

LMIS Excel Add-in User Manual

Version 2.0.0.2

2024.06.20

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1. Introduction

Labour Market Information Systems (LMIS) serve as the network of institutions, individuals and information for gathering, analysing, and reporting data that reflect the current state and trends within labour markets globally. Accurate LMIS data supports informed decision-making, benefiting governments, employers, and job seekers in effective workforce planning and policy development.

LMIS Excel Add-in is a tool that leverages the Statistical Data and Metadata eXchange (SDMX) standard to enhance data sharing capabilities within LMIS. This tool facilitates the connection to SDMX data sources, providing users with the ability to filter, query, and extract pertinent data, as well as upload data structures to centralized data management systems.

The LMIS Excel Add-in integrates with [SDMX tools](#) such as the **SDMX Constructor**, which customizes data structures, and the **Statistical Metadata-driven Analysis & Reporting Tool (SMART)**, which utilizes these structures to generate the required output datasets.

This manual serves as a comprehensive guide, detailing the functionalities of the LMIS Excel Add-in, and providing step-by-step instructions with example use cases.

1.1 Target Audience and Use Cases

The LMIS Excel Add-in caters to a wide range of users, from data managers and data analysts to SDMX data explorers, serving as a comprehensive tool for effective data management and analysis based on the SDMX standard.

Data Managers: These users are typically responsible for managing dataset systems within LMIS projects using the .Stat Data Lifecycle Manager (DLM).

For data managers, after [connecting to an SDMX registry \(4.1\)](#), they can [view SDMX data \(4.2\)](#) and [metadata \(4.3\)](#) in Excel, [upload and edit data \(4.4\)](#) for maintenance (authentication required).

Data Analysts: These users usually require access to comprehensive datasets to analyse labour market trends and dynamics, i.e., labour economists. With the LMIS Excel Add-in, they can download data from any LMIS projects or from ILOSTAT.

For data analysts, after [connecting to an SDMX registry \(4.1\)](#), they can [download data \(4.2\)](#) to track labour market trends, [bookmark data \(4.2.1\)](#) or [retrieve data \(4.2.2\)](#) to support their analyses.

SDMX Data Explorers: These users are interested in retrieving SDMX data and metadata. With the LMIS Excel Add-in, they can browse and download data from any SDMX registry directly into Excel.

For SDMX data explorers, after [connecting to an SDMX registry \(4.1\)](#), they can [download data \(4.2\)](#) and [metadata \(4.3\)](#).

(Note: the current version 2.0.0.2 supports downloading codelists as metadata).

1.2 System Requirements

To ensure the smooth operation of the LMIS Excel Add-in, users should have:

- A PC with Windows 7 or later.
- Microsoft Excel 2016 or later with support for add-ins.
- An active internet connection for data download and upload functions.

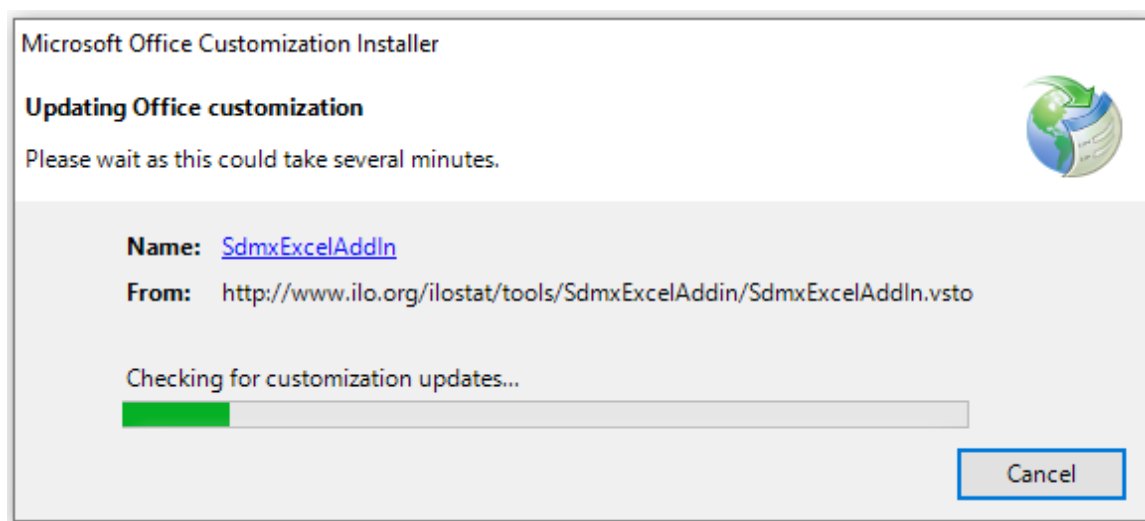
2. Installation and Update

2.1 Installation

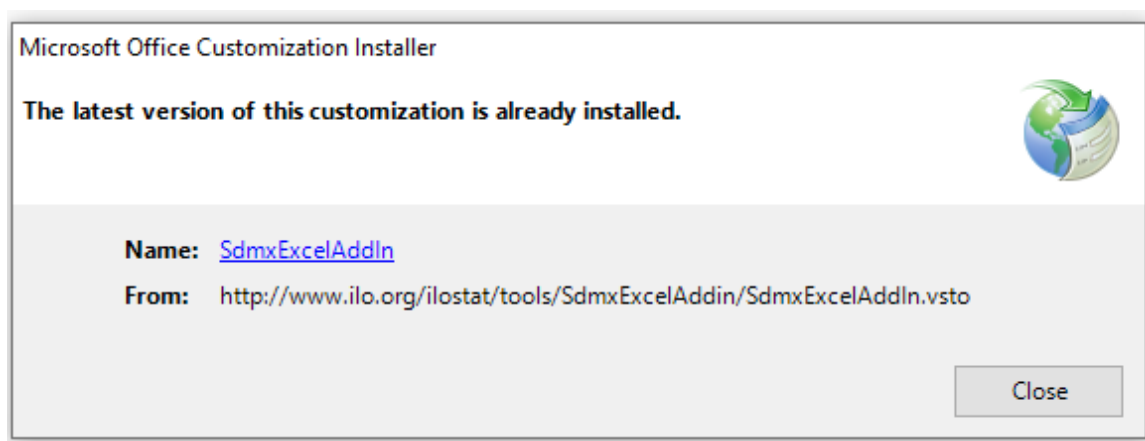
Before starting the installation, ensure Microsoft Excel is closed.

- Download the LMIS Excel Add-in installation file from the website:
<https://ilostat.ilo.org/resources/sdmx-tools/> .
- Double-click the downloaded file to start the installation.

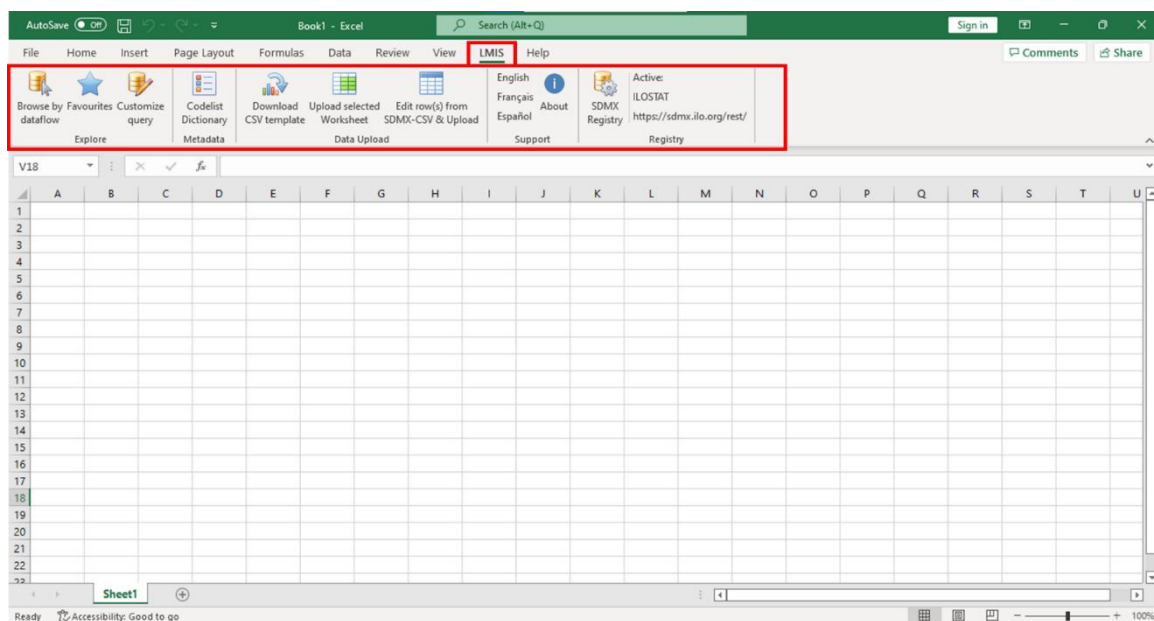
Name	Date modified	Type	Size
 ILOSTAT_LMISExcelAddin.exe	12/6/2023 10:23 AM	Application	875 KB



- If the LMIS Excel Add-in is already installed, you'll be notified that the latest version is installed.



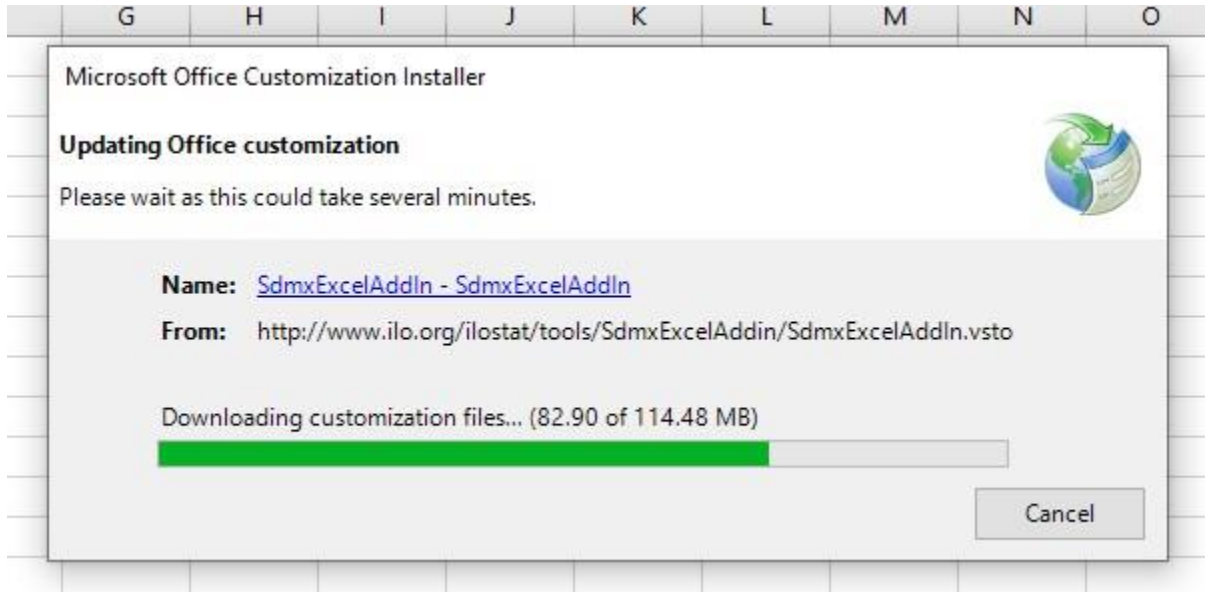
- After the installation, launch Microsoft Excel and check for the 'LMIS' tab on the Excel ribbon to verify that the add-in has been installed and is active.



(Relevant FAQ: [After installation, I can't find the add-in in my Excel?](#))

2.2 Update

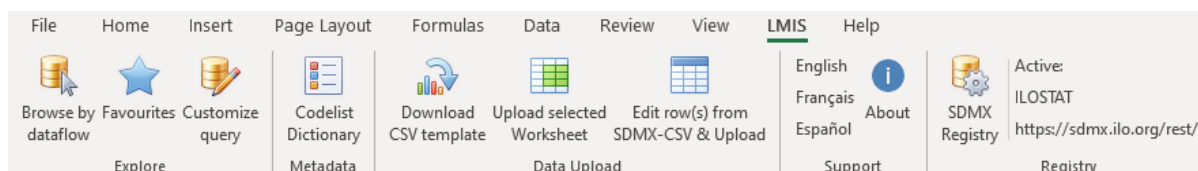
Upon starting Excel with an internet connection, the LMIS Excel Add-in will automatically check for updates the first time you click the 'LMIS' ribbon. If a new version is available, a window will pop up to indicate that an update is in progress.



(Relevant FAQ: [What should I do if I accidentally click 'Cancel' during the update process?](#))

3. Interface Overview

The LMIS Excel Add-in integrates a dedicated 'LMIS' tab into the Excel ribbon, providing specialized ribbon buttons for efficient data management. These ribbon buttons are grouped based on their functionality:



Explore:

- **Browse by dataflow:** Access dataflows from current registered source.
- **Favourites:** Quickly access your stored favourite dataflows.
- **Customize query:** Enables the customization of queries for the currently loaded dataflow in Excel.

Metadata:

- **Codelist Dictionary:** Download detailed codelists defining permissible values for dataset fields.

