of interest to you:

General topics:

☐ Overview of gender statistics: definitions and key concepts

☐ Making good use of existing statistics

☐ New areas for measuring progress in gender equality

☐ Components of a successful gender statistics programme

Producing statistics:

☐ Understanding the need for gender statistics

☐ Dimensions of data quality

☐ International standards, tools and methods

☐ Indicators and data sources for gender statistics

☐ Addressing sources of gender bias

☐ Dissemination and communicating gender statistics

Using statistics:

☐ Understanding how statistics are produced

☐ Accessing, interpreting and using statistics

☐ Writing about gender statistics

☐ Visual presentation of gender statistics in tables and charts

Specific areas of gender statistics:

☐ Measuring gender-based violence

☐ Time use

☐ Informal employment

☐ Unpaid work

☐ Other(s) – please specify:

3. Are there any other topics of interest to you, or do you have any suggestions about the training?

Annex 2: Example of gender statistics workshop agenda

Workshop for Users of Gender Statistics in Armenia

Duration: one day

Target audience: current and potential users of gender statistics

8:30–9:00	Registration
9:00–10:00	**Opening and introduction**
	Opening remarks by stakeholder representative(s) Objectives of the training, structure and expected results Participants' introduction and expectations
10:00–11:00	**Session 1: Basics of gender statistics**
	Presentation based on Module 1 (e.g. presentation What are gender statistics?.pptx) Practical exercise: understanding key terms
11:00–11:20	Coffee
11:20–12:45	**Session 2: Understanding statistical concepts**
	Presentation based on Module 1 (e.g. presentation Key statistical concepts.pptx) Practical exercise: calculating rates
12:45–14:00	Lunch

14:00–15:45	**Session 3: Measuring work and economic activity**
	Presentation based on Module 3 (e.g. presentation Measuring work and the economy.pptx) Practical exercise: Making a direct contribution to the economy (classifying individuals as in employment, unemployment and outside the labour force) – this exercise can be conducted part way through the above presentation (at Slide 12).
15:45–16:00	Coffee
16:00–17:10	**Session 4: Measuring power and decision-making from the gender perspective**
	Presentation based on Module 6 (e.g. presentation Power and decision making.pptx) Practical exercise: Making the case for increasing women in politics (note: if laptops and internet are available, use the UNECE database as the source of data for this exercise, that way giving participants a chance to explore the database and practice extracting data from it).
17:10–17:30	**Summary and conclusions** This session can be structured in a number of ways and it is up to the facilitation team to decide what is likely to work best. The main points to be covered may include: • Brief summary the main topics and points covered during the training (a verbal list than a repetition of detailed information) • Call on participants to ask questions and provide feedback on the workshop • Summarise any follow-up activities and next steps • Allow time for an evaluation form to be completed

* * * * *