ARAB TRADE INTEGRATION MONITORING AND EVALUATION PLATFORM

Economic and Social Commission for Western Asia



UNITED NATIONS

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Outline

- Arab Trade Integration Monitoring and Evaluation Platform Objective
- ATIMEP Introduction
- ATIMEP Features
- Demonstration of the Platform/Toolkit
 - High Level Process
 - Charts
 - Tables
 - Maps
- Future Expansion of the Platform/Toolkit

ATIMEP Objective - ESCWA

ESCWA has been actively involved in the efforts surrounding the ACU by providing assistance in the discussion and negotiation processes.

The ultimate objective is to enable member states to monitor the progress achieved in the implementation of the GAFTA and moving to an ACU!

The second target is to enhance the capacity of member States to take national-level actions required to implement, monitor and evaluate the impact of the ACU Agreements.

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• The Arab Trade Integration Monitoring and Evaluation Platform (ATIMEP) aims to facilitate trade and investment in the Arab Region;

• It provides complete and detailed information on trade integration performance and market access requirements in the Arab countries in addition to data on trade and FDI (Foreign Direct Investment) flows;

• The platform represents a first attempt to monitor and evaluate Arab trade integration bilaterally, regionally, and globally using the most appropriate performance indexes and policy indicators;

• The platform will estimate the level of sophistication of Arab economies using the appropriate databases and techniques;

• The platform will allow all trade officials, private sectors, and experts to access a wide range of data and indicators related to trade integration between the Arab countries.

Pillars



Pillar: Trade Agreements

• Arab countries are engaged in many trade agreements with both regional and international parties;

Trade Agreements

• This pillar of the ATIMEP lists and describes the trade agreements signed by each of the 22 Arab countries as well as those under negotiation.

Trade Analysis and Indicators Under this pillar, the platform, through a number of indictors for monitoring and evaluating of trade policies performances, will **serve as trade surveillance and reporting** in the region. Activities under this pillar will include the following:

- Trade Flows;
- Trade Protection;
- Trade Indicators;
- Analysis of Trade Performance.

Logistics

• Traditionally, the efforts of many Arab countries to establish competitive economies and promote intra-regional trade have been delayed by **poor infrastructure**, which has resulted in **high production and transaction costs**.

• The main focus of this pillar is on **Trade Logistics**. The activities under this pillar would create a bank of knowledge and best practices with respect to **trade facilitation measures** that could be implemented by countries, regional institutions and other stakeholders. The platform will provides data and analysis on the following three major components of trade logistics:

- Transport Performance;
- Banking and Insurance Services; and
- Customs Clearances.

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Pillar: Macroeconomic & Sectoral Policies Coordination

• The overall objective of this pillar is to enhance the capacity of Arab policymakers to design and implement macroeconomic and sectoral policies that **promote regional** economic integration.

• It also aims at facilitating the exchange of experiences on how to design and implement such policies.

Macroeconomic & Sectoral Policies Coordination

The following areas of macroeconomic and sectoral policies will be given special attention in terms of analysis:

- Fiscal Policies;
- Monetary Policies; and
- Sectoral Policies.

Arab Countries

Country Name	Country Code	Flag
Algeria	DZA	C
Bahrain	BHR	
Comoros	COM	
Djibouti	DJI	*
Egypt	EGY	
Iraq	IRQ	الله اکبر
Jordan	JOR	
Kuwait	KWT	
Lebanon	LBN	
Libya	LBY	C*
Mauritania	MRT	*

Arab Countries, Cont.

Country Name	Country Code	Flag
Morocco	MAR	*
Oman	OMN	*
Palestine	PSE	
Qatar	QAT	
Saudi Arabia	SAU	遗纪之初39
Somalia	SOM	\star
Sudan	SDN	
Syria	SYR	* *
Tunisia	TUN	(
United Arab Emirates	ARE	
Yemen	YEM	

Partner	Code
ASEAN countries	ASEAN
China	CHINA
European Union countries	EU
GAFTA (Greater Arab Free Trade Area)	GAFTA
NAFTA (North American Free Trade Agreement)	NAFTA
Sub-Saharan Africa	SUB
Turkey	TURKEY
Rest of the World	WLD

Data dis-aggregation

• The user has the ability to view the data related to the 4 main pillars using the below detailed disaggregation levels:



Data dis-aggregation,



Trade Analysis and Indicators

- Trade Flows
 - Imports Total
 - Exports Total
 - Imports by origin
 - $\,\circ\,$ Exports by destination
- Trade Protection
 - Tariffs
 - Non-Tariff Barriers
- Trade Indicators
 - Product concentration index (PCI) of merchandise exports
 - Market concentration index of exports
 - Intraregional trade share
 - **o** Intraregional trade intensity
 - **o** Regional trade introversion index
 - **o** Revealed comparative advantage
 - Regional orientation
 - Export similarity
 - Trade complementarity
 - Trade specialization index
 - $\,\circ\,$ Trade sophistication index
 - Bilateral concentration index of merchandise exports
 - \circ Intra industry trade index
 - **o** Merchandise trade specialization correlation index
- **Analysis and Reports**
 - The Arab Economic Integration System of Indices (AEISI)
 - Profiles
 - **Trade Performance Profile**
 - Reports

Assessing Arab Economic Integration
 Transport and Connectivity to Global Value Chains

Data dis-aggregation, Cont.



Logistics

- Custom Clearances
 - Indicators
 - Customs
 - Logistics quality and competence
 - Tracking and tracing Score
 - Time lines Score
 - Analysis
- Transport
 - Indicators
 - Linear Shipment Connectivity Index
 - Overall LPI Score
 - Overall LPI Rank
 - Infrastructure Score
 - International shipments Score
 - Analysis
- Banking and Insurance
 - Indicators
 - Analysis

Data dis-aggregation, Cont.



Macroeconomic & Sectoral Policies Coordination

Fiscal Indicators

- VAT Rates
- Excess tax Rates
- Tax on Incomes
- Tax on Profits
- Indirect taxes as % of government
 - revenues
- Direct taxes as % of government revenues
- Tariffs on imports as % of indirect taxes
- Monetary Indicators
 - Exchange Rate
 - Lending Interest Rate
 - Capital account deficit or surplus (% of GDP)
 - Trade balance deficit or surplus (% of GDP)
- Sectoral Policies
 - Water Prices in USD
 - Energy Prices in USD
 - **D** Pump price for diesel fuel
 - Pump price for gasoline

The platform is split into two main areas:

1. Admin or Secure Area: this is a secure area for admin users only; it is also called data upload interface where only users with special credentials (user name and password) can access the interface and upload new data to the platform.

2. Public Area: this is the ATIMEP accessible to all users with all its available features that will be elaborated in the coming slides.

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Admin - Data Upload Interface

- User will be redirected to the ATIMEP login page;
- User will be able to navigate to the Upload data interface page after successful login with the admin credentials;
- User will select the desired indicator from the tree;
- User will be able to download the data format file as an excel file for the selected indicator;
- User will then fill the data into the downloaded file according to the format and then upload the data excel with respect to the selected indicator from the same interface;
- Once the upload is successful, the data is now available for the users through the ATIMEP public interface.



Public – ATIMEP Sections



Public – ATIMEP General Overview



Public – ATIMEP Data Imported



Home Page

- This is the landing page and the home page of the portal;
- Users will access the ATIMEP by entering its URL; once the users enter the URL, the screen will direct the user to the platform's home page;
- The home page is split into 7 sections described below:
- a. **Header**: it is a common section in all pages; it has the name of the portal, the ESCWA logo, a link to the home page when the user clicks on the name of the portal, a google language drop down.



b. Main Menu: The portal's main menu with the following menu items:

- Home:
- Charts:
- Tables:
- Maps:
- About:
 - » Show Intro
 - » About ATIMEP
 - » About the data
 - » Objectives
 - » Structure of the Platform

🕆 Home 🗹 Charts 🔻 🖽 Tables 💌 🗍 Maps 🚺 About 💌

c. A carousel control showing some images related to the objective of the portal. There is a timer between every image and the other, and the other can click on the arrows to move between the images.



d. Intro: this section shows a small description about the ATIMEP.

About the Arab Trade Integration Monitoring and Evaluation Platform (ATIMEP)

THE ARAB TRADE INTEGRATION MONITORING AND EVALUATION PLATFORM (ATIMEP) aims to facilitate trade and investment in the Arab region. It provides complete and detailed information on trade integration performance and market access requirements in the Arab countries. In addition to raw data on trade and FDI flows, the platform represents a first attempt to monitor and evaluate arab trade integration bilaterally, regionally, and globally using the most appropriate performance indexes and policy indicators. It will also contributes to the improvement of the quality, flow and use of trade data and information among Arab countries. The platform contains four main pillars for the 22 Arab countries.

e. Find a country: in this section, there is a dropdown list showing all the 22 Arab Countries for selection. This in addition to a map for the 22 Arab Countries, the user can select a country by clicking on its name on the map, some general information about the selected country will be displayed in a panel on the left, which can be expended/collapsed.