Data Upload:

- **Download CSV template:** Obtain templates corresponding to dataflows which outline the structure required for data uploading.
- **Upload selected Worksheet:** Upload data directly from your selected worksheet to the SDMX registry.
- **Edit row(s) from SDMX-CSV & Upload:** Edit and upload data row(s) to the SDMX registry.

Support:

- **Languages settings:** Alternate the add-in's interface language among English, Français (French), and Español (Spanish).
- **About:** Basic information about the LMIS Excel Add-in, i.e., current version.

Registry:

- **SDMX Registry:** Manage data source connections.
- **Active (Registry):** Indicate the current connected registry.

4. Using LMIS Excel Add-in

Welcome to the chapter on using the LMIS Excel Add-in! This chapter covers three key topics to help you fully utilize this powerful tool.

The first topic we cover is connecting to **an SDMX registry (4.1)** using the LMIS Excel Add-in, an essential step to utilize the add-in's full suite of features. You'll receive detailed guidance on setting up and establishing connections to any SDMX data providers, ensuring you have the foundational access needed for data download and upload.

Next, we guide you through **downloading data and metadata (4.2 - 4.3)** from the connected SDMX registry using the LMIS Excel Add-in, with clear instructions for customizing queries and accessing metadata.

Finally, we focus on the **data upload process (4.4)**, guiding you through the steps to accurately upload, edit, and delete data on the .Stat Data Lifecycle Manager (DLM) platform—the current LMIS-supported data warehouse backend—using a standardized data entry template.

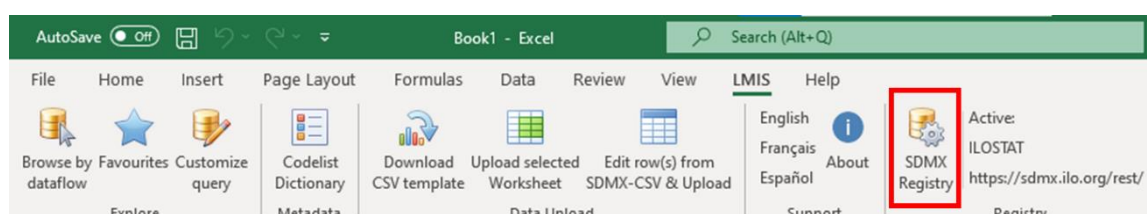
By the end of this chapter, you will have a solid understanding of how to use LMIS Excel Add-in to explore various SDMX resources setting you on a path to proficiency with this robust tool. So, let's get started!

4.1 Connecting to an SDMX registry

This section guides you through the essential steps to connect to SDMX registries, simplifying the process of exploring the data you need.

Below are the steps to connect an SDMX registry using the LMIS Excel Add-in:

- Click on the 'SDMX Registry' ribbon button located on the LMIS ribbon. This action will open a 'SDMX Registry' popup window.



- Within the 'SDMX Registry' popup window, you can connect to **a default SDMX registry** or **add a new registry** to customize your data sources.

SDMX Registry

Registry name: ILOSTAT

Base URL: <https://sdmx.ilo.org/rest>

DLM Connection (Optional)

Structure post URL: <http://127.0.0.1/rest/structure/>

Transfer service URL: <http://127.0.0.1/rest/structure/>

Authentication URL: <http://127.0.0.1:8080/auth/realms/demo/protocol/openid-connect/token>

Authentication client ID: stat-suite

Localhost New Advance... Remove Cancel Save Apply

4.1.1 Using Default Registries

By default, LMIS Excel Add-in offers the following SDMX registries to access:

- the ILO Department of Statistics (ILOSTAT): <https://sdmx.ilo.org/rest>
- SDMX Global Registry: <https://registry.sdmx.org/FusionRegistry/ws/rest>
- United Nations Statistics Division (UNSD): <http://data.un.org/WS/rest/>
- the EuroStat (ESTAT): <https://registry.sdmxcloud.org/ws/public/sdmxapi/rest/>

To connect to one of these registries:

- Select one from the 'Registry Name' dropdown in the SDMX Registry popup window and click 'Apply'.

SDMX Registry

Registry name: ILOSTAT ILOSTAT

Base URL: Global_Registry

DLM Connection (Optional)

Structure post URL: http://127.0.0.1/rest/structure/

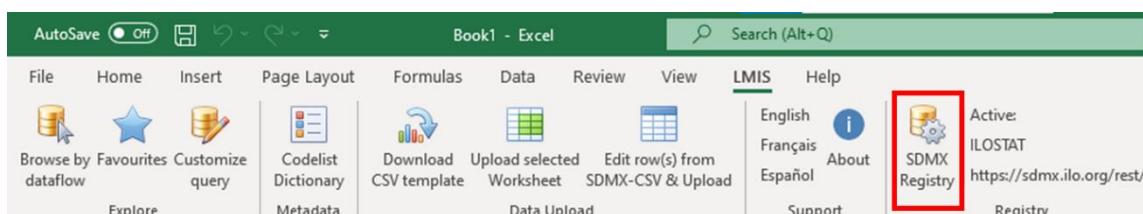
Transfer service URL: http://127.0.0.1/rest/structure/

Authentication URL: http://127.0.0.1:8080/auth/realms/demo/protocol/openid-connect/token

Authentication client ID: stat-suite

Localhost New Remove Cancel Save **Apply**

- In the LMIS Excel Add-in ribbon, the Registry section will update to display the name and URL of the current data source.



4.1.2 Adding a New Registry

In addition to the default registries, you can add a new SDMX registry by following these steps:

- Within the 'SDMX Registry' popup window, click the 'New' button, which clears the fields for 'Registry Name' and 'Base URL'
- Enter the 'Registry Name' and 'Base URL' for the SDMX registry you wish to add, and then click the 'Apply' button.
 - **Registry name:** Make a name to the new registry for easy identification, such as a recognizable abbreviation.
 - **Base URL:** The Registry URL provided by an organization for accessing its data resources in accordance with the SDMX standard.

SDMX Registry

Registry name: BIS

Base URL: https://stats.bis.org/api-doc/v1/

DLM Connection (Optional)

Structure post URL: http://127.0.0.1/rest/structure/

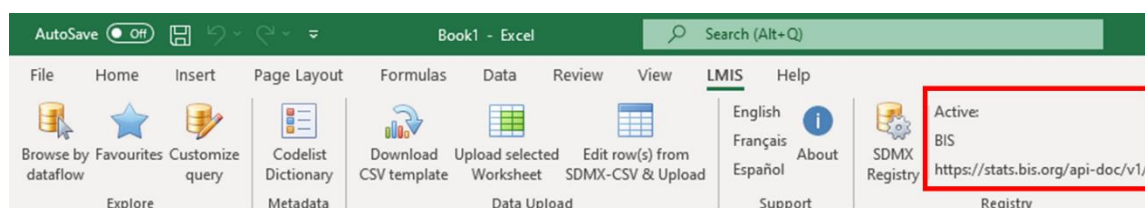
Transfer service URL: http://127.0.0.1/rest/structure/

Authentication URL: http://127.0.0.1:8080/auth/realms/demo/protocol/openid-connect/token

Authentication client ID: stat-suite

Localhost New Advance... Remove Cancel Save Apply

- The newly added SDMX registry will be the current data source in LMIS Excel Add-in ribbon



4.1.3 Advanced Settings

For advanced users who need tailored configurations, the 'Advance...' button in the 'SDMX Registry' popup window provides access to in-depth settings. Here, one can customize the connection strings in Json format to align with specific registry requirements.

SDMX Registry

Registry name:

Base URL:

DLM Connection (Optional)

Structure post URL:

Transfer service URL:

Authentication URL:

Authentication client ID:

Localhost New **Advance...** Remove Cancel Save Apply

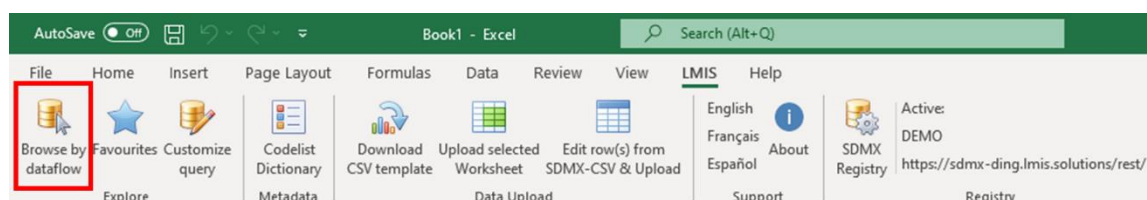
Advance - Edit Connection Strings

```
[
{
  "ID": "ILOSTAT",
  "Name": null,
  "BaseUrl": "https://www.ilo.org/sdmx/rest",
  "StructurePostUrl": "",
  "DLM_AuthUrl": "",
  "DLM_AuthClientId": "",
  "DLM_TransferServiceUrl": "",
  "DLM_DataSpace": null,
  "IsDefault": false
},
{
  "ID": "Global_Registry",
  "Name": null,
  "BaseUrl": "https://registry.sdmx.org/FusionRegistry/ws/rest",
  "StructurePostUrl": "",
  "DLM_AuthUrl": "",
  "DLM_AuthClientId": "",
  "DLM_TransferServiceUrl": "",
  "DLM_DataSpace": null,
  "IsDefault": true
},
{
  "ID": "UNSD"
```

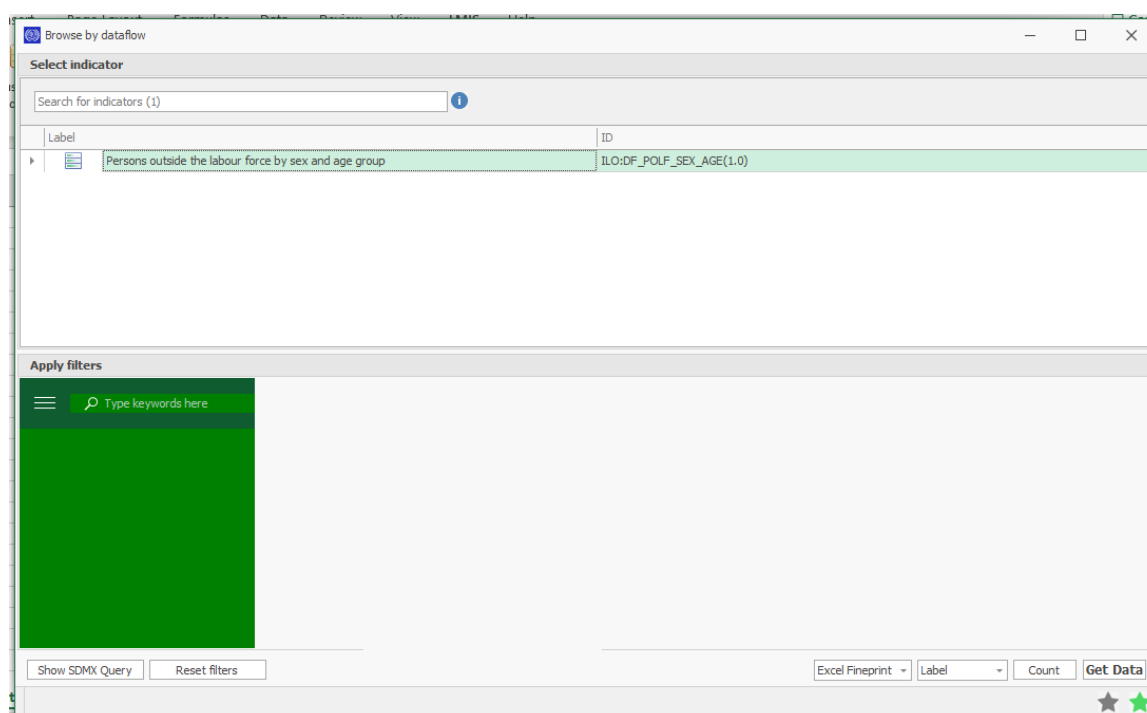
4.2 Downloading Data

Downloading data provides users access to a wealth of standardized statistics, fostering comprehensive analysis and insights. This section will guide you on how to download the specific data sets you need from the connected SDMX registry.

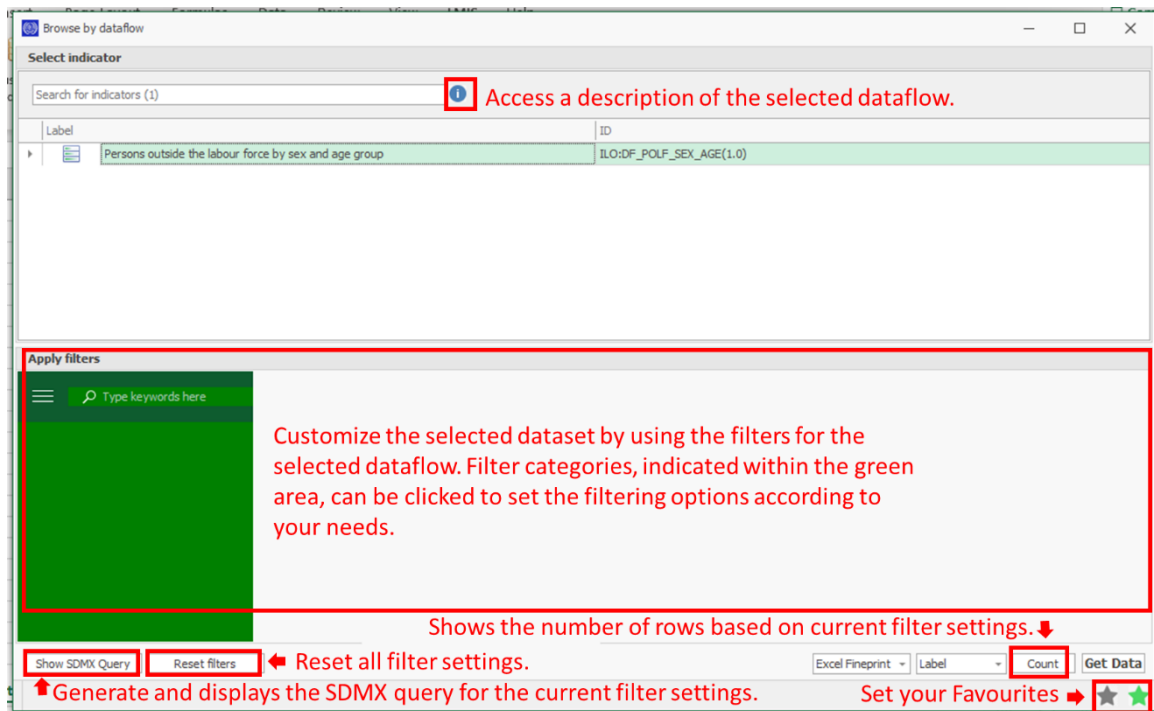
- After connecting to an SDMX registry ([4.1](#)), click 'Browse by dataflow' ribbon button to access the list of available dataflows.



