

Project-D: Import, matching, visualizing

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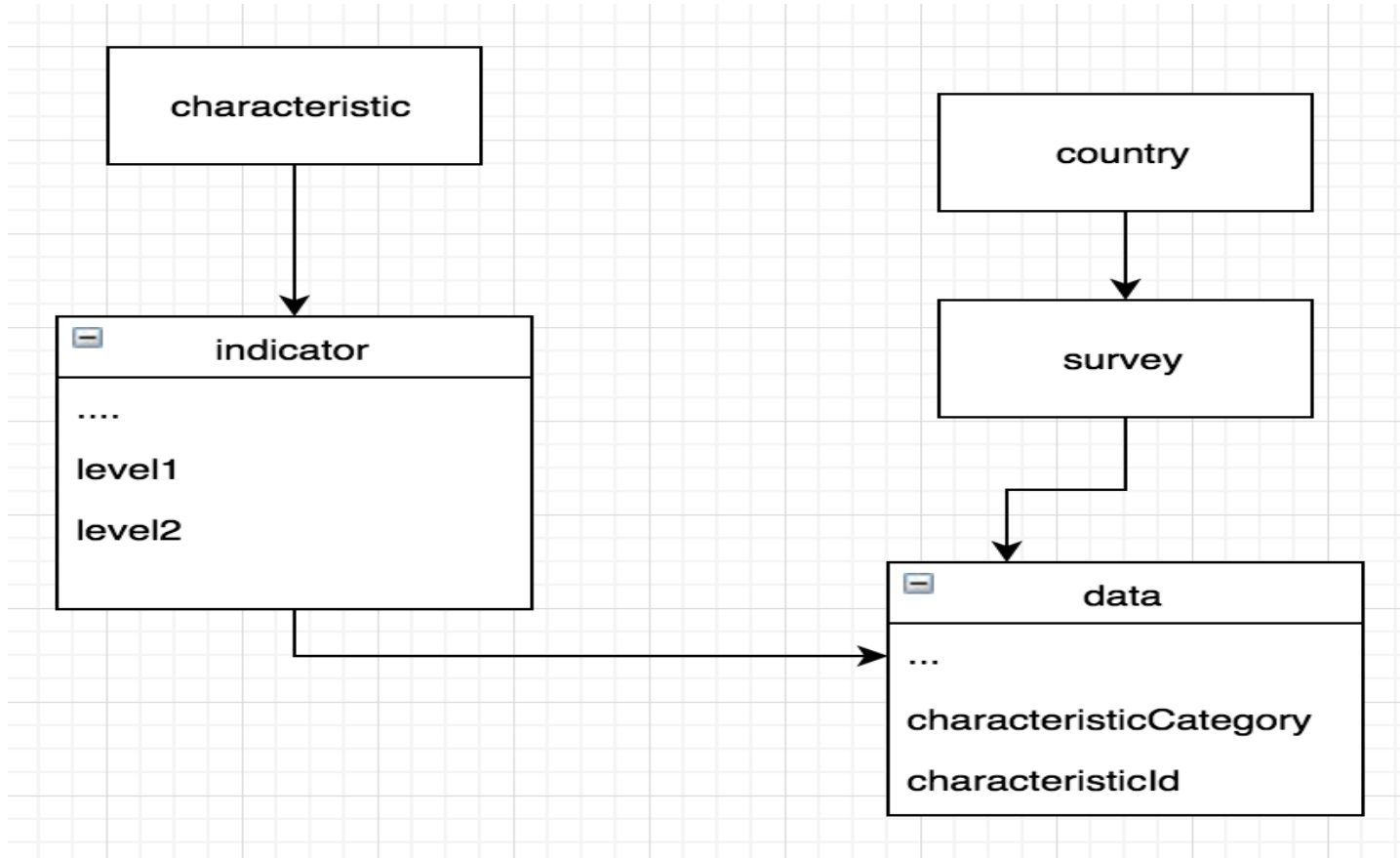
Torkil Ravem

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Tools

- React
- Webpack
- sass
- Foundation Zurb
- Redux
- Some available react components : react-desktop, react-multiselect, react-multistep-component
- Github : <https://github.com/nooralahzadeh/INF5750-D-ReactApp>

