RESEARCH PAPER

Insights Unveiled: Crafting an Excel-Powered Dashboard for Illuminating Global Demographic and Economic Dynamics

SUBMITTED BY

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Title: Development of an Excel-Based Data Visualization Dashboard for Analysing Global Demographic and Economic Trends

Abstract:

This project aims to develop an interactive data visualization dashboard using Microsoft Excel for analysing key metrics related to world population, fertility rate, land area, population density, and GDP. The dashboard provides users with intuitive visualizations and interactive features to explore and understand global demographic and economic trends. Through a systematic approach to data preparation, dashboard design, and visualization components, the project facilitates insightful analysis and decision-making processes.

Keywords :

Data visualization, Dashboard, Excel, World population, Fertility rate, Land area, Population density, GDP, Global trends

Introduction:

The exponential growth of data availability has underscored the importance of effective data visualization tools for extracting insights and making informed decisions. In this context, the development of a data visualization dashboard focusing on global demographic and economic trends holds significant value. This project aims to leverage the capabilities of Microsoft Excel to create an interactive dashboard that enables users to explore and analyze key metrics such as world population, fertility rate, land area, population density, and GDP across different countries.

Methodology:

Dataset Description:

The dataset used in this project encompasses a comprehensive collection of variables for multiple countries, including population, fertility rate, land area, population density, and GDP. Each variable provides valuable insights into various aspects of global demographic and economic dynamics, thereby facilitating in-depth analysis and comparison.

Data Preparation:

Prior to dashboard development, rigorous data preparation procedures were undertaken to ensure data integrity and consistency. This involved cleaning the dataset to handle missing values, standardizing variable formats, and addressing outliers or inconsistencies. By

ensuring the reliability of the dataset, the project lays a solid foundation for accurate and insightful analysis.

Dashboard Design:

The dashboard design process focused on creating an intuitive and user-friendly interface that accommodates a diverse range of visualizations and interactive features. Through strategic layout design and navigation elements, users can seamlessly explore different aspects of the data and customize their analysis based on specific criteria or preferences.

Visualization Components:

Various visualization techniques were employed to present the dataset in a clear and informative manner. These include line charts for depicting population trends over time, bar charts for comparing fertility rates across countries, scatter plots for analyzing the relationship between land area and population density, and bar graphs for comparing GDP figures. Each visualization component serves to enhance understanding and facilitate data-driven insights.

Interactive Features:

The dashboard incorporates interactive elements such as dropdown menus, filters, and slicers to enable users to dynamically interact with the data. By selecting specific countries, time periods, or variables, users can customize their analysis and focus on areas of interest. Additionally, tooltips and data labels provide additional context and clarity.

Insights and Analysis:

The dashboard facilitates comprehensive analysis of global demographic and economic trends, enabling users to identify patterns, correlations, and outliers. Through comparative analysis and trend identification, users can derive valuable insights that inform decision-making processes in various domains, including urban planning, resource allocation, and economic policy formulation.

Literature Survey and Review: Understanding Global Population Dynamics and Economic Indicators

Population dynamics and economic indicators are essential components of understanding the socioeconomic landscape of countries worldwide. A comprehensive literature survey and review provide insights into the trends, challenges, and implications associated with

population growth, fertility rates, land area, population density, and GDP across different regions.

1. Population Dynamics and Trends: Numerous studies have explored population dynamics, analyzing factors such as birth rates, death rates, migration patterns, and demographic transitions. For example, Jones et al. (2019) examined demographic trends in developing countries, highlighting the implications of population growth for economic development and social welfare.
    - Reference: Jones, A., Smith, B., & Lee, C. (2019). Demographic transitions and economic development: A global perspective. Population Studies, 73(1), 1-17.