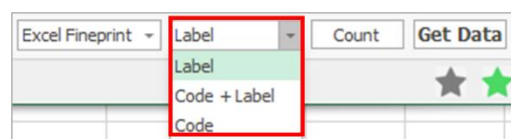
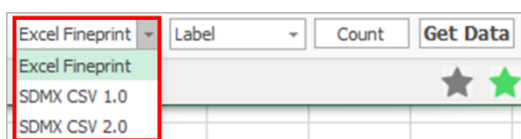
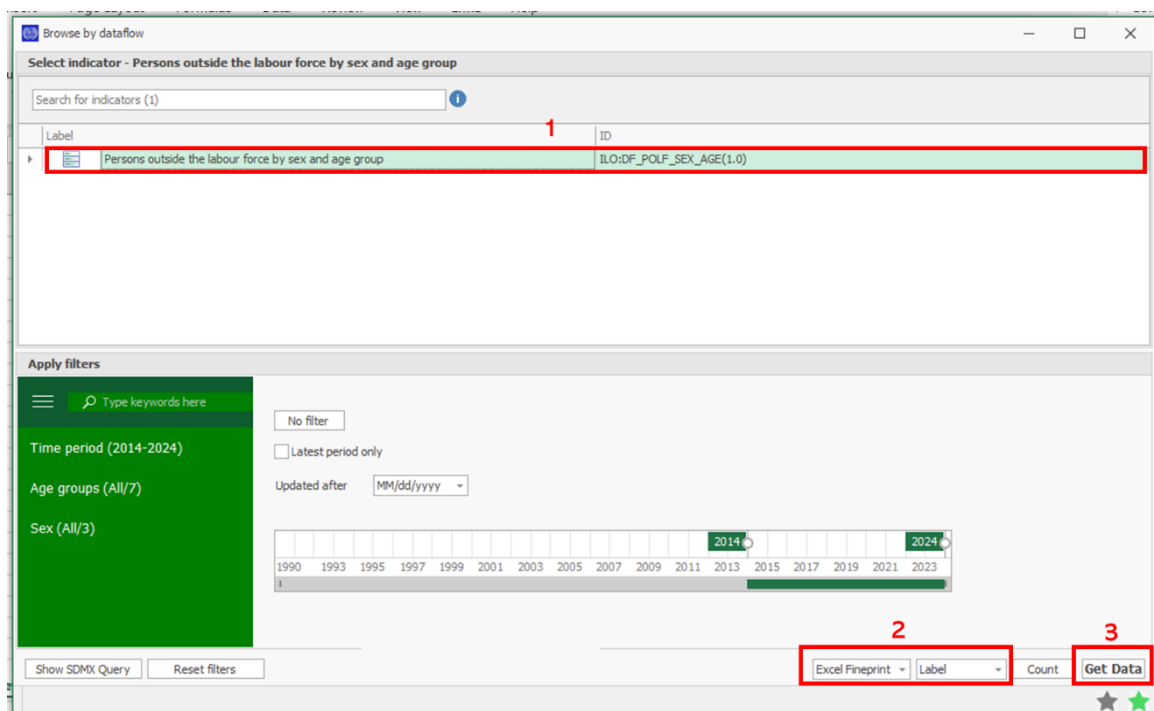
- Each dataflow is listed in 'Browse by dataflow' popup window with a Label (Dataflow name) and ID (Dataflow full identifier). The following example displays the only dataflow from the DEMO registry. Note that in many official production registries, the list can be quite long and may require a few seconds to load due to large data volumes.



- In 'Browse by dataflow' popup windows, perform the following operations in need:



- Select the required dataflow, the required **data format** and **data type** that aligns with your technical requirements, then click 'Get Data' button to download data.



- Data format
 - Excel Fingerprint for user-friendly Excel sheets, defaults to 'Label' data type.

- **SDMX CSV 1.0** for basic compatibility CSV format with SDMX 1.0, defaults to 'Code+Label' data type.
- **SDMX CSV 2.0** for a more advanced CSV format with SDMX 2.0, defaults to 'Code' data type.
- **Data type**
 - **Label:** Use descriptive names from codelists and concept schemes for readability.
 - **Code:** Use identifiable codes from codelists and concept schemes for efficient data processing and system compatibility.
- The required dataset will be downloaded into the current Excel sheet in table format.

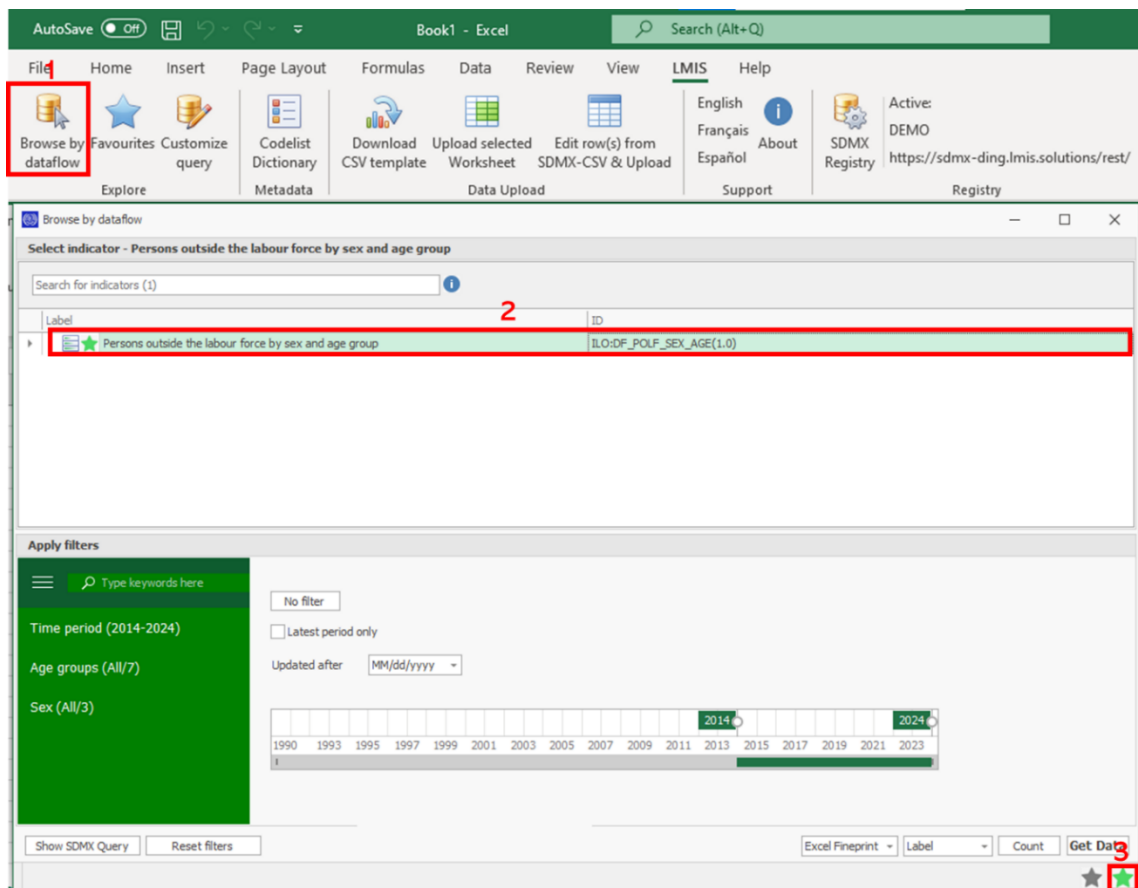
	DATAFLOW	Reference area	Frequency	Indicator	Age groups	Sex	Time period	OBS_VALUE	DECIMALS	U
6	ILO:DF_POLF_SEX_AGEI Total		Annual	Persons outside the la	55-64	Male	2022	26821	0	Pi
7	ILO:DF_POLF_SEX_AGEI Total		Annual	Persons outside the la	45-54	Total	2022	55034	0	Pi
8	ILO:DF_POLF_SEX_AGEI Total		Annual	Persons outside the la	35-44	Total	2022	60914	0	Pi
9	ILO:DF_POLF_SEX_AGEI Total		Annual	Persons outside the la	45-54	Male	2022	18631	0	Pi
10	ILO:DF_POLF_SEX_AGEI Total		Annual	Persons outside the la	15-24	Female	2022	133770	0	Pi
11	ILO:DF_POLF_SEX_AGEI Total		Annual	Persons outside the la	45-54	Female	2022	36403	0	Pi
12	ILO:DF_POLF_SEX_AGEI Total		Annual	Persons outside the la	65+	Female	2022	78725	0	Pi
13	ILO:DF_POLF_SEX_AGEI Total		Annual	Persons outside the la	25-34	Male	2022	33165	0	Pi
14	ILO:DF_POLF_SEX_AGEI Total		Annual	Persons outside the la	15-24	Male	2022	130086	0	Pi
15	ILO:DF_POLF_SEX_AGEI Total		Annual	Persons outside the la	Total	Male	2022	275996	0	Pi
16	ILO:DF_POLF_SEX_AGEI Total		Annual	Persons outside the la	55-64	Female	2022	44010	0	Pi
17	ILO:DF_POLF_SEX_AGEI Total		Annual	Persons outside the la	55-64	Total	2022	70831	0	Pi
18	ILO:DF_POLF_SEX_AGEI Total		Annual	Persons outside the la	65+	Total	2022	124048	0	Pi
19	ILO:DF_POLF_SEX_AGEI Total		Annual	Persons outside the la	35-44	Female	2022	38944	0	Pi
20	ILO:DF_POLF_SEX_AGEI Total		Annual	Persons outside the la	15-24	Total	2022	263856	0	Pi

4.2.1 Managing Favourites

Managing favourite dataflows allows for quicker access to your frequently used datasets. Here, you'll learn how to mark your preferred datasets using 'Star Icons' and gain rapid access to them for efficient data management.

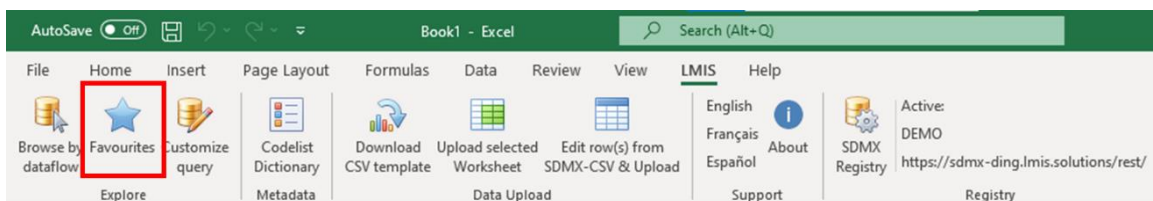
For adding a dataflow to your favourites:

- Click 'Browse by dataflow' ribbon button to access the list of available dataflows.
- Select the dataflow that you want to add in the 'Browse by dataflow' popup window.
- Click the green star in the lower right corner of the popup window to add the selected dataflow to your favourites.