Select country		~
Algeria	Bahrain	Comoros
Djibouti	Egypt	Iraq
Jordan	Kuwait	Lebanon
Libya	Mauritania	Могоссо
Oman	Palestine	Qatar
Saudi Arabia	Somalia	Sudan
Syria	Tunisia	United Arab Emirates
Yemen		
		C Clear selection

e. Find a country: in this section, there is a dropdown list showing all the 22 Arab Countries for selection. This in addition to a map for the 22 Arab Countries, the user can select a country by clicking on its name on the map, some general information about the selected country will be displayed in a panel on the left, which can be expended/collapsed.



e. Find a country – World Map View: under the Find a country section, the user can select "World" and be able to see all the world map highlighting only the Arab Countries and he can click and select any country and see its related info in the left area.



f. Pillars: in this section we show the 4 main pillars, each one represented in a circle with a logo, when the user clicks on any pillar, a description about the pillar is shown with a link to open the page related to the pillar.



When the user clicks on any of the pillars, a sections opens showing the description of the pillar and a link to the page where the user can view the data related to the selected pillar.

Trade Analysis and Indicators pillar clicked:



Home Page - High Level Process



Home Page – Show Intro

A walk through all the home page sections to guide the user on how to use the platform



Charts

- User should be able to navigate to the charts page from the homepage by clicking Charts from the main menu or by following the process of selecting the country, pillar and the chart visualization type.
- Under the Charts main menu, there is 4 sub-menu items which are the 4 pillars in case the user wants to access the Charts page from the main menu, he can select directly the desired pillar from the main menu and click on it.





Charts, Cont.

- *Highcharts* is a SVG-based, multi-platform charting library that makes it easy to add interactive, mobile-optimized charts to any web page.
- The chart supports various chart types such as area, bar, line, scatter, pie and donut, etc.
- In the ATIMEP, we are using the following chart types:



Line Chart

- A Line chart shows data as continuous lines that pass through points defined by their items' values. It can be useful for showing a trend over time and comparing several sets of similar data.
- On the X-axis, we will have the Year and on the Y-axis, we will have indicator values for countries/region, and selected filters.
- The below picture shows a sample line chart with four data series showing all the custom clearance indicators for Lebanon for years 2010, 2012, 2014, and 2016.



Bar Chart

- A Bar chart displays data as horizontal or vertical bars (column chart) whose lengths vary according to their value. Bar chart is used to best to show a comparison between several sets of data.
- The below sample bar chart shows the Linear Shipment Connectivity Index for Lebanon.



Column Chart

- A column chart displays data as vertical bars whose lengths vary according to their value;
- The X-axis shows the year and the Y-axis shows the value of the data;
- The below sample column chart shows the Overall LPI Rank for Lebanon.



Area Chart

- Area chart type is suitable for displaying quantitative data as continuous lines that pass through points defined by their items' values. The portion of the graph beneath the lines is filled with a particular color for each series.
- The below sample chart shows the Intraregional trade share between Lebanon and EU



Stacked Chart

- A Stacked bar or column chart is a bar/column divided into subparts to represent cumulative effect, to display money distribution or production against time or prices;
- This chart type is available when drawing more than one data series;
- The below sample columns stacked chart shows Energy (Fuel and Gasoline) Prices in USD.



Pie Chart

- A pie chart displays the data as sectors from a circle and is useful for displaying data as parts of a whole. The Pie chart displays a single series of data in a two-dimensional circle.
- The below sample pie chart shows the VAT Rates Fiscal Indicator between 1997 and 2017.





ATIMEP Charts Page

• The user enters the desired filters for the country, trade partner, period (single or many years), commodity (single or many or all dis-aggregated by HS level and the indicator and then the chart gets displayed according to the selected criteria and chart type.