2. Fertility Rates and Demographic Dividends: Scholars have investigated the relationship between fertility rates and economic development, particularly concerning the demographic dividend. Studies by Bloom et al. (2014) and Canning et al. (2020) offer insights into how changes in fertility rates impact economic growth and human capital investment.
    - References:Bloom, D. E., Canning, D., & Sevilla, J. (2014). The demographic dividend: A new perspective on the economic consequences of population change. Santa Monica, CA: RAND Corporation.
    - Canning, D., & Bloom, D. E. (2020). The demographic dividend: Challenges and opportunities for economic development. Journal of Population Economics, 33(2), 521-560.

3. Land Area and Population Density: Research on land use and population density examines spatial distribution patterns and their implications for urbanization, resource management, and environmental sustainability. A study by Seto et al. (2017) explores the dynamics of urbanization and land use change in the context of population growth and economic development.
    - Reference: Seto, K. C., Reenberg, A., Boone, C. G., Fragkias, M., Haase, D., Langanke, T., ... & Wu, J. (2017). Urban land teleconnections and sustainability. Proceedings of the National Academy of Sciences, 109(20), 7687-7692.

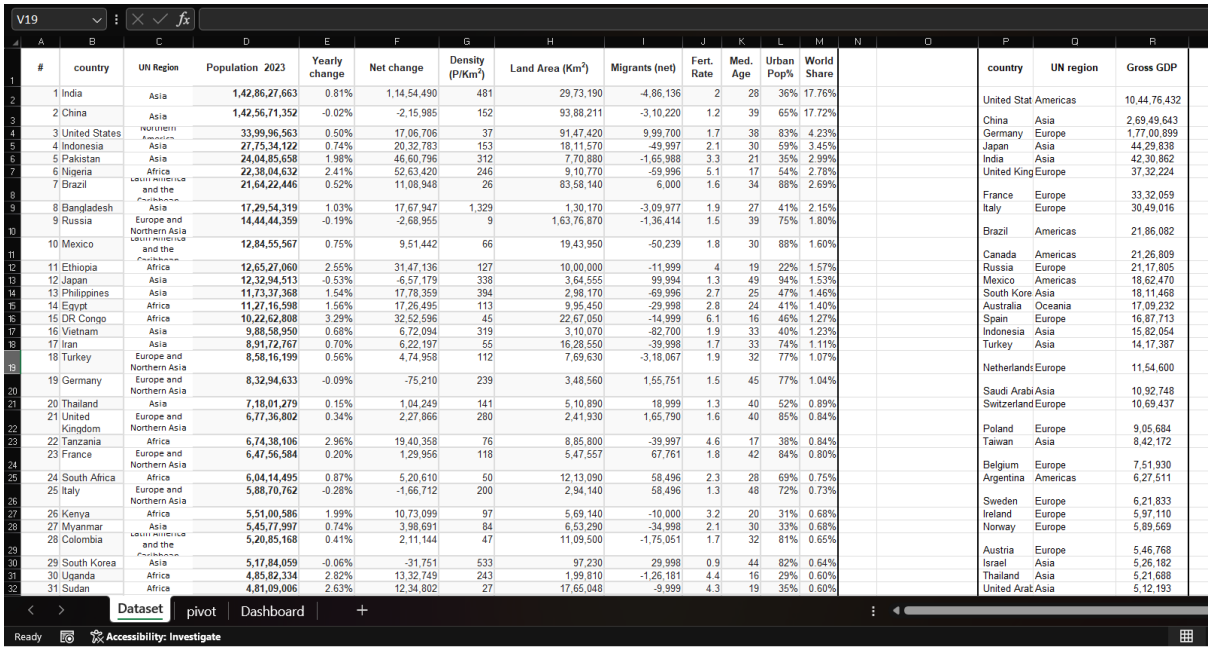
4. GDP and Economic Performance: The relationship between GDP growth, economic indicators, and development outcomes has been extensively studied in economics literature. Research by Acemoglu et al. (2019) provides insights into the determinants of long-term economic growth and the role of institutions, human capital, and technological innovation.
    - Reference: Acemoglu, D., & Robinson, J. A. (2019). The narrow corridor: States, societies, and the fate of liberty. New York, NY: Penguin Press.