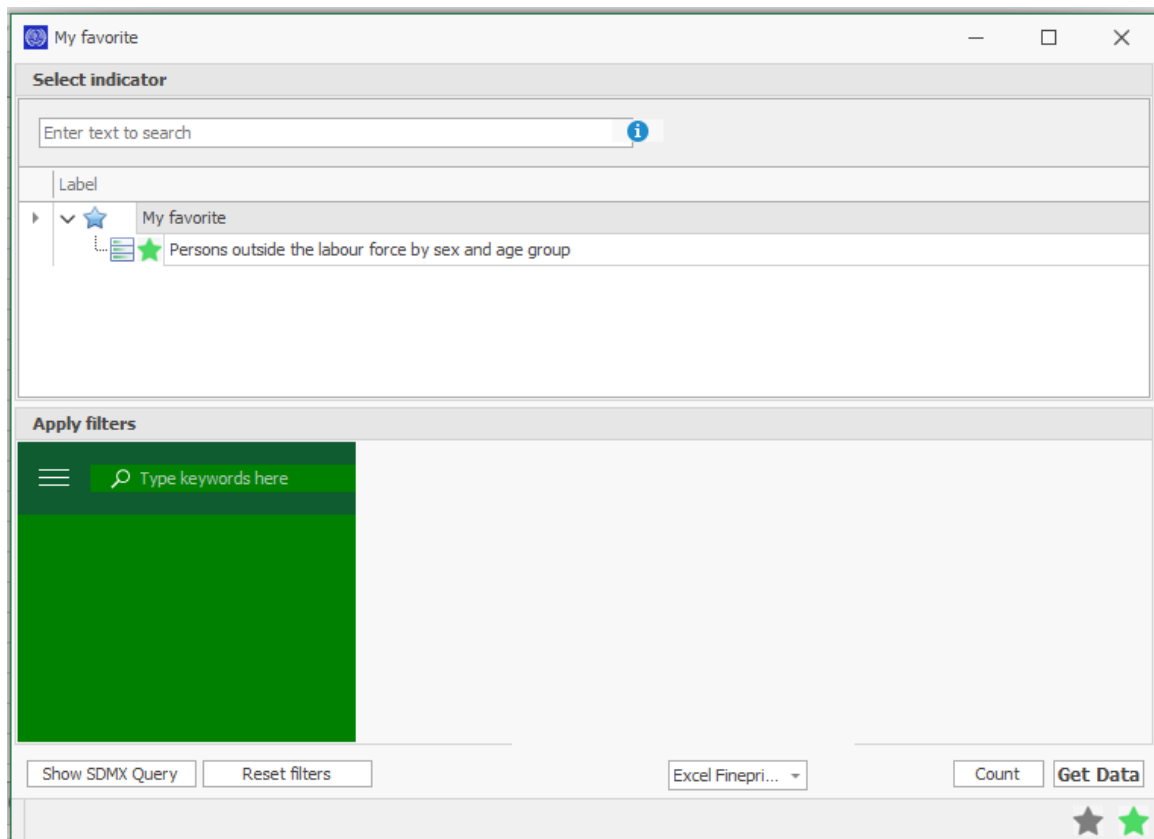


For managing your favourites:

- Click 'Favourites' ribbon button to access the list of your stored favourite dataflows.



- Your stored dataflows are listed in the 'My favourites' popup window, each with a Label (Dataflow name) and ID (Dataflow full identifier). In 'My favourite' popup windows, perform the following operations in need:
- Remove the dataflow from your favourites: Select the dataflow you want to remove and then click the grey star in the lower right corner.



- **Info Button** (i): Provides a description of the selected dataflow.
- **Apply Filters:** Customize your dataset by using the filters for the selected dataflow. Filter categories, indicated within the green area, can be clicked to set the filtering options according to your needs.
- **Show SDMX Query:** Generate and displays the SDMX query for the current filter settings.
- **Reset Filters:** Reset all filter settings.
- **Count:** Count the number of rows based on current filter settings.
- **Get Data:** Download the data based on current filter settings and selected data type.
- **Star Icons:** Add ★ or remove ★ the selected dataflow from your Favourites.

4.2.2 Customizing Existing Queries

In this section, we'll show you how to customize queries after downloading the data. This feature allows you to customize and adjust your existing queries when you need to change data filters, formats, or types.

- Activate or select the downloaded data sheet by clicking the sheet name.
- Click 'Customize Query' ribbon button to open 'Customize Query' window.

Persons outside the labour force by sex and age group

https://sdmx-ding.lmis.solutions/rest/data/ILO_DF_POLF_SEX_AGE.1.0/.../?startPeriod=2014&endPeriod=2024

Downloaded from the SDMX service DEMO on 29Apr2024

DATAFLOW	Reference area	Frequency	Indicator	Age groups	Sex	Time period	OBS_VALUE	DECIMALS	U
ILO:DF_POLF_SEX_AGE Total		Annual	Persons outside the la 55-64		Male	2022	26821		0 Pr
ILO:DF_POLF_SEX_AGE Total		Annual	Persons outside the la 45-54		Total	2022	55034		0 Pr
ILO:DF_POLF_SEX_AGE Total		Annual	Persons outside the la 35-44		Total	2022	60914		0 Pr
ILO:DF_POLF_SEX_AGE Total		Annual	Persons outside the la 45-54		Male	2022	18631		0 Pr
ILO:DF_POLF_SEX_AGE Total		Annual	Persons outside the la 15-24		Female	2022	133770		0 Pr
ILO:DF_POLF_SEX_AGE Total		Annual	Persons outside the la 45-54		Female	2022	36403		0 Pr
ILO:DF_POLF_SEX_AGE Total		Annual	Persons outside the la 65+		Female	2022	78725		0 Pr
ILO:DF_POLF_SEX_AGE Total		Annual	Persons outside the la 25-34		Male	2022	33165		0 Pr
ILO:DF_POLF_SEX_AGE Total		Annual	Persons outside the la 15-24		Male	2022	130086		0 Pr
ILO:DF_POLF_SEX_AGE Total		Annual	Persons outside the la Total		Male	2022	275996		0 Pr
ILO:DF_POLF_SEX_AGE Total		Annual	Persons outside the la 55-64		Female	2022	44010		0 Pr
ILO:DF_POLF_SEX_AGE Total		Annual	Persons outside the la 55-64		Total	2022	70831		0 Pr
ILO:DF_POLF_SEX_AGE Total		Annual	Persons outside the la 65+		Total	2022	124048		0 Pr
ILO:DF_POLF_SEX_AGE Total		Annual	Persons outside the la 35-44		Female	2022	38944		0 Pr
ILO:DF_POLF_SEX_AGE Total		Annual	Persons outside the la 15-24		Total	2022	263856		0 Pr

POLF_SEX_AGE.EN Sheet1

DF_POLF_SEX_AGE download finished. Total rows: 21. Total time elapsed: 0.442 seconds.

- In 'Customize Query' popup window, perform the following operations as needed:
 - **Show SDMX Query:** Displays the SDMX query for the current dataflow.
 - **Apply Filters:** Customize your dataset by using the filters for the selected dataflow. Filter categories, indicated within the green area, can be clicked to set the filtering options according to your needs.
 - **Refresh Filter:** Generates and displays the SDMX query based on the current filter settings.
 - **Reset Filters:** Reset all filter settings.
 - **Count:** Count the number of rows based on current filter settings.
 - **Get Data:** Download the data based on current filter settings and selected data type.

Customize query

Select indicator - Persons outside the labour force by sex and age group

https://sdmx-ding.lmis.solutions/rest/data/ILO_DF_POLF_SEX_AGE.1.0/.../?startPeriod=2014&endPeriod=2024

Apply filters

Type keywords here

No filter

Time period (2014-2024)

Age groups (All/7)

Sex (All/3)

Updated after MM/dd/yyyy

2014 2024

Refresh Filter Refresh Query

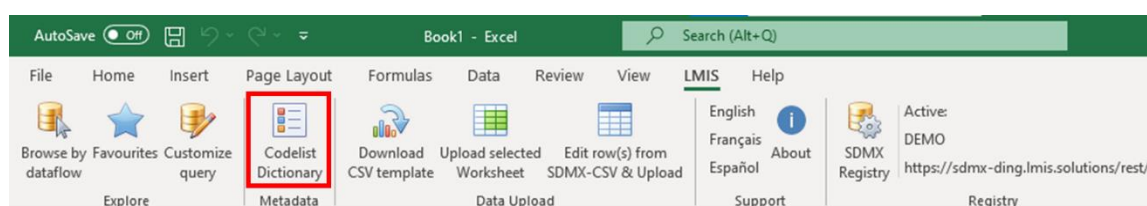
Excel Finepri... Label Count Get Data

4.3 Downloading Structure Metadata

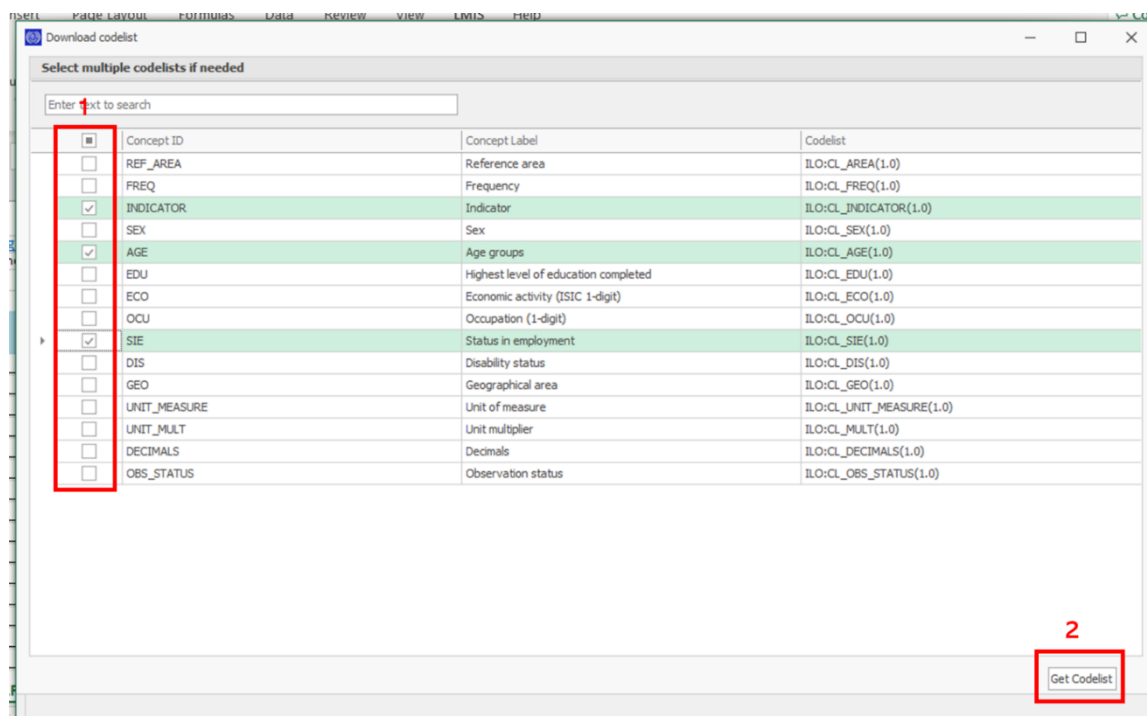
This section focuses on downloading structure metadata. The LMIS Excel Add-in enables the downloading of codelists as metadata, essential for a comprehensive understanding of data and data structures. Codelists, providing standardized codes for specific elements, make data comparable and interoperable across various systems. This standardization is key to ensuring consistency and accuracy in data analysis and reporting.

To download codelists:

- Click the 'Codelist Dictionary' ribbon button to access a list of all codelists available for the connected data source.



- The codelist list appears with the 'Concept ID', 'Concept Label', and the associated 'Codelist'.
- Select the required codelists and then click the 'Get Codelist' button to download them.



4.4 Data Upload and Editing

This section introduces the comprehensive 'data upload and editing' functionality of the LMIS Excel Add-in, designed for data managers who need to upload data to the .Stat DLM or manage existing datasets through direct in-app editing.

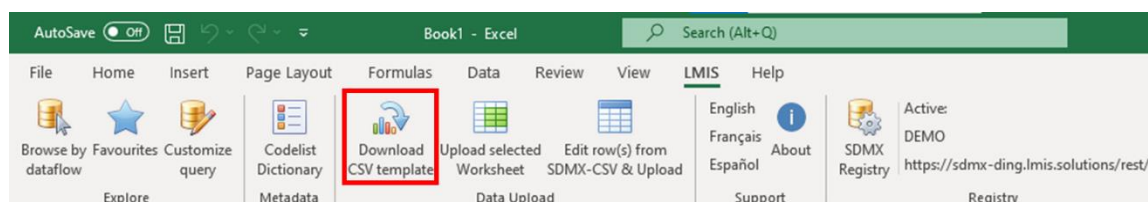
We will begin with **4.4.1, downloading the CSV template**, which serves as a standard template for preparing data for upload. Following this, **4.4.2 Upload Selected Worksheet** and **4.4.3 Uploading Selected Rows** will guide you through uploading your prepared data and provide instructions for editing or uploading specific rows of data. For managing an existing dataset, **4.4.4 Editing selected rows** and **4.4.5 Deleting data** will guide you on how to update and remove data entries that have already been uploaded to DLM. To illustrate the application of these features, **4.4.6 Case Study: Data Management in Demoland** provides a practical scenario, demonstrating how these processes integrate to enhance your data management workflow.