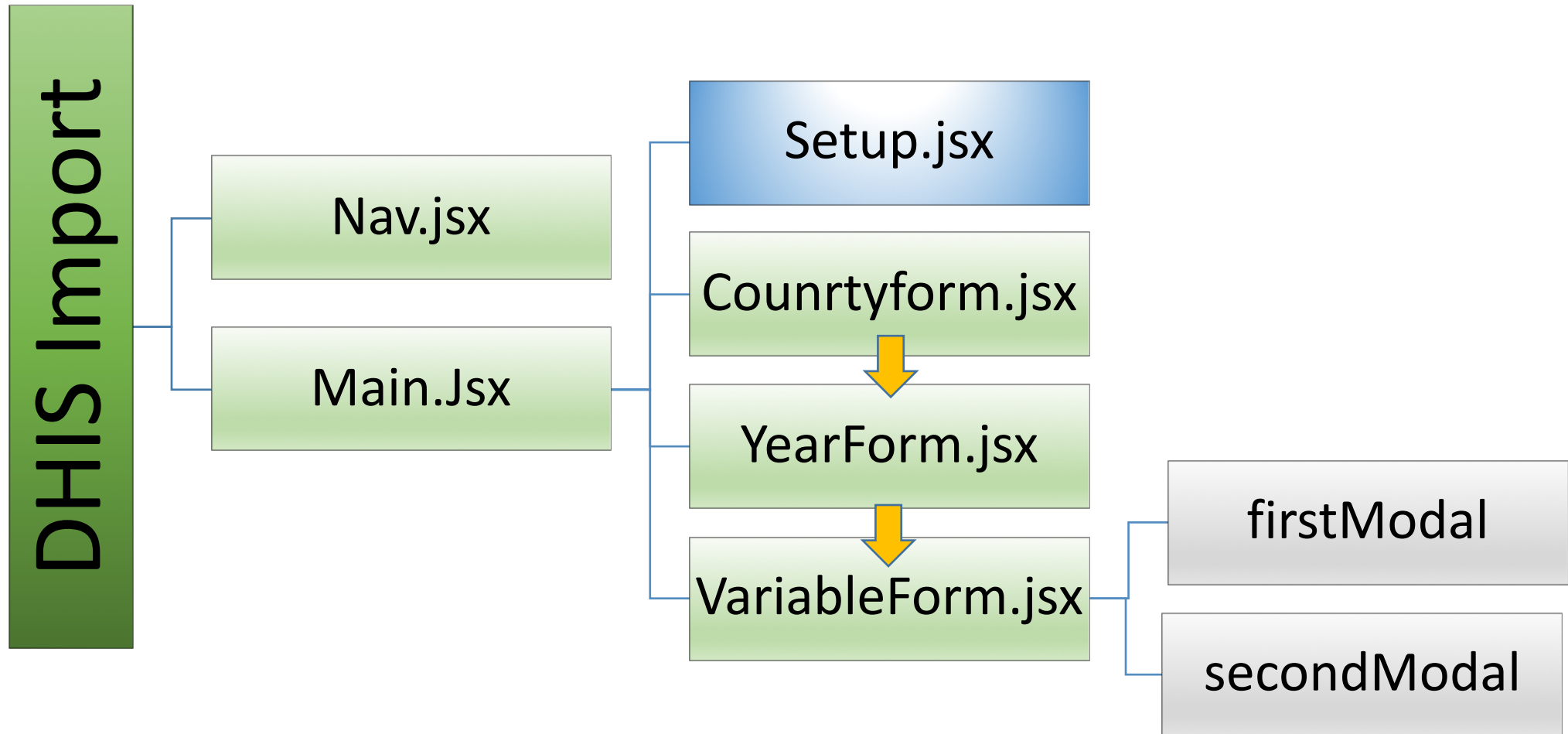
dhs: Data model



Mapping from dhs To DHIS

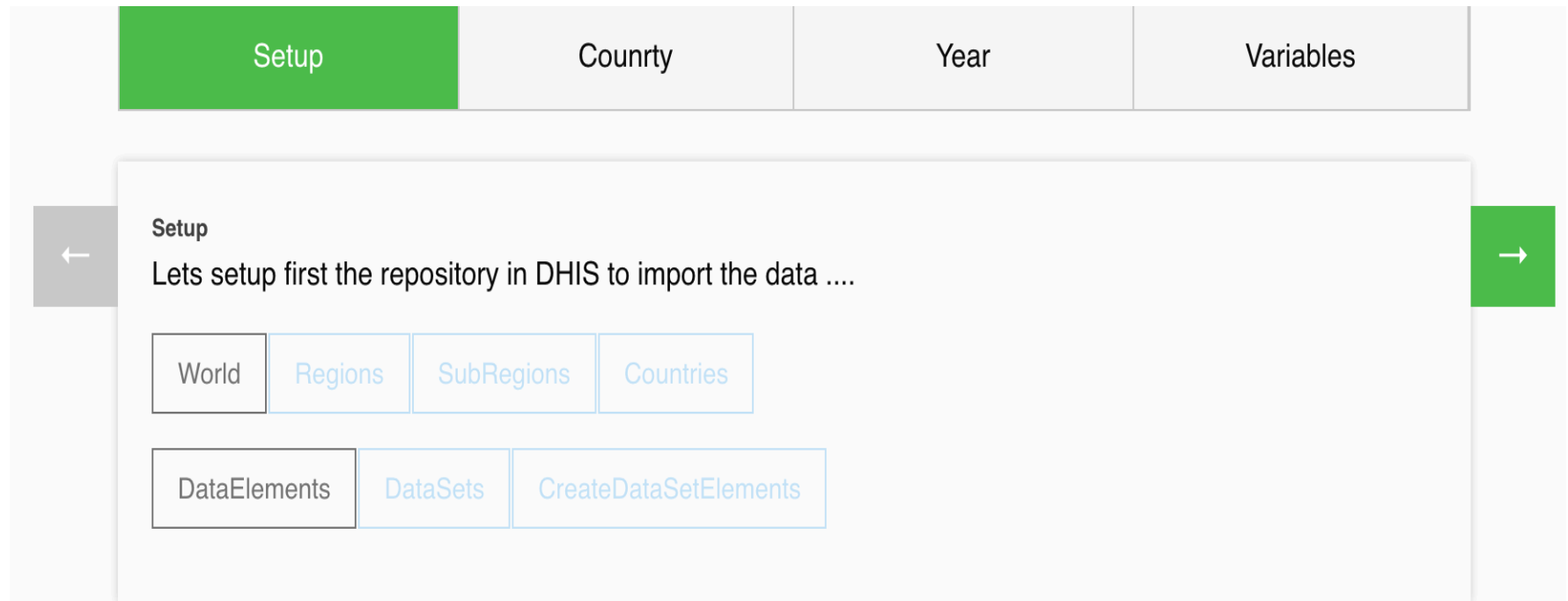
- **Indicator** : dataSets
- **Characteristics and CharacteristicCategory** : dataElements
- **Data** : dataValues
- **Country** (region, sub-region): OrgUnits and Hierarchy
- **Survey** : year selection
- **Level 1 and Level 2 in indicator**: variable selection

App architecture



Setup

- Start from empty db and Create db in DHIS2
- World, Region, Subregion, Country
- DataElement, DataSet, DataSetElement



The screenshot displays the DHIS2 Setup interface. At the top, there is a horizontal navigation bar with four tabs: 'Setup' (highlighted in green), 'Country', 'Year', and 'Variables'. Below this bar, a central panel contains the following elements:

- A title 'Setup' and a subtitle 'Lets setup first the repository in DHIS to import the data'.
- A row of four buttons: 'World' (highlighted), 'Regions', 'SubRegions', and 'Countries'.
- A second row of three buttons: 'DataElements' (highlighted), 'DataSets', and 'CreateDataSetElements'.

Navigation arrows are visible on the left and right sides of the central panel, and a green arrow button is located on the far right.

Controls and messaging

The screenshot displays the 'DHIS importer' application interface. At the top, a navigation bar includes tabs for 'Setup', 'Country' (which is highlighted in green), 'Year', and 'Variables'. Below the navigation bar, a central panel contains a 'Select Country' dropdown menu with 'Afghanistan' selected. To the left of this panel is a green arrow pointing left, and to the right is a green arrow pointing right. Below the dropdown, the text 'You selected: Afghanistan' is displayed, followed by a red warning message: 'Selected country doesn't have year!'. A black arrow points from the warning message to the 'Country' tab. Below the warning message, there is a list of categories with checkboxes: 'Disposal of children's stools', 'Child Nutrition', 'Maternal health', and 'Malaria'. At the bottom right of the interface is a green 'Import' button. A black arrow points from the bottom left towards the 'Import' button, with the red text 'There is no data to import!' below it. On the left side of the image, there is a separate 'Setup' panel with a green header and a left-pointing arrow. It contains the text 'Setup' and 'Lets setup first the repository'. Below this are three tabs: 'World', 'Regions', and 'Subregions'. Under 'World' are 'DataElements' and 'DataSet'. A green circular icon with a white cross is located at the bottom of this panel, with a black arrow pointing to it from the left.