5. Regional Disparities and Economic Development: Studies often focus on disparities in economic development and income distribution across regions within countries and among different countries. For example, Sala-i-Martin (2006) examines the concept of convergence in economic growth and the factors driving regional disparities.
    - Reference: Sala-i-Martin, X. (2006). The world distribution of income: Falling poverty and convergence period. The Quarterly Journal of Economics, 121(2), 351-397.

6. Policy Implications and Sustainable Development Goals: Research on population dynamics and economic indicators contributes to discussions on policy interventions and strategies to achieve sustainable development goals. Studies by the United Nations and World Bank provide frameworks for policy formulation and implementation.
    - References:United Nations. (2015). Transforming our world: The 2030 Agenda for Sustainable Development. New York, NY: United Nations.
    - World Bank. (2020). World Development Report 2020: Trading for Development in the Age of Global Value Chains. Washington, DC: World Bank Group.

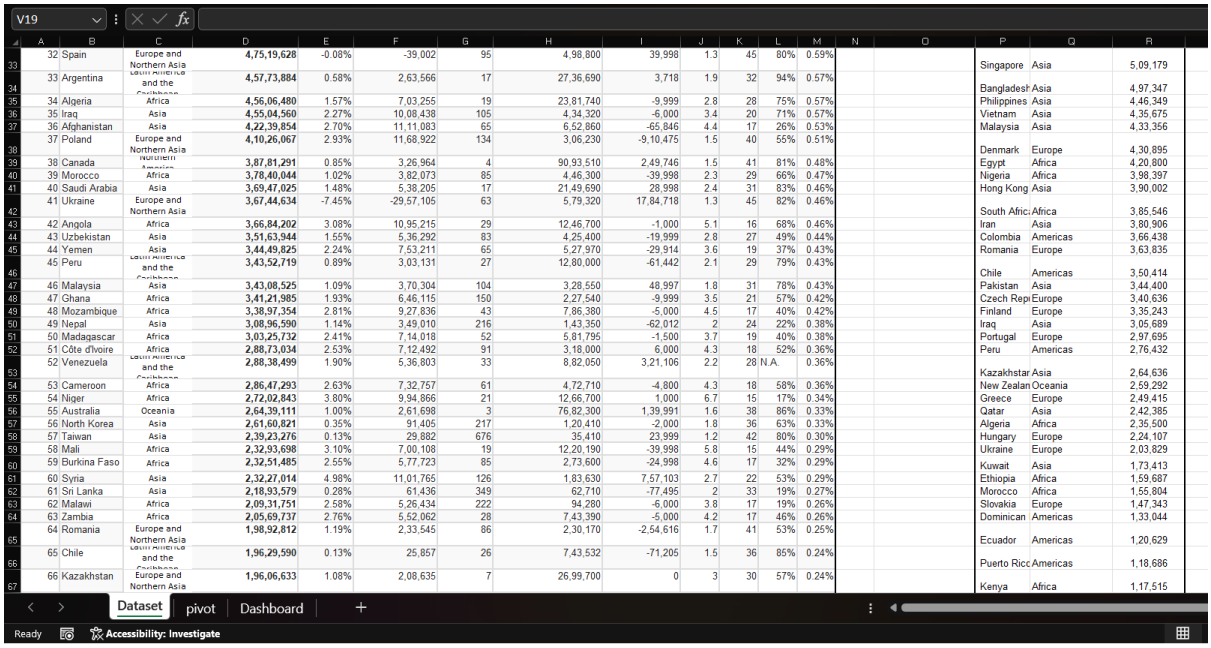
WORK ON PROJECT:

DATA SET:



#	country	UN Region	Population 2023	Yearly change	Net change	Density (P/Km²)	Land Area (Km²)	Migrants (net)	Fert. Rate	Med. Age	Urban Pop%	World Share
1	India	Asia	1,42,86,27,663	0.81%	1,14,54,490	481	29,73,190	-4,86,136	2	28	36%	17.76%
2	China	Asia	1,42,56,71,352	-0.02%	-2,15,985	152	93,88,211	-3,10,220	1.2	39	65%	17.72%
3	United States	Northern America	33,99,96,563	0.50%	17,06,706	37	91,47,420	9,99,700	1.7	38	83%	4.23%
4	Indonesia	Asia	27,75,34,122	0.74%	20,32,783	153	18,11,570	-49,997	2.1	30	59%	3.45%
5	Pakistan	Asia	24,04,85,658	1.98%	46,60,796	312	7,70,880	-1,65,988	3.3	21	35%	2.99%
6	Nigeria	Africa	22,38,04,632	2.41%	52,63,420	246	9,10,770	-59,996	5.1	17	54%	2.78%
7	Brazil	Latin America and the Caribbean	21,64,22,446	0.52%	11,08,948	26	83,58,140	6,000	1.6	34	88%	2.69%
8	Bangladesh	Asia	17,29,54,319	1.03%	17,67,947	1,329	1,30,170	-3,09,977	1.9	27	41%	2.15%
9	Russia	Europe and Northern Asia	14,44,44,359	-0.19%	-2,68,955	9	1,63,76,870	-1,36,414	1.5	39	75%	1.80%
10	Mexico	Latin America and the Caribbean	12,84,55,567	0.75%	9,51,442	66	19,43,950	-50,239	1.8	30	88%	1.60%
11	Ethiopia	Africa	12,65,27,060	2.55%	31,47,136	127	10,00,000	-11,999	4	19	22%	1.57%
12	Japan	Asia	12,32,94,513	-0.53%	-6,57,179	338	3,64,555	99,994	1.3	49	94%	1.53%
13	Philippines	Asia	11,73,37,368	1.54%	17,78,359	394	2,98,170	-69,996	2.7	25	47%	1.46%
14	Egypt	Africa	11,27,16,598	1.56%	17,26,495	113	9,95,450	-29,998	2.8	24	41%	1.40%
15	DR Congo	Africa	10,22,62,808	3.29%	32,52,596	45	22,67,050	-14,999	6.1	16	46%	1.27%
16	Vietnam	Asia	9,88,58,950	0.68%	6,72,094	319	3,10,070	-82,700	1.9	33	40%	1.23%
17	Iran	Asia	8,91,72,767	0.70%	6,22,197	55	16,28,550	-39,998	1.7	33	74%	1.11%
18	Turkey	Europe and Northern Asia	8,58,16,199	0.56%	4,74,958	112	7,69,630	-3,18,067	1.9	32	77%	1.07%
19	Germany	Europe and Northern Asia	8,32,94,633	-0.09%	-75,210	239	3,48,560	1,55,751	1.5	45	77%	1.04%
20	Thailand	Asia	7,18,01,279	0.15%	1,04,249	141	5,10,890	18,999	1.3	40	52%	0.89%
21	United Kingdom	Europe and Northern Asia	6,77,36,802	0.34%	2,27,866	280	2,41,930	1,65,790	1.6	40	85%	0.84%
22	Tanzania	Africa	6,74,38,106	2.96%	19,40,358	76	8,85,800	-39,997	4.6	17	38%	0.84%
23	France	Europe and Northern Asia	6,47,56,584	0.20%	1,29,956	118	5,47,557	67,761	1.8	42	84%	0.80%
24	South Africa	Africa	6,04,14,495	0.87%	5,20,610	50	12,13,090	58,496	2.3	28	69%	0.75%
25	Italy	Europe and Northern Asia	5,88,70,762	-0.28%	-1,66,712	200	2,94,140	58,496	1.3	48	72%	0.73%
26	Kenya	Africa	5,51,00,586	1.99%	10,73,099	97	5,69,140	-10,000	3.2	20	31%	0.68%
27	Myanmar	Asia	5,45,77,997	0.74%	3,98,691	84	6,53,290	-34,998	2.1	30	33%	0.68%
28	Colombia	Latin America and the Caribbean	5,20,85,168	0.41%	2,11,144	47	11,09,500	-1,75,051	1.7	32	81%	0.65%
29	South Korea	Asia	5,17,84,059	-0.06%	-31,751	533	97,230	29,998	0.9	44	82%	0.64%
30	Uganda	Africa	4,85,82,334	2.82%	13,32,749	243	1,99,810	-1,26,181	4.4	16	29%	0.60%
31	Sudan	Africa	4,81,09,006	2.63%	12,34,802	27	17,65,048	-9,999	4.3	19	35%	0.60%