4.4.1 Downloading CSV Template

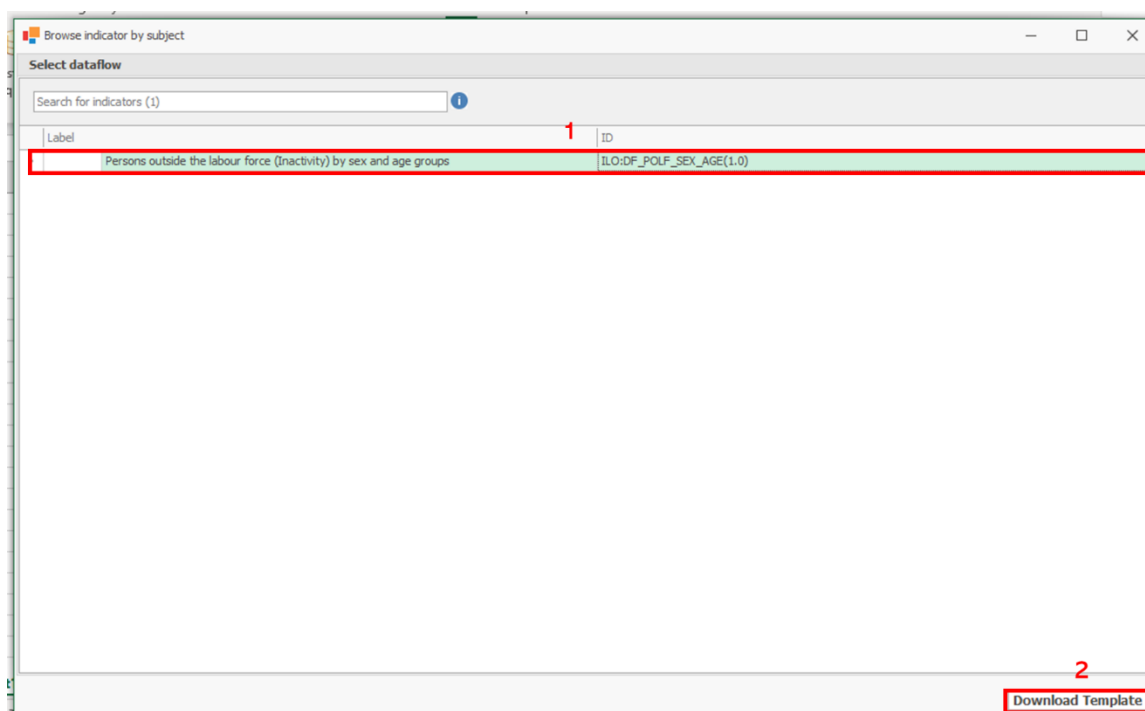
Start your data upload process by downloading the CSV template for your target dataflow, detailing the required data structure for uploading or editing, including the structure ID and necessary dimensions.

To download a CSV template for a dataflow:

- Click 'Download CSV template' ribbon button, which opens a window displaying all available templates for the connected SDMX registry.



- The list will present each template with its corresponding dataflow's 'Label' and 'ID'.
- Select the desired template in the popup window, then click 'Download Template' to download it.



To prepare your data for upload or editing, fill out the downloaded template:

- Fill the dimensions with the specific data you intend to upload or edit.
- For the 'Action' column, specify the type of operation you want to perform on each row:
 - Action 'I' Information for uploading.
 - Action 'M' Merge for editing.
 - Action 'D' Delete for deleting.
 - Action 'R' Replace for replacement.

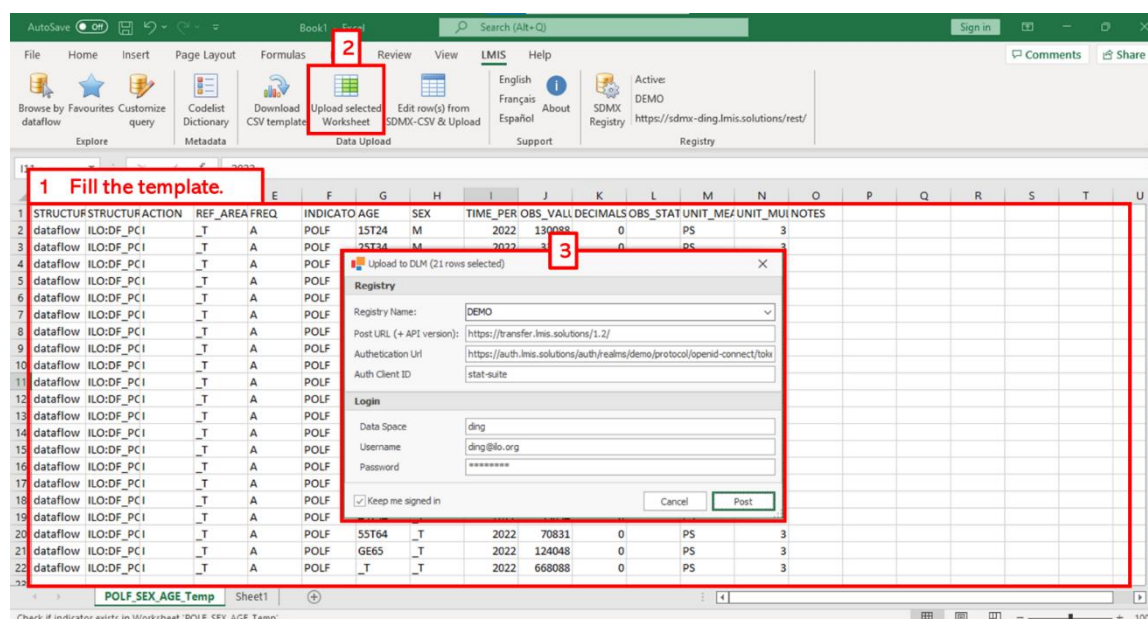
(In LMIS Excel Add-in, the actions are designed according to '[Supported type of actions](#)' from .Stat Suite)

4.4.2 Upload Selected Worksheet

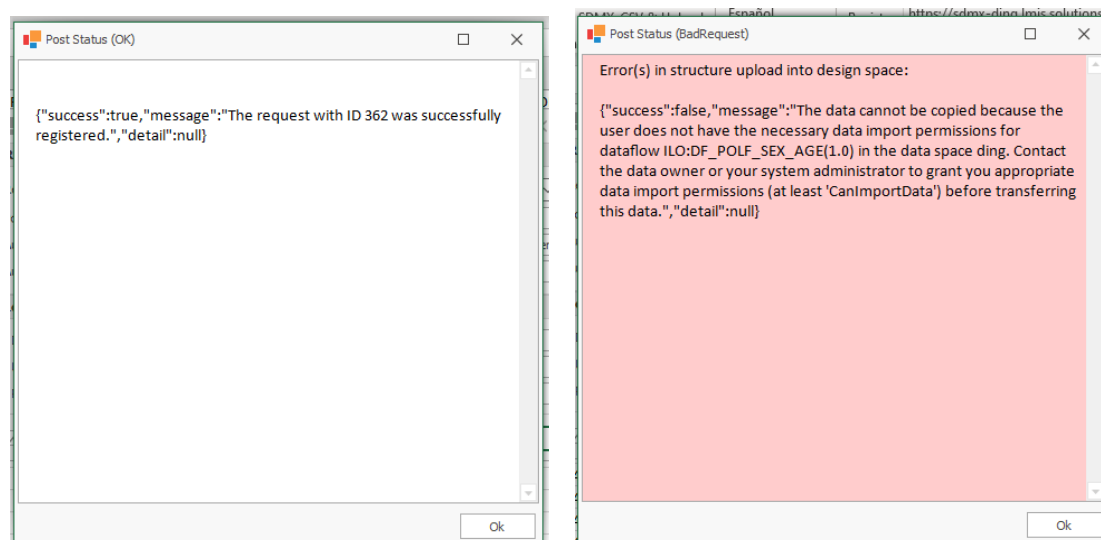
The 'Upload Selected Worksheet' feature in the LMIS Excel Add-in streamlines the process of transferring data to the DLM platform.

- (1) **Edit the downloaded CSV template:** Fill in the data to be uploaded and the 'Action' column with 'I' for each row of data. Notice that, please skip this step if the data sheet is already prepared following the SDMX-CSV format.
- (2) **Initiate the Upload:** Ensure the filled template is open in the current Excel worksheet, then click the 'Upload Selected Worksheet' ribbon button to begin the upload process.

(3) **Authenticate:** Enter the required authentication details in the 'Upload to DLM' popup window and click the 'Post' button to upload your data to the DLM platform.



You will receive a notification regarding the status of your upload, confirming the successful transfer or detailing any issues that need to be addressed.

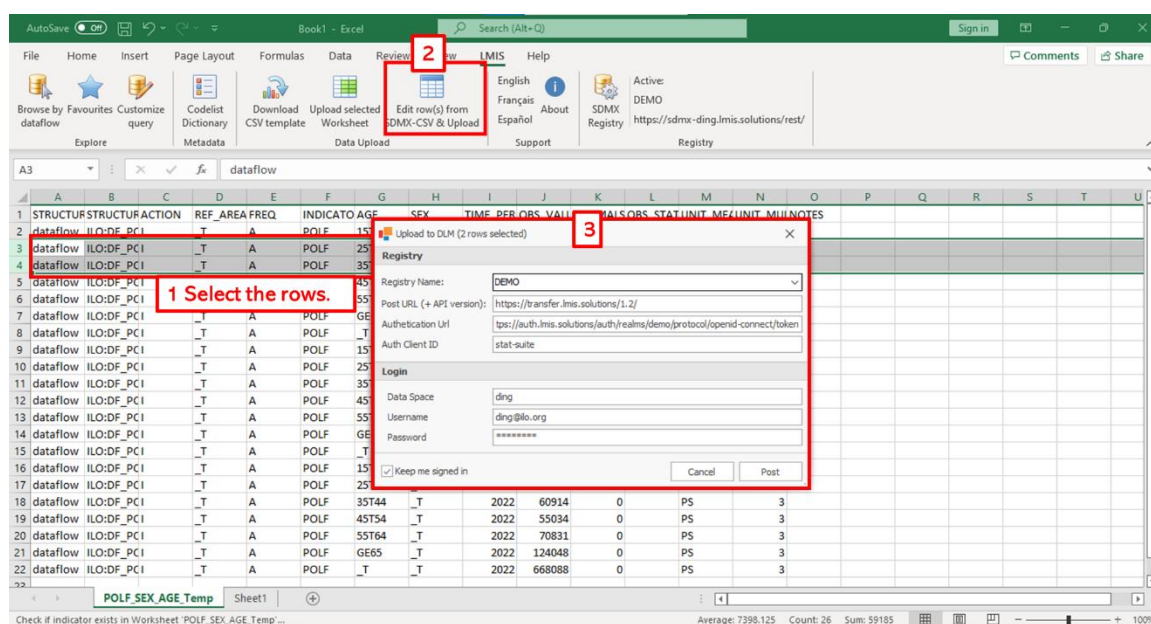


4.4.3 Uploading Selected Rows

The 'Uploading Selected Rows' feature of the LMIS Excel Add-in is similar to the steps for uploading a worksheet but provides added flexibility for targeted data management. It is designed for scenarios where uploading specific portions of your data in rows is required.

To upload specific rows of an existing dataset (downloaded previously):

- (1) **Select the Target Rows:** Consecutively select the rows in the template you wish to upload.
- (2) **Initiate the Upload:** Click the 'Edit row(s) from SDMX-CSV & Upload' ribbon button to begin the upload process.
- (3) **Authenticate:** Enter the required authentication details in the 'Upload to DLM' popup window, then click the 'Post' button to upload the selected rows to the DLM platform.

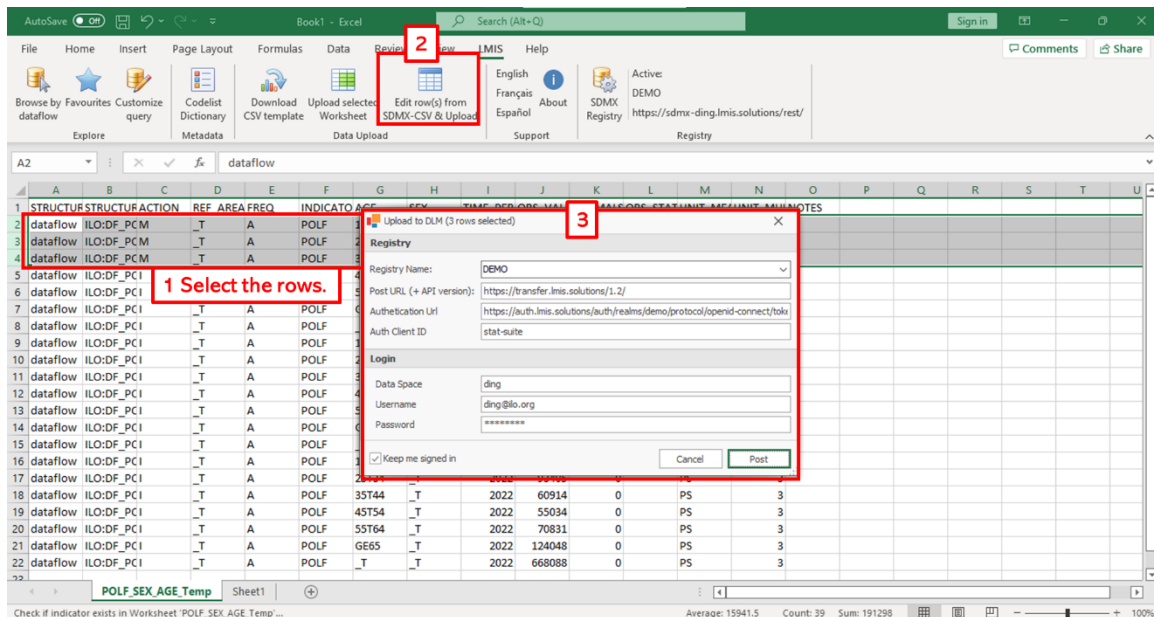


4.4.4 Editing Selected Rows

In .Stat DLM, the 'M' action is used to incrementally update existing metadata attributes or to add new referential metadata that was previously missing. Therefore, in the LMIS Excel Add-in, the 'M' action in the 'Action' column is designed for editing purposes, allowing users to make precise modifications to specific data entries without altering the entire dataset.

