





# World Bank indicators

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# worldbank 사이트 이해하기

<https://www.worldbank.org/en/home>

The screenshot displays the World Bank homepage. At the top, the navigation bar includes 'THE WORLD BANK', 'WHO WE ARE', 'WHAT WE DO', 'WHERE WE WORK', 'UNDERSTANDING POVERTY', 'WORK WITH US', 'WE LIVE', and a search icon. The main banner features a large image of children and the headline 'The Challenges of Food Insecurity: Stories of Resilience'. Below the headline, a sub-headline reads: 'As many as 670 million people will still face hunger by 2030. Read on to learn more about the challenges and the solutions needed to address these challenges and help transform global food systems.' Two buttons are present: 'READ MORE >' and 'TACKLING FOOD INSECURITY >'. Below the banner, the 'Data & Research' section is visible, with a black arrow pointing to the 'By Indicator' link. The 'Development Topics' section lists various areas: Climate Change, Fragility, Conflict, and Violence, Debt, Health, Food Security, Agriculture and Food, Poverty, Education, Energy, and a link to 'All Development Topics >'. A search bar at the bottom of the 'Data & Research' section contains the text 'Search research and publications' and a search icon.

THE WORLD BANK  
IBRD · IDA

WHO WE ARE WHAT WE DO WHERE WE WORK UNDERSTANDING POVERTY WORK WITH US WE LIVE

NEWS | ENGLISH

The Challenges of Food Insecurity: Stories of Resilience

As many as 670 million people will still face hunger by 2030. Read on to learn more about the challenges and the solutions needed to address these challenges and help transform global food systems.

READ MORE > TACKLING FOOD INSECURITY >

THE WORLD BANK  
IBRD · IDA

WHO WE ARE WHAT WE DO WHERE WE WORK UNDERSTANDING POVERTY WORK WITH US WE LIVE

NEWS | ENGLISH

**Data & Research**

- [Open Data](#)
- [By Country](#)
- [By Indicator](#)
- [Research & Publications](#)

**Development Topics**

- [Climate Change](#)
- [Fragility, Conflict, and Violence](#)
- [Debt](#)
- [Health](#)
- [Food Security](#)
- [Agriculture and Food](#)
- [Poverty](#)
- [Education](#)
- [Energy](#)
- [All Development Topics >](#)

We face big challenges to help the world's poorest people and ensure that everyone sees benefits from economic growth. Data and research help us understand these challenges.

Search research and publications

# worldbank Indicators 이해하기

THE WORLD BANK | Data

This page in: English Español Français العربية 中文

Search data e.g. GDP, population, Indonesia

Home DataBank Microdata Data Catalog

## Indicators

Featured indicators All indicators Quick search

### Agriculture & Rural Development

Agricultural irrigated land (% of total agricultural land)	Agricultural land (% of land area)
Agricultural machinery, tractors per 100 sq. km of arable land	Agriculture, forestry, and fishing, value added (% of GDP)
Arable land (% of land area)	Arable land (hectares per person)
Cereal yield (kg per hectare)	Crop production index (2014-2016 = 100)
Employment in agriculture, female (% of female employment) (modeled ILO estimate)	Employment in agriculture, male (% of male employment) (modeled ILO estimate)
Fertilizer consumption (kilograms per hectare of arable land)	Food production index (2014-2016 = 100)
Forest area (% of land area)	Forest area (sq. km)
Land area (sq. km)	Land under cereal production (hectares)
Livestock production index (2014-2016 = 100)	Permanent cropland (% of land area)
Rural population	Rural population (% of total population)
Surface area (sq. km)	

### Aid Effectiveness

Grants, excluding technical cooperation (BoP, current US\$)	Incidence of tuberculosis (per 100,000 people)
Income share held by lowest 20%	Maternal mortality ratio (modeled estimate, per 100,000 live births)
Mortality rate, under-5 (per 1,000 live births)	Net ODA received (% of GNI)
Net ODA received (% of central government expense)	Net ODA received (% of gross capital formation)
Net ODA received (% of imports of goods, services and primary income)	Net ODA received per capita (current US\$)
Net migration	Net official development assistance received (current US\$)

### Navigation Menu

- Agriculture & Rural Development
- Aid Effectiveness
- Climate Change
- Economy & Growth
- Education
- Energy & Mining
- Environment
- External Debt
- Financial Sector
- Gender
- Health
- Infrastructure
- Poverty
- Private Sector
- Public Sector
- Science & Technology
- Social Development
- Social Protection & Labor
- Trade
- Urban Development