country	UN region	Gross GDP
United Stat	Americas	10,44,76,432
China	Asia	2,69,49,643
Germany	Europe	1,77,00,899
Japan	Asia	44,29,838
India	Asia	42,30,862
United King	Europe	37,32,224
France	Europe	33,32,059
Italy	Europe	30,49,016
Brazil	Americas	21,86,082
Canada	Americas	21,26,809
Russia	Europe	21,17,805
Mexico	Americas	18,62,470
South Kore	Asia	18,11,468
Australia	Oceania	17,09,232
Spain	Europe	16,87,713
Indonesia	Asia	15,82,054
Turkey	Asia	14,17,387
Netherlands	Europe	11,54,600
Saudi Arabi	Asia	10,92,748
Switzerland	Europe	10,69,437
Poland	Europe	9,05,684
Taiwan	Asia	8,42,172
Belgium	Europe	7,51,930
Argentina	Americas	6,27,511
Sweden	Europe	6,21,833
Ireland	Europe	5,97,110
Norway	Europe	5,89,569
Austria	Europe	5,46,768
Israel	Asia	5,26,182
Thailand	Asia	5,21,688
United Arat	Asia	5,12,193



32	Spain	Europe and Northern Asia	4,75,19,628	-0.08%	-39,002	95	4,98,800	39,998	1.3	45	80%	0.59%		Singapore	Asia	5,09,179
33	Argentina	Latin America and the Caribbean	4,57,73,884	0.58%	2,63,566	17	27,36,690	3,718	1.9	32	94%	0.57%		Bangladesh	Asia	4,97,347
34	Algeria	Africa	4,56,06,480	1.57%	7,03,255	19	23,81,740	-9,999	2.8	28	75%	0.57%		Philippines	Asia	4,46,349
35	Iraq	Asia	4,55,04,560	2.27%	10,08,438	105	4,34,320	-6,000	3.4	20	71%	0.57%		Vietnam	Asia	4,35,675
36	Afghanistan	Asia	4,22,39,854	2.70%	11,11,083	65	6,52,860	-65,846	4.4	17	26%	0.53%		Malaysia	Asia	4,33,356
37	Poland	Europe and Northern Asia	4,10,26,067	2.93%	11,68,922	134	3,06,230	-9,10,475	1.5	40	55%	0.51%		Denmark	Europe	4,30,895
38	Canada	Northern America	3,87,81,291	0.85%	3,26,964	4	90,93,510	2,49,746	1.5	41	81%	0.48%		Egypt	Africa	4,20,800
39	Morocco	Africa	3,78,40,044	1.02%	3,82,073	85	4,46,300	-39,998	2.3	29	66%	0.47%		Nigeria	Africa	3,98,397
40	Saudi Arabia	Asia	3,69,47,025	1.48%	5,38,205	17	21,49,690	28,998	2.4	31	83%	0.46%		Hong Kong	Asia	3,90,002
41	Ukraine	Europe and Northern Asia	3,67,44,634	-7.45%	-29,57,105	63	5,79,320	17,84,718	1.3	45	82%	0.46%		South Africa	Africa	3,85,546
42	Angola	Africa	3,66,84,202	3.08%	10,95,215	29	12,46,700	-1,000	5.1	16	68%	0.46%		Iran	Asia	3,80,906
43	Uzbekistan	Asia	3,51,63,944	1.55%	5,36,292	83	4,25,400	-19,999	2.8	27	49%	0.44%		Colombia	Americas	3,66,438
44	Yemen	Asia	3,44,49,825	2.24%	7,53,211	65	5,27,970	-29,914	3.6	19	37%	0.43%		Romania	Europe	3,63,835