To edit selected rows:

- (1) **Select the Target Rows:** Consecutively select the rows in the template that you wish to edit.
- (2) **Initiate the Edit:** Click the 'Edit row(s) from SDMX-CSV & Upload' ribbon button to start the posting process.
- (3) **Authenticate:** Enter the required authentication details in the 'Upload to DLM' popup window, then click the 'Post' button to upload the selected rows to the DLM platform.

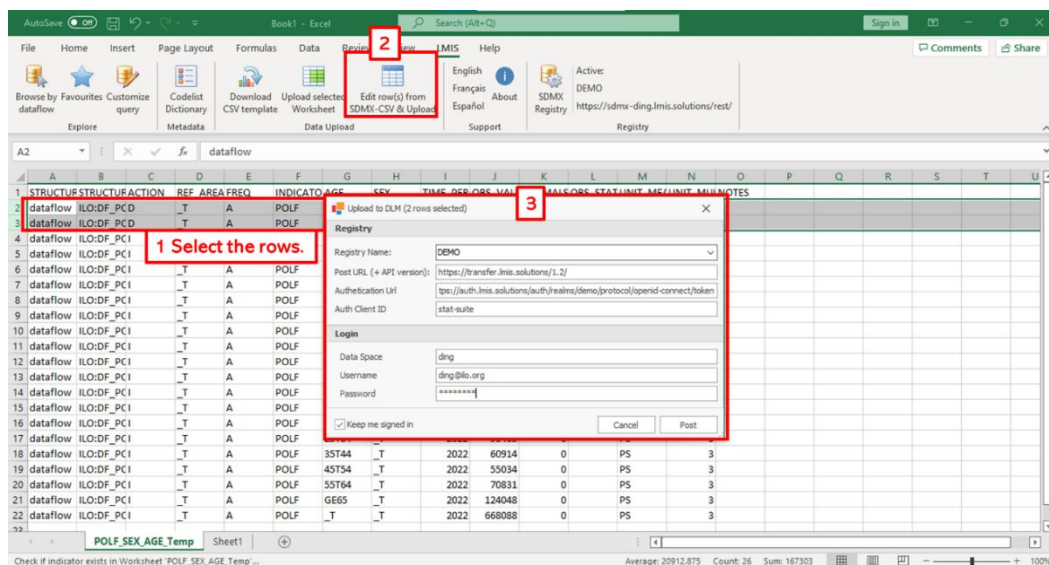


4.4.5 Deleting Selected Rows

Here, we will use 'D' action to selectively delete outdated or incorrect data entries efficiently, maintaining a clean and relevant dataset in the .Stat DLM.

To delete selected rows:

- (1) Selected the target rows: Consecutively select the rows in the template that you want to remove.
- (2) Click the 'Edit row(s) from SDMX-CSV & Upload' ribbon button to start the posting process.
- (3) Authenticate: Enter the required authentication details in the 'Upload to DLM' popup window, then click the 'Post' button to upload the selected rows to the DLM platform.



4.4.6 Case Study: Data Management in Demoland

This case study demonstrates how data concerning the population outside the labor force is managed in the fictional country of Demoland using the LMIS Excel Add-in.

Background:

In Demoland, the authorities have established an SDMX Data Structure Definition (DSD) (ID: ILO:DF_POLF_SEX_AGE(1.0), Name: Persons outside the labour force by sex and age group) for their employment statistics. This data is regularly uploaded and updated to support policymaking and economic planning.

The data management operations for this dataflow include:

(1) Uploading Process

Assume the data presented in Table 4.1 needs to be uploaded to the DLM.

Table 4.1 Population outside the labour force by sex and age group (2022)

Age Group	Men	Women	Both Sexes
15-24	130,088	133,770	263,856
25-34	33,165	60,240	93,405
35-44	21,970	38,944	60,914
45-54	18,631	36,403	55,034
55-64	26,821	44,010	70,831
65+	45,323	78,725	124,048
Total	275,997	392,092	668,088

1) Download the CSV template for the dataflow and receive the template as shown in Table 4.2.

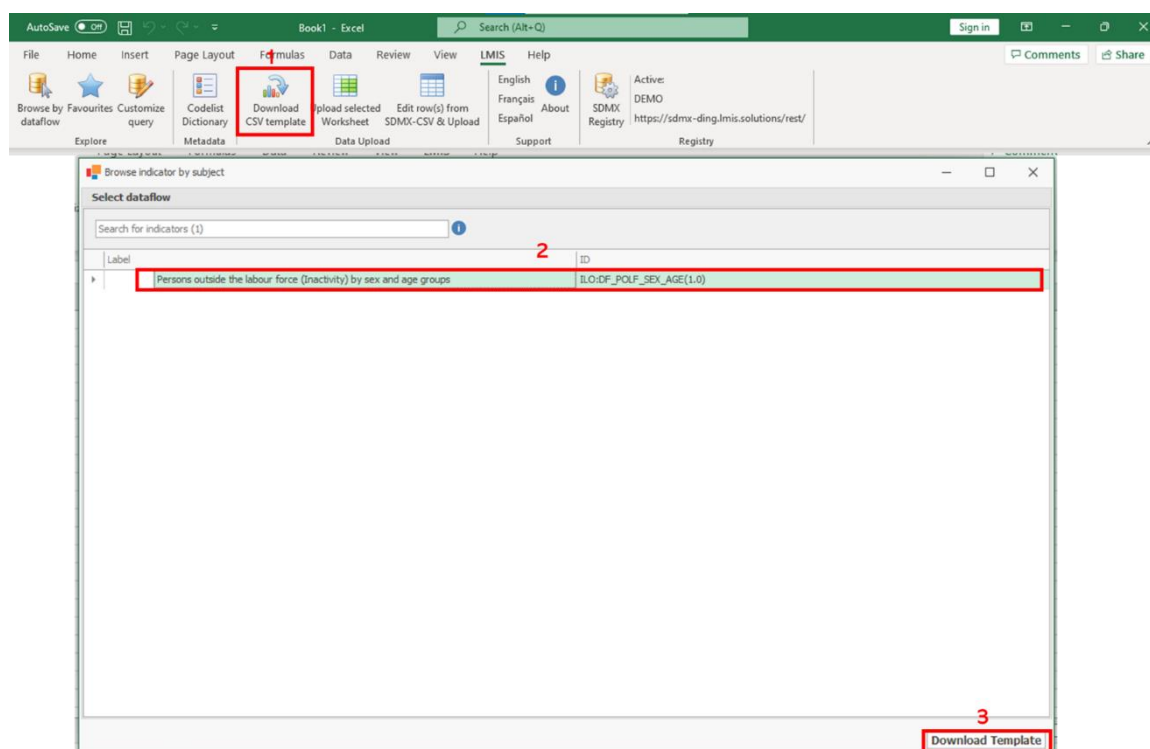


Table 4.2 The Downloaded Template

STRUCTURE	STRUCTURE_ID	ACTION	REFERENCE	FR EQ	INDICATOR	AGE	SEX	TIME PERIOD	OBS. VALUE	DECIMALS	OBS. STATUS	UNIT MEASURE	UNIT MULT	NOTES
dataflow	ILO:DF_POLF_SEX_AGE(1.0)	I	_T	A	POLF	_T	_T			0	A	PS	3	
		M				L15	M				B			
		D				15T 24	F				D			
						25T 34	_O				E			
						35T 44	_Z				F			
						45T 54					G			
						55T 64					I			
						GE 65					K			
						_U					W			
						_X					O			
						_Z					M			
											P			
											S			
											L			
											Q			
											J			
											N			
											U			
											V			

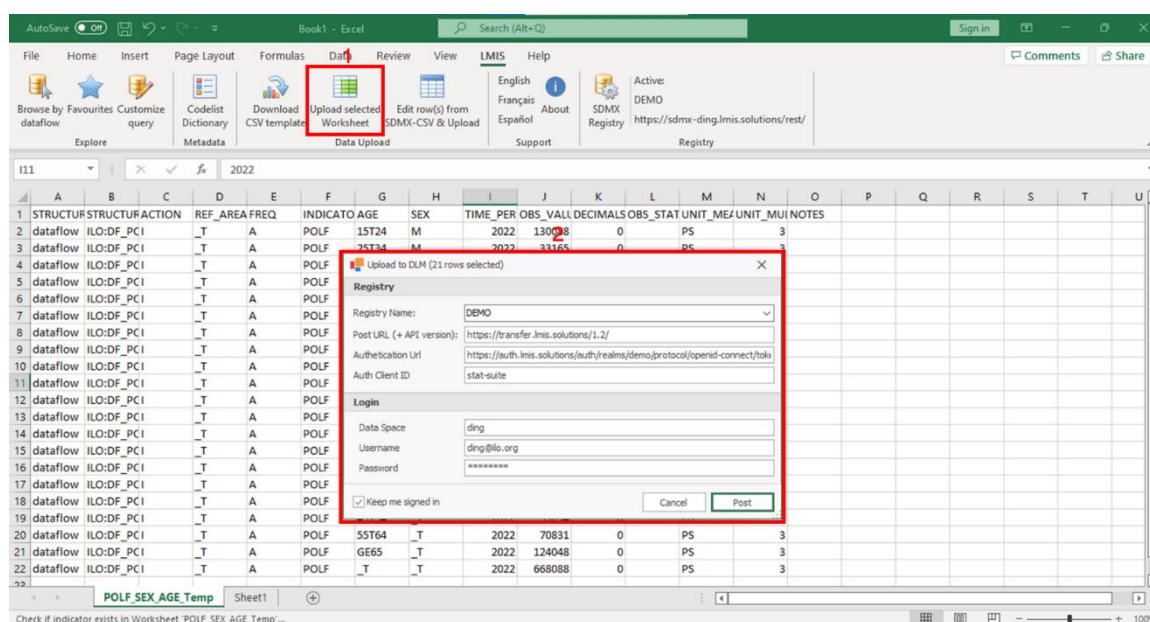
2) Editing the Template: Fill the downloaded template with the data from Table 4.1. The template prepared for uploading appears as shown in Table 4.3.

Table 4.3 The Template for Uploading

STRUCTURE	STRUCTURE_ID	ACTION	REFERENCE	FR EQ	INDICATOR	AGE	SEX	TIME PERIOD	OBS. VALUE	DECIMALS	OBS. STATUS	UNIT MEASURE	UNIT MULT	NOTES
dataflow	ILO:DF_POLF_SEX_AGE(1.0)	I	_T	A	POLF	15T 24	M	2022	130,088	0		PS	3	
dataflow	ILO:DF_POLF_SEX_AGE(1.0)	I	_T	A	POLF	25T 34	M	2022	33,165	0		PS	3	
dataflow	ILO:DF_POLF_SEX_AGE(1.0)	I	_T	A	POLF	35T 44	M	2022	21,970	0		PS	3	
dataflow	ILO:DF_POLF_SEX_AGE(1.0)	I	_T	A	POLF	45T 54	M	2022	18,631	0		PS	3	
dataflow	ILO:DF_POLF_SEX_AGE(1.0)	I	_T	A	POLF	55T 64	M	2022	26,821	0		PS	3	
dataflow	ILO:DF_POLF_SEX_AGE(1.0)	I	_T	A	POLF	GE 65	M	2022	45,323	0		PS	3	
dataflow	ILO:DF_POLF_SEX_AGE(1.0)	I	_T	A	POLF	_T	M	2022	275,997	0		PS	3	

dataflow	ILO.DF_POLF_SEX_AGE(1.0)	I	_T	A	POLF	15T24	F	2022	133,770	0		PS	3	
dataflow	ILO.DF_POLF_SEX_AGE(1.0)	I	_T	A	POLF	25T34	F	2022	60,240	0		PS	3	
dataflow	ILO.DF_POLF_SEX_AGE(1.0)	I	_T	A	POLF	35T44	F	2022	38,944	0		PS	3	
dataflow	ILO.DF_POLF_SEX_AGE(1.0)	I	_T	A	POLF	45T54	F	2022	36,403	0		PS	3	
dataflow	ILO.DF_POLF_SEX_AGE(1.0)	I	_T	A	POLF	55T64	F	2022	44,010	0		PS	3	
dataflow	ILO.DF_POLF_SEX_AGE(1.0)	I	_T	A	POLF	GE65	F	2022	78,725	0		PS	3	
dataflow	ILO.DF_POLF_SEX_AGE(1.0)	I	_T	A	POLF	_T	F	2022	392,092	0		PS	3	
dataflow	ILO.DF_POLF_SEX_AGE(1.0)	I	_T	A	POLF	15T24	_T	2022	263,856	0		PS	3	
dataflow	ILO.DF_POLF_SEX_AGE(1.0)	I	_T	A	POLF	25T34	_T	2022	93,405	0		PS	3	
dataflow	ILO.DF_POLF_SEX_AGE(1.0)	I	_T	A	POLF	35T44	_T	2022	60,914	0		PS	3	
dataflow	ILO.DF_POLF_SEX_AGE(1.0)	I	_T	A	POLF	45T54	_T	2022	55,034	0		PS	3	
dataflow	ILO.DF_POLF_SEX_AGE(1.0)	I	_T	A	POLF	55T64	_T	2022	70,831	0		PS	3	
dataflow	ILO.DF_POLF_SEX_AGE(1.0)	I	_T	A	POLF	GE65	_T	2022	124,048	0		PS	3	
dataflow	ILO.DF_POLF_SEX_AGE(1.0)	I	_T	A	POLF	_T	_T	2022	668,088	0		PS	3	

3) Uploading the data: Click the 'Upload Selected Worksheet' ribbon button for a full data set update.