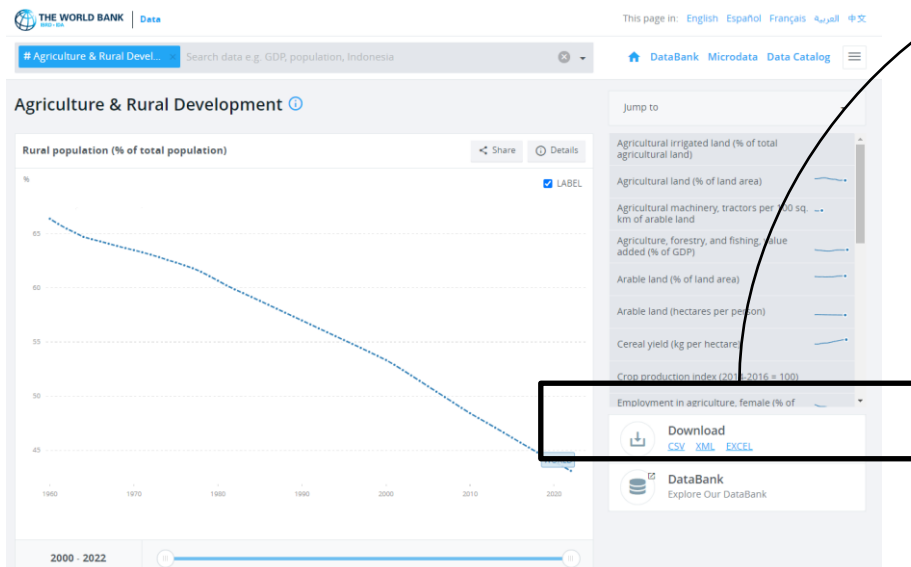
- 20개 주요 지표
- 256개 하위 세부 지표

# 국가별로 지표를 수집하는 방법

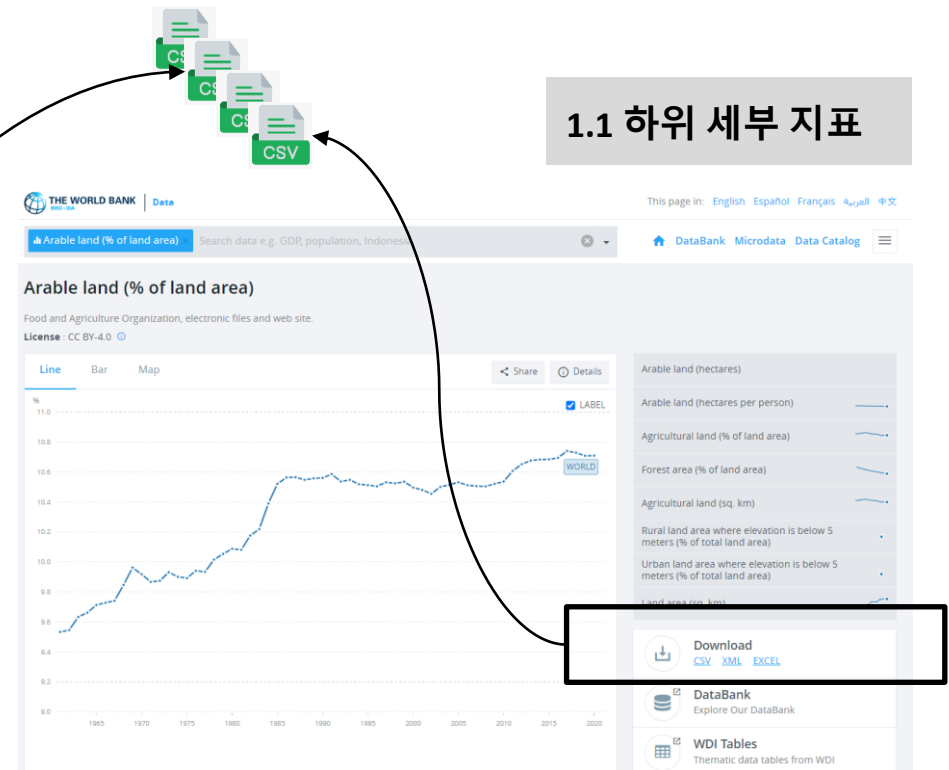
## Task

- 20개 주요 지표와 256개 하위 세부 지표의 사이트로가서 데이터를 다운받아 한 개의 파일로 만드는 것
- 국가별로 지표/세부 지표별 csv파일을 crawling한 후 single csv파일로 merge하기