Setup

← Setup
Lets setup first the repository

World Regions Subregions

DataElements DataSet

Disposal of children's stools

Child Nutrition

Maternal health

Malaria

There is no data to import!

DHIS importer

Setup Country Year Variables

← Select Country →

Afghanistan

You selected: Afghanistan

Selected country doesn't have year!

Import

Control and messaging

→ ↻ ⓘ api.dhsprogram.com/rest/dhs/data?countryIds=AL&surveyYear=2002&indicatorIds=CH_DSTL_C_TLT,CH_DSTL_C_RTL,CH_DSTL_C_BUR,CH...

Server Error

404 - File or directory not found.

The resource you are looking for might have been removed, had its name changed, or is temporarily unavailable.

Child Nutrition



Maternal health



Malaria



Not Found: No response from dhs! Please select proper varibale

Import

Control and Messaging

Child Health

☒ Child's size and weight

☐ Vaccinations by age

☐ Vaccinations by sex

☐ Vaccinations by region

☐ Prevalence and incidence of malnutrition

☐ Prevalence of anemia

☐ Treatment of fever

☐ Prevalence of diarrhea

☐ Treatment of diarrhea

☐ Feeding practices during diarrhea

☐ Knowledge of ORS packets or pre-packaged liquids

☐ Disposal of children's stools

Selected country: Armenia

Selected years: 2010

- Successfully Imported dataVaules: 0
- Successfully Updated dataVaules: 66
- Ignored dataVaules: 0

OK

Option:
☐ D
☐ D
☒ D

Data in DHIS after import

Trinidad and Tobago

Central America

El Salvador

Guatemala

Honduras

Mexico

Nicaragua

South America

North Africa/West Asia/Europe

Eastern Europe

Moldova

Romania

Ukraine

North Africa

Egypt

Morocco

Tunisia

Southern Europe

Albania

West Asia

Armenia

Azerbaijan

Georgia

Jordan

Turkey

Yemen

Data Entry ?

Armenia - January 2010 - No Data

Organisation UnitArmenia

Data SetSize of child at birth: Very small

PeriodJanuary 2010Prev yearNext year

Size of child at birth: Very small

Filter in section	Value
Five years preceding the survey_Birth order_1	1.9
Five years preceding the survey_Birth order_2-3	1.4
Five years preceding the survey_Birth order_4-5	2
Five years preceding the survey_Birth order_6+	
Five years preceding the survey_Education (2 groups)_No education or primary	10.5
Five years preceding the survey_Education (2 groups)_Secondary or higher	9
Five years preceding the survey_Education_Higher	9.2
Five years preceding the survey_Education_Primary	10.5
Five years preceding the survey_Education_Secondary	8.6
Five years preceding the survey_Mother's age at birth_20-34	1.7

Future work

- Enhancement in data fetching from dhs web site
- Enhancement in mapping (dimensions)
- OrgUnit hierarchy creation in dhis (updating)
- Uploading the app to dhis

Appendix

Country

Response (12 records)		
#	fieldname	fieldDescription
1	DHS_countryCode	Two-letter DHS specific country code.
2	CountryName	DHS specific country name.
3	FIPS_countryCode	Federal Information Processing Standards(FIPS) specific country code.
4	ISO2_countryCode	International Organization of Standards(ISO) specific two-letter country code.
5	ISO3_countryCode	International Organization of Standards(ISO) specific three-letter country code.
6	UNAIDS_countryCode	UNAIDS specific three-letter country code.
7	UNICEF_countryCode	UNICEF specific three-letter country code.
8	UNSTAT_countryCode	UNSTAT specific three-letter country code.
9	WHO_countryCode	WHO specific two-letter country code.
10	RegionName	Name of the geographic region for the specified country.
11	SubRegionName	Name of the geographic sub-region for the specified region.
12	RegionOrder	A numeric value that can be used for ordering regions/sub-regions in a list.