4) Upon successful upload, the dataflow 'Persons outside the labour force by sex and age group' would be illustrated in Table 4.4.

Table 4.4 The dataflow after uploading

DATAFLOW	Reference area	Frequency	Indicator	Age groups	Sex	Time period	OBS_VA LUE	DECIMALS	Unit of measure	Unit multiplier
ILO.DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	55-64	Male	2022	26821	0	Persons	Units
ILO.DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	45-54	Total	2022	55034	0	Persons	Units
ILO.DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	35-44	Total	2022	60914	0	Persons	Units
ILO.DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	45-54	Male	2022	18631	0	Persons	Units
ILO.DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	15-24	Female	2022	133770	0	Persons	Units
ILO.DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	45-54	Female	2022	36403	0	Persons	Units
ILO.DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	65+	Female	2022	78725	0	Persons	Units
ILO.DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	25-34	Male	2022	33165	0	Persons	Units
ILO.DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	15-24	Male	2022	130088	0	Persons	Units
ILO.DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	Total	Male	2022	275997	0	Persons	Units

ILO:DF_POLF_SEX_A GE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	55-64	Fem ale	2022	44010	0	Persons	Units
ILO:DF_POLF_SEX_A GE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	55-64	Total	2022	70831	0	Persons	Units
ILO:DF_POLF_SEX_A GE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	65+	Total	2022	124048	0	Persons	Units
ILO:DF_POLF_SEX_A GE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	35-44	Fem ale	2022	38944	0	Persons	Units
ILO:DF_POLF_SEX_A GE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	15-24	Total	2022	263856	0	Persons	Units
ILO:DF_POLF_SEX_A GE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	35-44	Male	2022	21970	0	Persons	Units
ILO:DF_POLF_SEX_A GE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	25-34	Fem ale	2022	60240	0	Persons	Units
ILO:DF_POLF_SEX_A GE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	25-34	Total	2022	93405	0	Persons	Units
ILO:DF_POLF_SEX_A GE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	65+	Male	2022	45323	0	Persons	Units
ILO:DF_POLF_SEX_A GE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	Total	Fem ale	2022	392092	0	Persons	Units
ILO:DF_POLF_SEX_A GE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	Total	Total	2022	668088	0	Persons	Units

(2) Editing Data

Modifications are required for two statistics as indicated in red in Table 4.5.

Table 4.5 Population outside the labour force by sex and age group (2022)

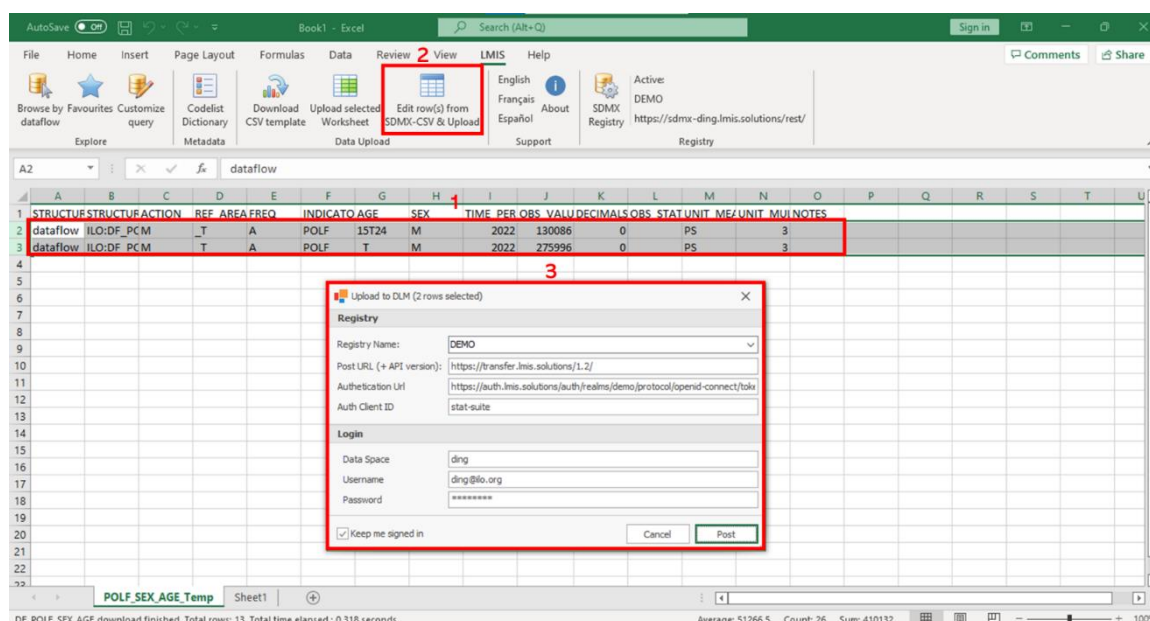
Age Group	Men	Women	Both Sexes
15-24	130,086	133,770	263,856
25-34	33,165	60,240	93,405
35-44	21,970	38,944	60,914
45-54	18,631	36,403	55,034
55-64	26,821	44,010	70,831
65+	45,323	78,725	124,048
Total	275,996	392,092	668,088

1) Edit the template with the data marked in red in Table 4.5, setting the 'Action' column to 'M' for each target row. The template prepared for uploading appears as Table 4.6.

Table 4.6 The Template for Update

STRUCTURE	STRUCTURE_ID	ACTION	REF_AREA	FREQ	INDICATOR	AGE	SEX	TIME_PERIOD	OBS_VALUE	DECIMALS	OBS_STATUS	UNIT_MEASURE	UNIT_MULT	NOTES
dataflow	ILO:DF_POLF_SEX_AGE (1.0)	M	_T	A	POLF	15T24	M	2022	130086	0		PS	3	
dataflow	ILO:DF_POLF_SEX_AGE (1.0)	M	_T	A	POLF	_T	M	2022	275996	0		PS	3	

2) Select the target rows consecutively in the template, then click the 'Edit row(s) from SDMX-CSV & Upload' ribbon button to initiate the update process in the DLM.



3) Upon successful updating, the dataflow 'Persons outside the labour force by sex and age group' will be updated as illustrated in Table 4.7.

Table 4.7 The Dataflow After Updating

DATAFLOW	Reference area	Frequency	Indicator	Age groups	Sex	Time period	OBS. VALUE	DECIMALS	Unit of measure	Unit multiplier
ILO-DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	55-64	Male	2022	26821	0	Persons	Units
ILO-DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	45-54	Total	2022	55034	0	Persons	Units
ILO-DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	35-44	Total	2022	60914	0	Persons	Units
ILO-DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	45-54	Male	2022	18631	0	Persons	Units
ILO-DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	15-24	Female	2022	133770	0	Persons	Units
ILO-DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	45-54	Female	2022	36403	0	Persons	Units
ILO-DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	65+	Female	2022	78725	0	Persons	Units
ILO-DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	25-34	Male	2022	33165	0	Persons	Units
ILO-DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	15-24	Male	2022	130086	0	Persons	Units
ILO-DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	Total	Male	2022	275996	0	Persons	Units
ILO-DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	55-64	Female	2022	44010	0	Persons	Units
ILO-DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	55-64	Total	2022	70831	0	Persons	Units
ILO-DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	65+	Total	2022	124048	0	Persons	Units
ILO-DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	35-44	Female	2022	38944	0	Persons	Units
ILO-DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	15-24	Total	2022	263856	0	Persons	Units
ILO-DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	35-44	Male	2022	21970	0	Persons	Units
ILO-DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	25-34	Female	2022	60240	0	Persons	Units
ILO-DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	25-34	Total	2022	93405	0	Persons	Units
ILO-DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	65+	Male	2022	45323	0	Persons	Units
ILO-DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	Total	Female	2022	392092	0	Persons	Units
ILO-DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	Total	Total	2022	668088	0	Persons	Units

(3) Deleting data:

Assume that the data in the 'Total' row needs to be deleted as shown in Table 4.8.

Table 4.8 Population outside the labour force by sex and age group (2022)

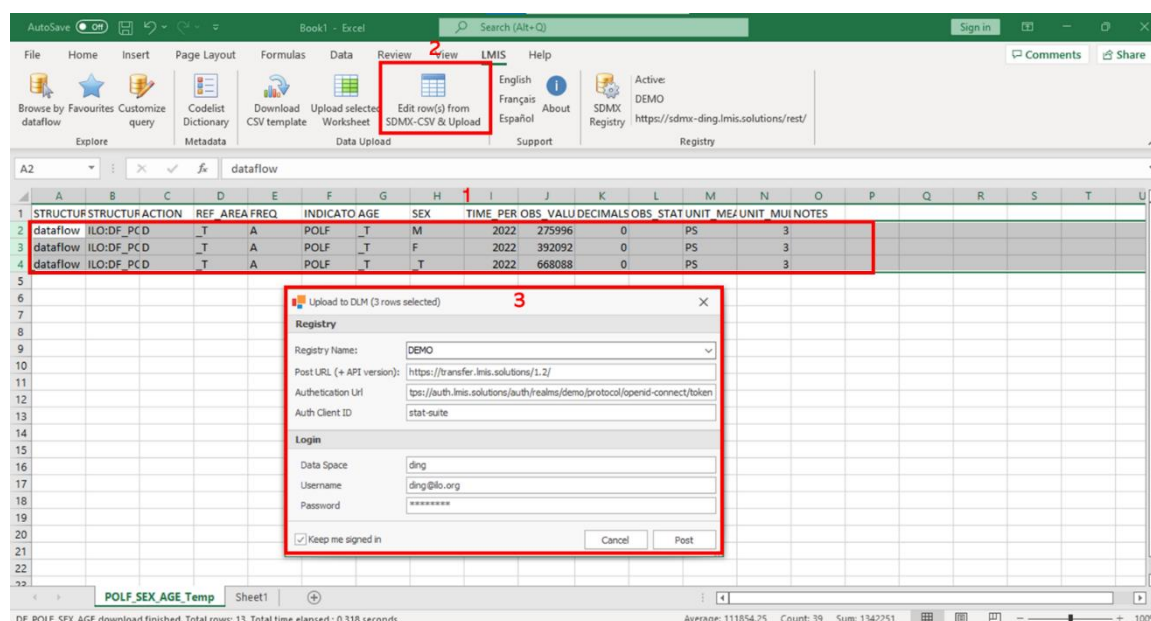
Age Group	Men	Women	Both Sexes
15-24	130,086	133,770	263,856
25-34	33,165	60,240	93,405
35-44	21,970	38,944	60,914
45-54	18,631	36,403	55,034
55-64	26,821	44,010	70,831
65+	45,323	78,725	124,048
Total	275,996	392,092	668,088

1) Modify the template by filling in the data to be deleted and setting the 'Action' column to 'D' for each targeted row. This will produce the deletion template shown in Table 4.9.

Table 4.9 Template for Deletion

STRUCTURE	STRUCTURE_ID	ACTION	REFERENCE AREA	FREQUENCY	INDICATOR	AGE GROUP	SEX	TIME PERIOD	OBSERVATION VALUE	DECIMALS	OBSERVATION STATUS	UNIT OF MEASURE	UNIT MULTIPLIER	NOTES
dataflow	ILO:DF_POLF_SEX_AGE(1.0)	D	_T	A	POLF	_T	M	2022	275,996	0		PS	3	
dataflow	ILO:DF_POLF_SEX_AGE(1.0)	D	_T	A	POLF	_T	F	2022	392,092	0		PS	3	
dataflow	ILO:DF_POLF_SEX_AGE(1.0)	D	_T	A	POLF	_T	T	2022	668,088	0		PS	3	

2) Selected the target rows consecutively in the template, then click the 'Edit row(s) from SDMX-CSV & Upload' ribbon button to initiate the deletion process in the DLM.



3) Upon successful deletion, the dataflow 'Persons outside the labour force by sex and age group' will reflect the changes as shown in Table 4.10.