## 1. 주요 지표



## 1.1 하위 세부 지표



# 크롤링할 endpoint 확인하기(1/4)

<https://data.worldbank.org/indicator>

The screenshot shows the World Bank Data Catalog interface. On the left, a sidebar lists various categories, with 'Agriculture & Rural Development' highlighted by a black box. On the right, the DevTools 'Elements' panel is open, showing the HTML structure of the page. A black box in the DevTools panel highlights the following HTML snippet:

```
<a href="/topic/agriculture-and-rural-development?view=chart" data-reactid="180">Agriculture & Rural Development</a>
```

An arrow points from the 'Agriculture & Rural Development' category in the sidebar to this HTML snippet in the DevTools panel.

`<a href="/topic/agriculture-and-rural-development?view=chart">Agriculture & Rural Development</a> == $0`

# 크롤링할 endpoint 확인하기(2/4)

## 마지막 지표의—세부지표

### Urban Development

Mortality caused by road traffic injury (per 100,000 population)

a 537.39 × 21.14 grams per cubic meter)  
Color #50595E  
Font 13.216px OpenSans, sans-serif exceeding WHO guideline value (% of  
ACCESSIBILITY  
Contrast Aa 7.16 (a)  
Name Population living in slums (% of urban p... ion)  
Role link  
Keyboard-focusable (✓) 1 million (% of total population)

Population living in slums (% of urban population)

Urban population

Urban population (% of total population)

```
<section class="nav-item">...</section>
<section class="nav-item">...</section>
<section class="nav-item">...</section>
<section class="nav-item">...</section>
<section class="nav-item">...</section>
<section class="nav-item">...</section>
<section class="nav-item">...</section>
<section class="nav-item">...</section>
<section class="nav-item">...</section>
```

```
<section class="nav-item">
  <h3 id="urban-development">...</h3>
  <!-- react-text: 44266 -->
  <!-- /react-text -->
```

```
<ul>
  <li>...</li> <flex>
  <li>...</li> <flex>
  <li>...</li> <flex>
  <li>...</li> <flex>
  <li>...</li> <flex>
  <li>...</li> <flex>
```

```
<li>...</li> <flex>
  <a href="/indicator/EN.POP.SLUM.UR.ZS?view=chart">Population living in slums (% of urban populati
</li>
  <li>...</li> <flex>
    <a href="/indicator/SP.URB.TOTL?view=chart">Urban population</a>
  </li>
```