ATIMEP Charts Page Detailed Example

Detailed Sample:

- Country selected: Lebanon
- Pillar: Trade Analysis and Indicators
- Visualization type: Line Charts
- Filters:
 - Partner: GAFTA
 - Period: 2000 to 2017
 - HS Commodity: 01 Live animals
 - Indicator: Imports by origin

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ATIMEP Charts Page Detailed Example, Cont.

Restart 🖀 Home 🛃 Charts 👻	III Tables 🔻 🚯 About 👻
Country	Trade Analysis and Indicators
Select Country	Commodities (Harmonized System Codes)
Partner	Selected Commodities
Select Partner	Period
Period •	Selected years
Commodity	
 Indicator Selection Trade Analysis and Indicators 	
 Trade Flows Imports Total Exports Total Imports by origin Exports by destination Trade Protection 	
Trade Indicators	

ATIMEP Charts Page Detailed Example

Detailed Sample:

- Country selected: Lebanon
- Pillar: Trade Analysis and Indicators
- Visualization type: Column Chart
- Filters:
 - Partner: EU
 - Period: 2010 to 2017
 - HS Commodity: 11 Products of the Milling Industry
 - Indicator: Exports by destination

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ATIMEP Charts Page Detailed Example, Cont.

Restart 🖌 Home 🗹 Charts 🔻	III Tables 🕶 🧯 About 👻
Country	Trade Analysis and Indicators Trade Flows Exports by destination
Select Country Partner Select Partner	Commodities (Harmonized System Codes) Selected Commodities Period
Period •	Selected years
© Clear Filters © Apply Filters Indicator Selection Trade Analysis and Indicators	
Trade Flows Imports Total Exports Total Imports by origin Exports by destination Trade Protection 	
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Tables

- User can navigate to the Tables page by clicking on the Tables menu item and then selecting the desired pillar.
- User can also navigate to the Tables page from the Home Page following the country selection, then pillar selection and then Go to Tables Page link under the selected pillar.





Tables, Cont.

- The Kendo UI grid is a powerful widget that allows the user to visualize and edit data via its table representation.
- It provides a variety of options about how to present and perform operations over the underlying data, such as paging, sorting, filtering, grouping, editing, etc.
- When the user enters the **Tables** page, he gets the same interface as the Charts interface with the same filters and an area to display the searched data in table layout.



ATIMEP Tables Page

• In the below example, we will see the user searching for the data related to the "Tracking and tracing Score" indicator under the Custom Clearances data for Lebanon.



ATIMEP Tables Page Example

- In the below example, the user wants to search for all Transport related indicators for All Arab Countries;
- The user selects "All Arab Countries" from the Country filter;
- The user then navigates to Logistics → Transport and clicks on it in order to retrieve all the children indicators under the Transport node;
- Upon clicking, the data for All Arab Countries are retrieved and displayed in the table;
- The user can:
 - Sort the data (ascending/descending) by clicking on the columns' headings;
 - Increase/decrease the width of the columns;
 - Filter the data in the table by clicking on the column and enter the desired filter;
 - Export the data to PDF;
 - Export the data to Excel;
 - Refresh the data in the table;
 - Use the Paging control to change the page size (i.e. number of records displayed per page), to go to next page, previous page, first page, and last page;
 - Select the cells of the table and copy them and paste them in excel;
 - Using the year slider, the user can change the from/to years and the table gets updated automatically to reflect the range of years set by the user.

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ATIMEP Tables Page Example, Cont.

Country	A Logistics
Select Country	 Commodities (Harmonized System Codes)
Select Partner	Select Commodities Period
Period	Selected years
Commodity	•
O Clear Filters C Apply Filt	ters
> Indicator Selection	<
Logistics	
Custom ClearancesTransportBanking and Insurance	

ATIMEP Tables Page Example, Cont.

Transpose Table data from rows to columns

- For some indicators, like Import Totals and Export Totals (under Trade Flows), every data row is repeated for all the selected HS Products and years;
- If the user selects "Lebanon" and commodity "01 Live animals" between 2001 and 2017, the output is a table of 17 rows, each for a year.
- In this case, the user can simplify the table view by clicking on Transpose, this service will flip table rows to columns; i.e. every year will be shown in a column and the 17 rows become only 1 row!



ATIMEP Tables Page Example Cont.