Table 4.10 The Dataflow After Deletion

DATAFLOW	Reference area	Frequency	Indicator	Age groups	Sex	Time period	OBSERVATION VALUE	DECIMALS	Unit of measure	Unit multiplier
ILO:DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	55-64	Male	2022	26821	0	Persons	Units
ILO:DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	45-54	Total	2022	55034	0	Persons	Units
ILO:DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	35-44	Total	2022	60914	0	Persons	Units
ILO:DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	45-54	Male	2022	18631	0	Persons	Units
ILO:DF_POLF_SEX_AGE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	15-24	Female	2022	133770	0	Persons	Units

ILO:DF_POLF_SEX_A GE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	45-54	Fem ale	2022	36403	0	Persons	Units
ILO:DF_POLF_SEX_A GE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	65+	Fem ale	2022	78725	0	Persons	Units
ILO:DF_POLF_SEX_A GE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	25-34	Male	2022	33165	0	Persons	Units
ILO:DF_POLF_SEX_A GE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	15-24	Male	2022	130086	0	Persons	Units
ILO:DF_POLF_SEX_A GE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	55-64	Fem ale	2022	44010	0	Persons	Units
ILO:DF_POLF_SEX_A GE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	55-64	Total	2022	70831	0	Persons	Units
ILO:DF_POLF_SEX_A GE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	65+	Total	2022	124048	0	Persons	Units
ILO:DF_POLF_SEX_A GE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	35-44	Fem ale	2022	38944	0	Persons	Units
ILO:DF_POLF_SEX_A GE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	15-24	Total	2022	263856	0	Persons	Units
ILO:DF_POLF_SEX_A GE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	35-44	Male	2022	21970	0	Persons	Units
ILO:DF_POLF_SEX_A GE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	25-34	Fem ale	2022	60240	0	Persons	Units
ILO:DF_POLF_SEX_A GE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	25-34	Total	2022	93405	0	Persons	Units
ILO:DF_POLF_SEX_A GE(1.0)	Total	Annual	Persons outside the labour force (Inactivity)	65+	Male	2022	45323	0	Persons	Units

5. Troubleshooting and Support

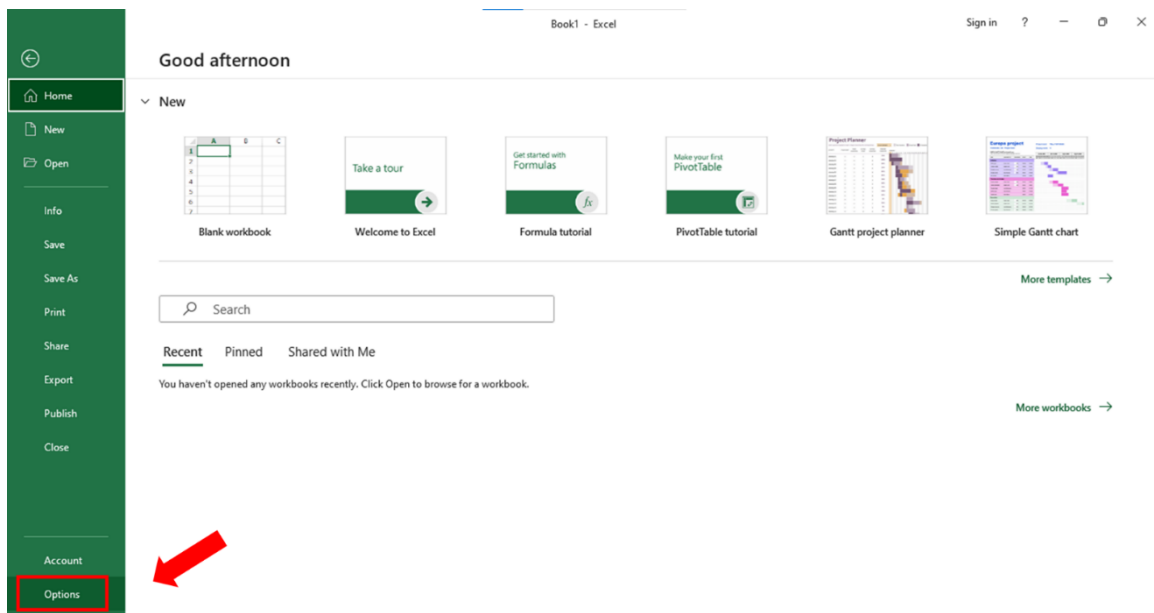
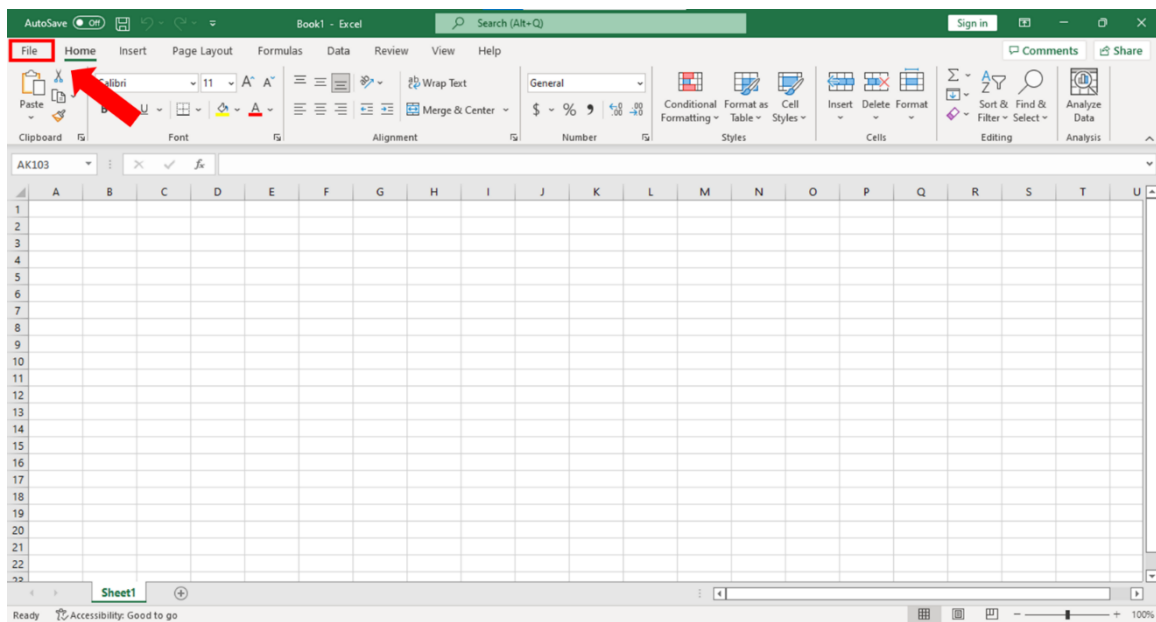
For any issues or inquiries, please contact support at ding@ilo.org.

Common Issues and Solutions:

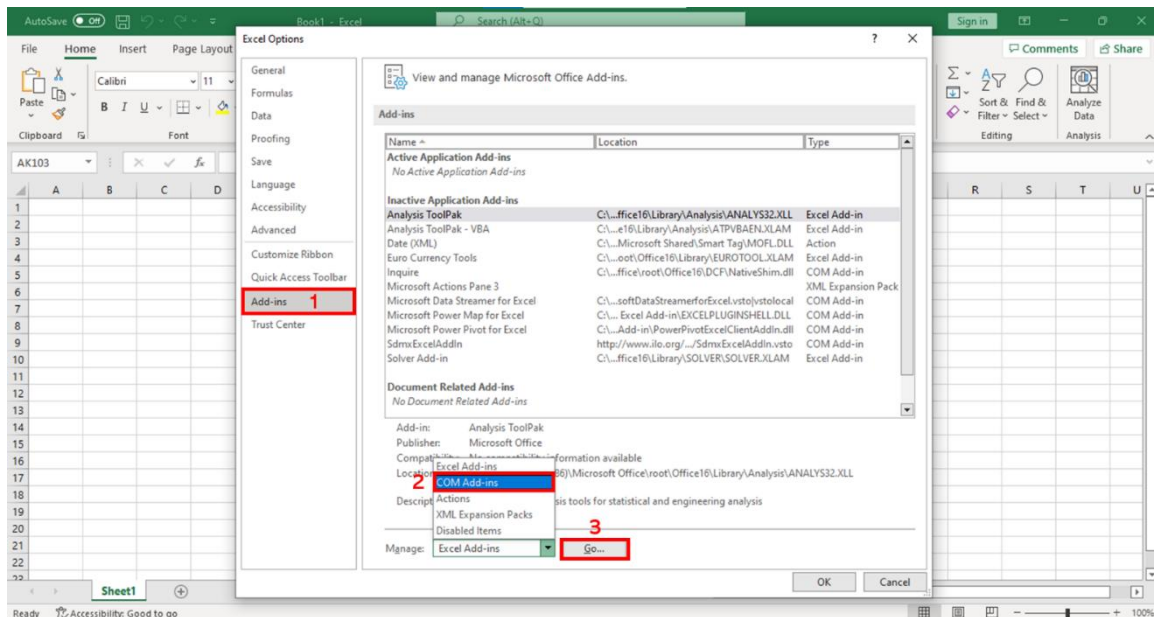
- *After installation, why can't I find the add-in in my Excel?*

Please follow these steps:

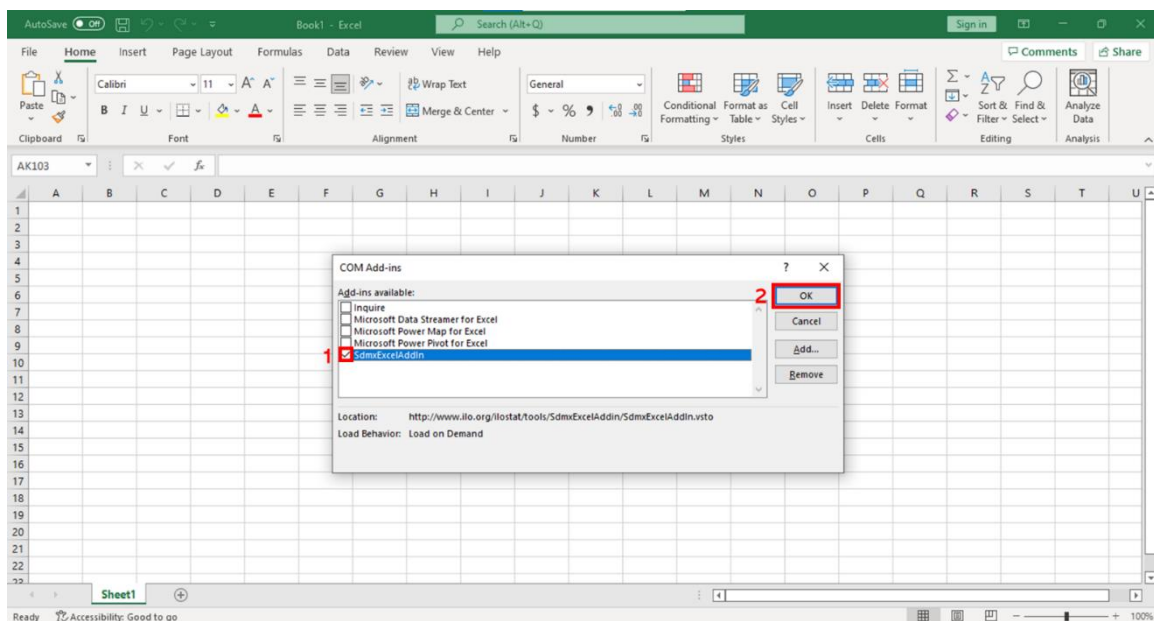
(1) **Open Excel Options:** Open Excel, click 'File', then select 'Options'.



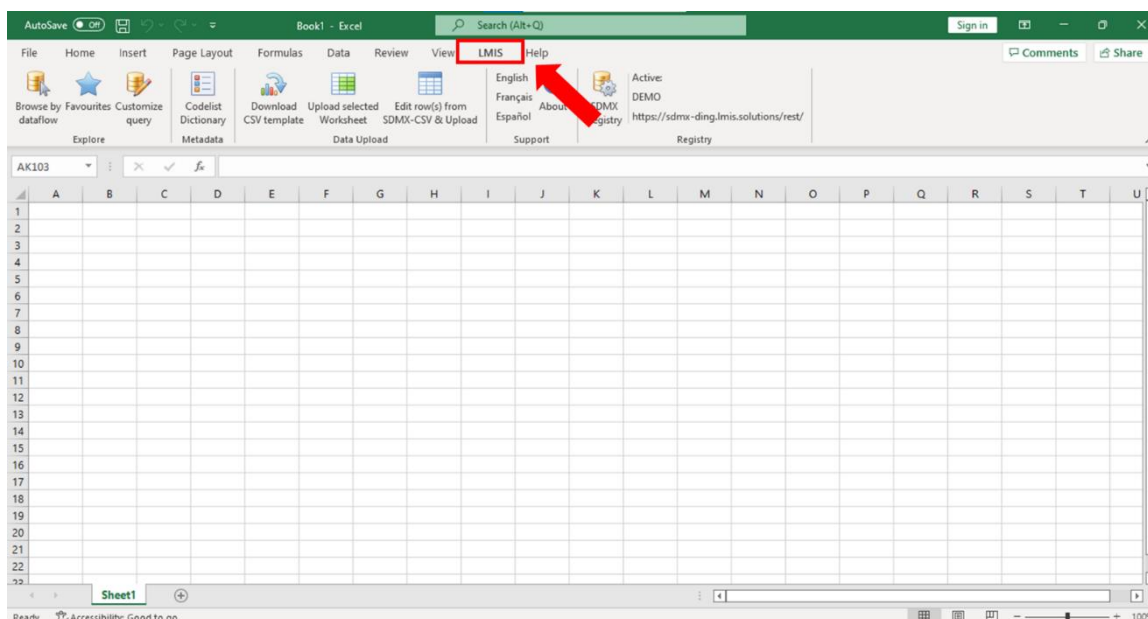
(2) **Access Add-ins:** In the Excel Options menu, select 'Add-ins' on the left, then at the bottom, ensure 'COM Add-ins' is selected in the 'Manage' dropdown and click 'Go...'.



(3) **Enable the Add-in:** In the COM Add-ins dialog, find 'SdmxExcelAddin', check its box to enable, and click 'OK'.



(4) Your add-in should now be visible on the ribbon.



If you accidentally click 'cancel' during the update process for the LMIS Excel Add-in, simply restart Excel and click on the 'LMIS' ribbon to activate it. The add-in should automatically prompt for an update if one is available. If no update prompt appears, manually install the latest version of the LMIS Excel Add-in by visiting [SDMX tools - ILOSTAT](https://sdmx-ding.lmis.solutions/rest/).