# 크롤링할 endpoint 확인하기(3/4)

THE WORLD BANK | Data

Search data e.g. GDP, population, Indonesia

## Indicators

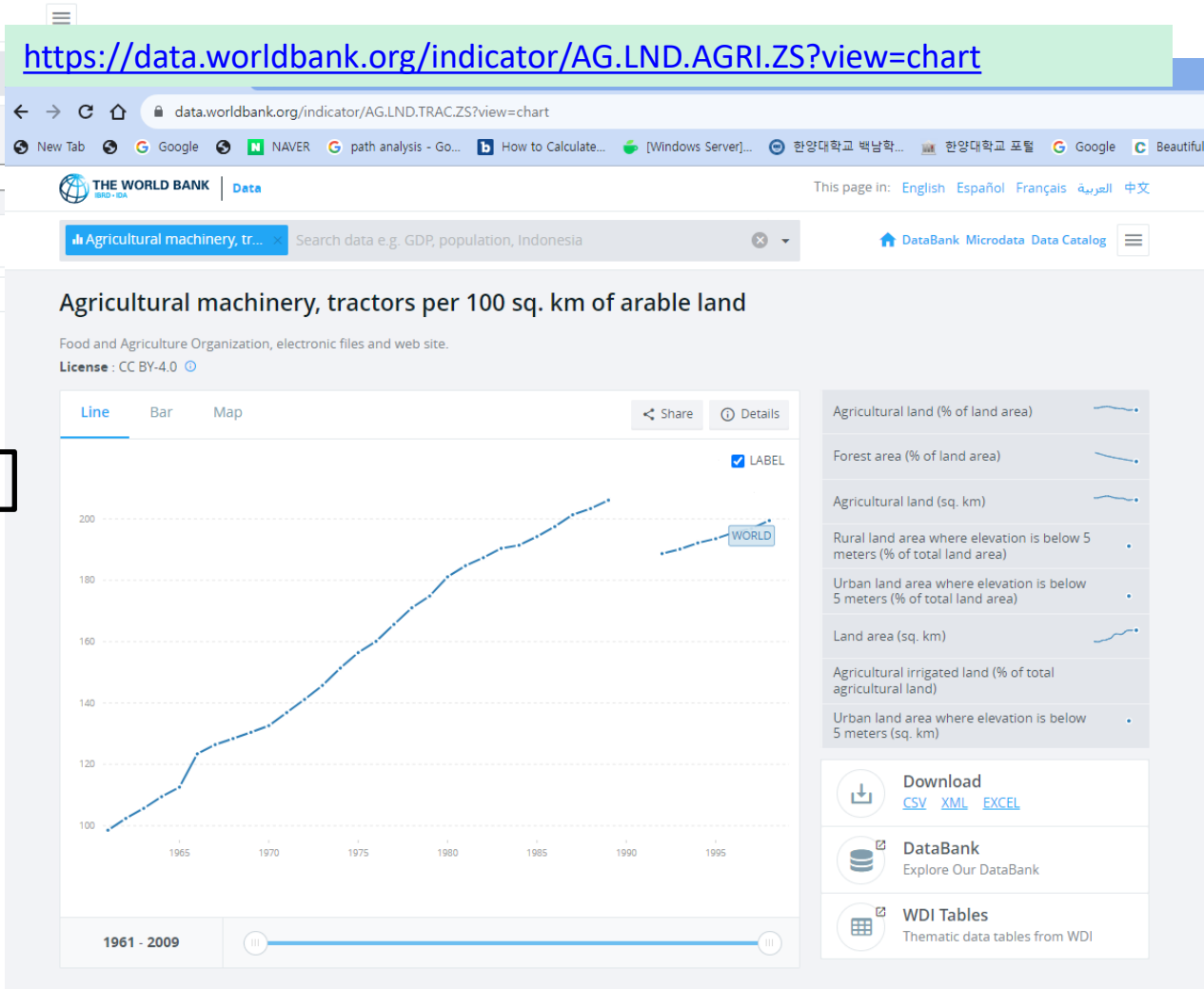
Agriculture & Rural Development

Featured indicators   All indicators

Quick search

### Agriculture & Rural Development

- Agricultural irrigated land (% of total agricultural land)
- Agricultural land (% of land area)
- Agricultural machinery, tractors per 100 sq. km of arable land**
- Agriculture, forestry, and fishing, value added (% of GDP)
- Arable land (% of land area)
- Arable land (hectares per person)
- Cereal yield (kg per hectare)
- Crop production index (2014-2016 = 100)
- Employment in agriculture, female (% of female employment) (modeled ILO estimate)
- Employment in agriculture, male (% of male employment) (modeled ILO estimate)

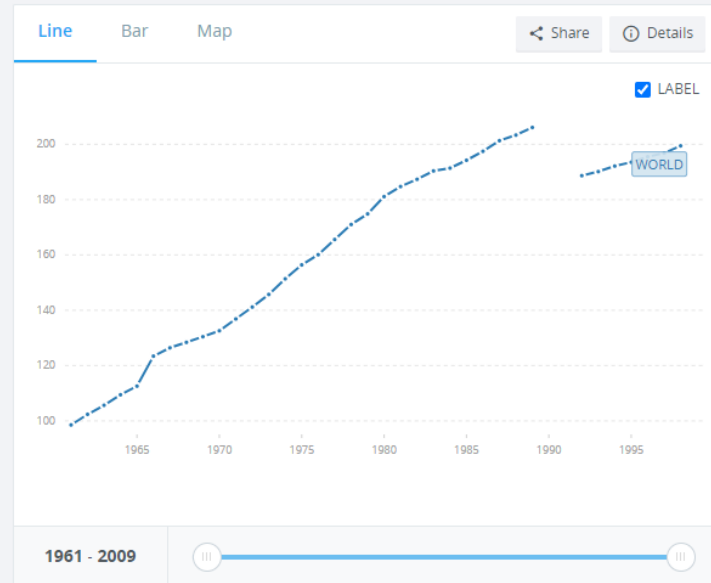


# 크롤링할 endpoint 확인하기(4/4)

## Agricultural machinery, tractors per 100 sq. km of arable land

Food and Agriculture Organization, electronic files and web site.