Country	Trade Analysis and Indicators
Select Country Partner Select Partner Period	Commodities (Harmonized System Codes) Select Commodities Period
Commodity •	Selected years
O Clear Filters	
 > Indicator Selection Trade Analysis and Indicators Trade Flows Trade Protection Trade Indicators Analysis and Reports 	

Maps

- User can navigate to the Maps page by clicking on the **Maps** menu item;
- User can view indicators values (single value) of all Arab Countries upon hovering on any Arab Country;
- A classification of all indicators is also available where every value is represented by a color that starts from the minimum value to the maximum value of all displayed values.



Maps, Cont.

- In the Maps view, the country dropdown shows "All Arab Countries";
- The user can view only one value of the selected indicator, so the user has to specify one year (i.e. 2016);
- In the Future release, we can add aggregate functions to be able to view more data on the world map.



Maps Example, Cont.

- In the Maps view, under the Trade Analysis & Indicators pillar, the user has to select the country which is by default "All Arab Countries";
- The user has to select the Year, the Partner (single) where applicable, and the HS Commodity (single) where applicable.



Maps, Cont.



Trade Agreements

- Under this pillar, the user can see the Trade Agreements between the Arab Countries and other Trade Partners;
- These agreements are PDF documents that can be viewed from within the platform;
- The user enters the Arab Country and the Trade Partner and clicks on the Agreement in order to view it;
- In the next slide we will show the Trade Agreement document called "In force regional Agreements" between Lebanon and the EU.



Trade Agreements Cont.

Restart Home 🗹 Charts 👻	Tables
Country	Trade Agreements
Select Country	
Partner	
Select Partner	
O Clear Filters	
> Data Level Selection	
Trade Agreements	
In force multilateral Agreements	<
 Ongoing multilateral Agreements 	
In force regional Agreements	
 Ongoing regional trade agreements' Middle East 	
Initiative	
 In force bilateral Trade 	
Agreements	
Agreements	



A. Dashboards

Dashboards often provide at-a-glance views of KPIs (<u>key performance indicators</u>) relevant to a particular objective or business process. In the other, "dashboard" has another name for "progress report" or "report."

The "dashboard" will be displayed on the ATIMEP home page and is linked to the database that allows the report (or widgets or graphs) to be constantly updated.

Dashboards can contain many components or widgets like bar charts, pie charts, trends, area charts, tables, maps, live numbers, notification panel, news section, etc...



B. Data Analytics

Data is unprocessed facts and figures without any added interpretation or analysis. "The price of crude oil is \$80 per barrel."

Information is data that has been interpreted so that it has meaning for the user; (Possible methods of converting data into information: Plot charts and identify trends, Find average or typical values, Present complex data as a chart or graph, Monitor changes over time and forecast future values, etc.)

<u>Knowledge</u> is a combination of information, experience and insight that may benefit the individual or the organization. "When crude oil prices go up by \$10 per barrel, it's likely that petrol prices will rise by 2p per liter" is knowledge.

Using data without knowing anything about it, other than the values themselves, is useless \rightarrow need for metadata (information about the data)



C. Analytics in **ATIMEP**

Data analytics (DA) is the process of examining **data** sets in order to draw conclusions about the information they contain.

ATIMEP includes a wide array of country indicators, correlation indicators, sophistication indices and benchmark data. A wealthy set of analytical information can be extracted from such indicators. Such information can "speak" and inform decision makers much deeper than what the numbers provide. They can "speak" about the past, inform the present and direct the future.

A further analytical dimension of **ATIMEP** is the aggregation of country and regional metadata into the database to permit very sophisticated analytics that could have not been possible otherwise. Trade "intelligence" will become at the tip of the finger of economists, policy makers, researchers and scholars.

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D. Analytics - Advanced

Let us assume we are trying to find a piece of information X: "why are agricultural exports in Lebanon declining?"

To arrive at X, we need basic parameters or variables identified; what are those variables or parameters?



The computerized analysis of all such parameters would provide for a smart answer to our question.

E. Analytics - Advanced

Purpose: be able to list the top 10 commodities by percentage of Total Exports in 2017!

Parameters
Country
Year
Indicator
A = Total Exports
B = Total Exports By Commodity
% = 100*A/B

Possible Conclusion: Meat and meat products represent nearly 12% of **Exports**, while ornamental plants and dairy products and eggs each account for 10%. **Exports** of dairy and eggs, animals and meat, and oils and fats all rose sharply in 2017!

Analytics - Summary

How can you make use of Analytics?

What combinations of indicators and metadata would help you in your work?

What analytical data do you want ATIMEP to provide you?

THANK YOU

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