Indicator

#	fieldname	fieldDescription
1	IndicatorId	Indicator ID for the specified indicator. Each indicator will always have a unique ID and can be used across surveys.
2	IndicatorOldId	Provides the old numeric ID for the indicator used in API version 1. Available for legacy usage/support only.
3	Label	Indicator label describing the specified indicator.
4	Definition	Provides a definition of the specified indicator. The definition can be used to provide detailed information to your users.
5	Level1	Each indicator is grouped in a three level hierarchy. This column provides the top level grouping and is the major subject area.
6	Level2	Each indicator is grouped in a three level hierarchy. This column provides the second level grouping and is the topic area within the major subject.
7	Level3	Each indicator is grouped in a three level hierarchy. This column provides the third level grouping and is the universe for the topic (typically Women, Men, Both Sexes, Children, Households, Population).
8	IndicatorOrder	Indicator Order is used for ordering indicators within the levels.
9	NumberScale	Number Scale provides the precision (number of decimal places) that should be presented for the indicator.
10	Denominator	Provides a definition of the denominator of the specified indicator. The denominator definition can be used to provide detailed information to your users.
11	MeasurementType	<p>Specifies the type of measurement.</p> <ul style="list-style-type: none"> • Mean • Median • Number • Percent • Rate
12	IndicatorType	<p>Type of indicator:</p> <p>I = Indicator</p> <p>D = Weighted denominator</p> <p>U = Unweighted denominator</p> <p>T = Distribution total (100%)</p> <p>S = Special answers (don't know/missing)</p> <p>E = Sampling errors</p> <p>C = Confidence interval</p>
13	ShortName	Provides a short name for the specified indicator that can be used when displaying the indicator within the hierarchy level if the indicator label is too long. If space is available we recommend using the indicator label.
14	TagIds	A list of tag IDs for selecting indicators according to tagged groups. See the tags list for the descriptions associated with each ID.
15	IsQuickStat	This column will display a '1' for DHS Quickstat indicators that are used or viewed most often. The information can be utilized to serve the most common data to users quickly.
16	QuickStatOrder	This column will provide an integer to help provide a special sort order for all the Quickstat Indicators. These are indicators that display a '1' in the IsQuickStat column and are used or viewed most often. The information can be utilized to serve the most common data to users quickly.
17	ByLabels	Formerly the set of labels for different universes within the indicator, e.g. All women, Currently Married Women. No longer used.
18	SDRID	This column contains the Spatial Data Repository Indicator ID.

Level1, Level2

1140	CH_SZWT_C_VSM	79284000	Size of child at birth: Very small	Percentage of live births in the five (or three) years preceding the survey where the size of the child at birth was very small	Child Health	Child's size and weight at birth
1141	CH_SZWT_C_SML	79284001	Size of child at birth: Smaller than average	Percentage of live births in the five (or three) years preceding the survey where the size of the child at birth was smaller than average	Child Health	Child's size and weight at birth
1142	CH_SZWT_C_AVG	79284002	Size of child at birth: Average or larger	Percentage of live births in the five (or three) years preceding the survey where the size of the child at birth was average or larger	Child Health	Child's size and weight at birth
1143	CH_SZWT_C_DKM	79284009	Size of child at birth: don't know or missing	Percentage of live births in the five (or three) years preceding the survey with 'don't know' or missing information on size of child at birth	Child Health	Child's size and weight at birth
1144	CH_SZWT_C_TOT	79149000	Size of child at birth: Total	Percentage of live births in the five (or three) years preceding the survey: Total	Child Health	Child's size and weight at birth
1145	CH_SZWT_C_REP		Birth weight of child reported	Percentage of live births in the five (or three) years preceding the survey with a birth weight reported numerically	Child Health	Child's size and weight at birth
1146	CH_SZWT_C_NUM	79149001	Number of live births in the last five (or three) years	Number of live births in the five (or three) years preceding the survey	Child Health	Child's size and weight at birth
1147	CH_SZWT_C_UNW		Number of live births in the last five (or three) years (unweighted)	Number of live births in the five (or three) years preceding the survey (unweighted)	Child Health	Child's size and weight at birth

Characteristic (Category and Id)