License : CC BY-4.0



- Agricultural land (% of land area)
- Forest area (% of land area)
- Agricultural land (sq. km)
- Rural land area where elevation is below 5 meters (% of total land area)
- Urban land area where elevation is below 5 meters (% of total land area)
- Land area (sq. km)
- Agricultural irrigated land (% of total agricultural land)

Download

CSV - XMI

새 탭에서 링크 열기

새 창에서 링크 열기

시크릿 창에서 링크 열기

다른 이름으로 링크 저장...

링크 주소 복사

검사

<https://api.worldbank.org/v2/en/indicator/AG.LND.TRAC.ZS?downloadformat=csv>



# 국가별 indicators 정리 파일 형태

국가코드와 실제 국가명을 mapping하여야함

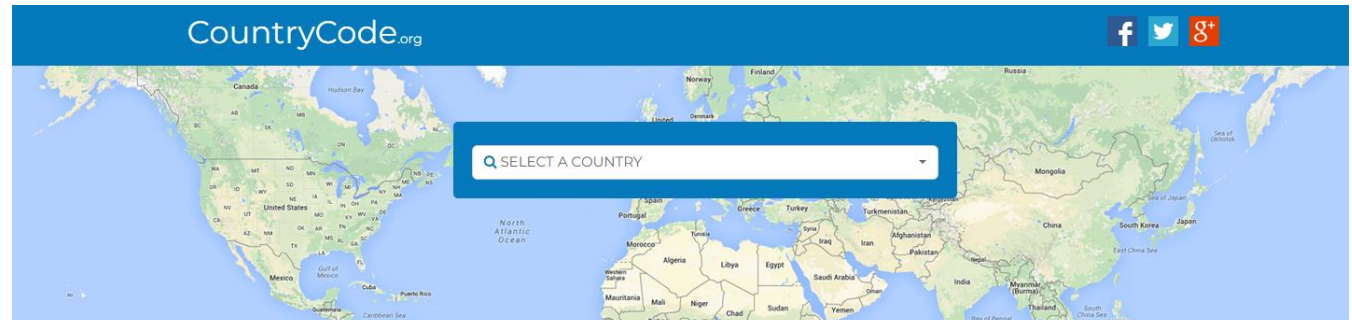
Country Code	AG.LND.ARBL.HA.PC	AG.LND.CROP.ZS	SP.RUR.TOTL	SP.RUR.TOTL.ZS	NY.AGR.TOTL.ZS	NY.GDP.MKTP.CD	NY.GDP.MKTP.KD.ZG	NY.GDP.PCAP.CD	NY.GDP.PCAP.KD.ZG	NY.GDP.PCAP.PP.CD	...	NE.IMP.GNFS.ZS	TX
ABW	0.018764	0.003210	59554.0	55.948000	0.027573	3.126019e+09	17.172509	29342.100730	17.225300	42887.374913	...	68.251408	
AFE	0.178557	0.804311	448184780.0	62.175407	13.921312	1.169484e+12	3.404852	1622.391720	0.842507	4169.019532	...	28.749192	
AFG	0.200887	0.406298	30181937.0	73.384000	33.484499	1.458314e+10	-20.700000	363.674087	-22.929194	1673.964059	...	13.872054	
AFW	0.215282	2.018578	249836404.0	50.952615	21.889064	8.778633e+11	3.762758	1790.348800	1.192668	4798.434519	...	21.151077	
AGO	0.146582	0.252667	11359649.0	31.919000	13.649109	1.067136e+11	3.045403	2998.501158	-0.096755	6973.696299	...	16.621200	
...	...	...	...	...	...	...	...	...	...	...	...	...	...
XKX	0.000098	0.003210	0.0	0.000000	7.386859	9.429156e+09	3.511707	5351.439542	4.924753	14723.404932	...	70.760150	
YEM	0.035869	0.556850	20491585.0	60.812000	17.183127	2.160616e+10	0.752448	676.928385	-1.721735	836.187569	...	43.246924	
ZAF	0.204075	0.340453	18965399.0	31.665000	2.570586	4.058697e+11	2.042299	6776.480077	1.187663	15904.848363	...	31.464978	
ZMB	0.200764	0.048427	10857387.0	54.239000	3.388658	2.978445e+10	4.744942	1487.907764	1.895518	3894.310259	...	27.156932	
ZWE	0.255270	0.258498	11033499.0	67.605000	8.849899	2.067806e+10	3.400000	1266.996031	1.328184	2530.645987	...	30.901234	

266 rows × 16 columns

# 국가 코드 사이트

국가코드를 보여주는 사이트에서 실제 국가명을 mapping하면 됨

<https://countrycode.org/>



Country Codes

COUNTRY	COUNTRY CODE	ISO CODES	POPULATION	AREA KM2	GDP \$USD
Afghanistan	93	AF / AFG	29,121,286	647,500	20.65 Billion
Albania	355	AL / ALB	2,986,952	28,748	12.8 Billion
Algeria	213	DZ / DZA	34,586,184	2,381,740	215.7 Billion
American Samoa	1-684	AS / ASM	57,881	199	462.2 Million
Andorra	376	AD / AND	84,000	468	4.8 Billion
Angola	244	AO / AGO	13,068,161	1,246,700	124 Billion
Anguilla	1-264	AI / AIA	13,254	102	175.4 Million
Antarctica	672	AQ / ATA	0	14,000,000	
Antigua and Barbuda	1-268	AG / ATG	86,754	443	1.22 Billion
Argentina	54	AR / ARG	41,343,201	2,766,890	484.6 Billion

# 최종 정리 파일

국가코드를 보여주는 사이트에서 실제 국가명을 mapping

	COUNTRY	COUNTRY CODE	ISO CODES	POPULATION	AREA KM2	GDP \$USD	code	code	Country Code	ISO Codes
0	Afghanistan	93	AF / AFG	29121286	647500	20.65 Billion	AF	AFG	AF	AFG
1	Albania	355	AL / ALB	2986952	28748	12.8 Billion	AL	ALB	AL	ALB
2	Algeria	213	DZ / DZA	34586184	2381740	215.7 Billion	DZ	DZA	DZ	DZA
3	American Samoa	1-684	AS / ASM	57881	199	462.2 Million	AS	ASM	AS	ASM
4	Andorra	376	AD / AND	84000	468	4.8 Billion	AD	AND	AD	AND
...	...	...	...	...	...	...	...	...	...	...
235	Wallis and Futuna	681	WF / WLF	16025	274	NaN	WF	WLF	WF	WLF
236	Western Sahara	212	EH / ESH	273008	266000	NaN	EH	ESH	EH	ESH
237	Yemen	967	YE / YEM	23495361	527970	43.89 Billion	YE	YEM	YE	YEM
238	Zambia	260	ZM / ZMB	13460305	752614	22.24 Billion	ZM	ZMB	ZM	ZMB
239	Zimbabwe	263	ZW / ZWE	11651858	390580	10.48 Billion	ZW	ZWE	ZW	ZWE

240 rows × 10 columns

code	code	AG.LND.ARBL.HA.PC	AG.LND.CROP.ZS	SP.RUR.TOTL	SP.RUR.TOTL.ZS	NY.AGR.TOTL.ZS	NY.GDP.MKTP.CD	NY.GDP.MKTP.KD.ZG	NY.GDP.PCAP.CD	NY.GDP.PCAP.KD.ZG	...	NE.IMP.GNFS.ZS	TX.VAL.MRCH.CD.WT
AFG	AF	0.200887	0.406298	30181937.0	73.384	33.484499	1.458314e+10	-20.700000	363.674087	-22.929194	...	13.872054	8.830000e+08
ALB	AL	0.211287	3.210036	1004807.0	36.201	18.628032	1.888210e+10	4.844236	6802.804519	6.205275	...	47.841878	4.309000e+09
DZA	DZ	0.172721	0.424899	11328186.0	25.228	11.384084	1.919129e+11	3.100000	4273.922183	1.434777	...	22.439074	6.108900e+10
ASM	AS	0.069064	3.750000	5669.0	12.804	0.016625	7.090000e+08	-1.866252	15743.310758	0.648378	...	102.115656	3.020000e+08
AND	AD	0.009266	0.003210	9730.0	12.189	0.495686	3.352033e+09	8.809579	41992.793358	7.732716	...	1.127672	1.650000e+08
...	...	...	...	...	...	...	...	...	...	...	...	...	...
ESH	EH	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	...	NaN	NaN
YEM	YE	0.035869	0.556850	20491585.0	60.812	17.183127	2.160616e+10	0.752448	676.928385	-1.721735	...	43.246924	8.730000e+08
ZMB	ZM	0.200764	0.048427	10857387.0	54.239	3.388658	2.978445e+10	4.744942	1487.907764	1.895518	...	27.156932	1.165100e+10
ZWE	ZW	0.255270	0.258498	11033499.0	67.605	8.849899	2.067806e+10	3.400000	1266.996031	1.328184	...	30.901234	6.586000e+09
TWN	TW	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	...	NaN	NaN

240 rows × 117 columns