Indicator	Value	Precision	DHS_CountryCode	CountryName	SurveyYear	SurveyId	IndicatorId	IndicatorOrder	CharacteristicId	CharacteristicOrder	CharacteristicCategory	CharacteristicLabel
Specific fertility rate: 15-19	33	0	AZ	Azerbaijan	2006	AZ2006DHS	FE_FRTR_W_A15	11763010	1000	0	Total	Total
Specific fertility rate: 15-19	20	0	AZ	Azerbaijan	2006	AZ2006DHS	FE_FRTR_W_A15	11763010	3001	30001	Residence	Urban
Specific fertility rate: 15-19	49	0	AZ	Azerbaijan	2006	AZ2006DHS	FE_FRTR_W_A15	11763010	3002	30002	Residence	Rural
Specific fertility rate: 15-19	31	0	AZ	Azerbaijan	2006	AZ2006DHS	FE_FRTR_W_A15	11763010	4000	31000	Education	No education
Specific fertility rate: 15-19	77	0	AZ	Azerbaijan	2006	AZ2006DHS	FE_FRTR_W_A15	11763010	4001	31001	Education	Primary
Specific fertility rate: 15-19	36	0	AZ	Azerbaijan	2006	AZ2006DHS	FE_FRTR_W_A15	11763010	4002	31002	Education	Secondary
Specific fertility rate: 15-19	3	0	AZ	Azerbaijan	2006	AZ2006DHS	FE_FRTR_W_A15	11763010	4003	31003	Education	Higher
Specific fertility rate: 15-19	63	0	AZ	Azerbaijan	2006	AZ2006DHS	FE_FRTR_W_A15	11763010	5001	32001	Education (2 groups)	No education or primary
Specific fertility rate: 15-19	32	0	AZ	Azerbaijan	2006	AZ2006DHS	FE_FRTR_W_A15	11763010	5002	32002	Education (2 groups)	Secondary or higher
Specific fertility rate: 15-19	35	0	AZ	Azerbaijan	2006	AZ2006DHS	FE_FRTR_W_A15	11763010	6001	40001	Wealth quintile	Lowest
Specific fertility rate: 15-19	58	0	AZ	Azerbaijan	2006	AZ2006DHS	FE_FRTR_W_A15	11763010	6002	40002	Wealth quintile	Second
Specific fertility rate: 15-19	36	0	AZ	Azerbaijan	2006	AZ2006DHS	FE_FRTR_W_A15	11763010	6003	40003	Wealth quintile	Middle
Specific fertility rate: 15-19	28	0	AZ	Azerbaijan	2006	AZ2006DHS	FE_FRTR_W_A15	11763010	6004	40004	Wealth quintile	Fourth
Specific fertility rate: 15-19	9	0	AZ	Azerbaijan	2006	AZ2006DHS	FE_FRTR_W_A15	11763010	6005	40005	Wealth quintile	Highest
Specific fertility rate: 15-19	14	0	AZ	Azerbaijan	2006	AZ2006DHS	FE_FRTR_W_A15	11763010	501001	1501001	Region	Baku
Specific fertility rate: 15-19	31	0	AZ	Azerbaijan	2006	AZ2006DHS	FE_FRTR_W_A15	11763010	501002	1501002	Region	Absheron
Specific fertility rate: 15-19	54	0	AZ	Azerbaijan	2006	AZ2006DHS	FE_FRTR_W_A15	11763010	501003	1501003	Region	Ganja Gazakh
Specific fertility rate: 15-19	23	0	AZ	Azerbaijan	2006	AZ2006DHS	FE_FRTR_W_A15	11763010	501004	1501004	Region	Shaki Zaqatala
Specific fertility rate: 15-19	45	0	AZ	Azerbaijan	2006	AZ2006DHS	FE_FRTR_W_A15	11763010	501005	1501005	Region	Lankaran
Specific fertility rate: 15-19	19	0	AZ	Azerbaijan	2006	AZ2006DHS	FE_FRTR_W_A15	11763010	501006	1501006	Region	Guba Khachmaz
Specific fertility rate: 15-19	45	0	AZ	Azerbaijan	2006	AZ2006DHS	FE_FRTR_W_A15	11763010	501007	1501007	Region	Aran
Specific fertility rate: 15-19	40	0	AZ	Azerbaijan	2006	AZ2006DHS	FE_FRTR_W_A15	11763010	501008	1501008	Region	Yukhari Karabakh