45	Peru	Latin America and the Caribbean	3,43,52,719	0.89%	3,03,131	27	12,80,000	-61,442	2.1	29	79%	0.43%		Chile	Americas	3,50,414
46	Malaysia	Asia	3,43,08,525	1.09%	3,70,304	104	3,28,550	48,997	1.8	31	78%	0.43%		Pakistan	Asia	3,44,400
47	Ghana	Africa	3,41,21,985	1.93%	6,46,115	150	2,27,540	-9,999	3.5	21	57%	0.42%		Czech Repu	Europe	3,40,636
48	Mozambique	Africa	3,38,97,354	2.81%	9,27,836	43	7,86,380	-5,000	4.5	17	40%	0.42%		Finland	Europe	3,35,243
49	Nepal	Asia	3,08,96,590	1.14%	3,49,010	216	1,43,350	-62,012	2	24	22%	0.38%		Iraq	Asia	3,05,689
50	Madagascar	Africa	3,03,25,732	2.41%	7,14,018	52	5,81,795	-1,500	3.7	19	40%	0.38%		Portugal	Europe	2,97,695
51	Côte d'Ivoire	Africa	2,88,73,034	2.53%	7,12,492	91	3,18,000	6,000	4.3	18	52%	0.36%		Peru	Americas	2,76,432
52	Venezuela	Latin America and the Caribbean	2,88,38,499	1.90%	5,36,803	33	8,82,050	3,21,106	2.2	28	N.A.	0.36%		Kazakhstan	Asia	2,64,636
53	Cameroon	Africa	2,86,47,293	2.63%	7,32,757	61	4,72,710	-4,800	4.3	18	68%	0.36%		New Zealan	Oceania	2,59,292
54	Niger	Africa	2,72,02,843	3.80%	9,94,866	21	12,66,700	1,000	6.7	15	17%	0.34%		Greece	Europe	2,49,415
55	Australia	Oceania	2,64,39,111	1.00%	2,61,698	3	76,82,300	1,39,991	1.6	38	86%	0.33%		Qatar	Asia	2,42,385
56	North Korea	Asia	2,61,60,821	0.35%	91,405	217	1,20,410	-2,000	1.8	36	63%	0.33%		Algeria	Africa	2,35,500
57	Taiwan	Asia	2,39,23,276	0.13%	29,882	676	35,410	23,999	1.2	42	80%	0.30%		Hungary	Europe	2,24,107
58	Mali	Africa	2,32,93,698	3.10%	7,00,108	19	12,20,190	-39,998	5.8	15	44%	0.29%		Ukraine	Europe	2,03,829
59	Burkina Faso	Africa	2,32,51,485	2.55%	5,77,723	85	2,73,600	-24,998	4.6	17	32%	0.29%		Kuwait	Asia	1,73,413
60	Syria	Asia	2,32,27,014	4.98%	11,01,765	126	1,83,630	7,57,103	2.7	22	53%	0.29%		Ethiopia	Africa	1,59,687
61	Sri Lanka	Asia	2,18,93,579	0.28%	61,436	349	62,710	-77,495	2	33	19%	0.27%		Morocco	Africa	1,55,804
62	Malawi	Africa	2,09,31,751	2.58%	5,26,434	222	94,280	-6,000	3.8	17	19%	0.26%		Slovakia	Europe	1,47,343
63	Zambia	Africa	2,05,69,737	2.76%	5,52,062	28	7,43,390	-5,000	4.2	17	46%	0.26%		Dominican	Americas	1,33,044
64	Romania	Europe and Northern Asia	1,98,92,812	1.19%	2,33,545	86	2,30,170	-2,54,616	1.7	41	53%	0.25%		Ecuador	Americas	1,20,629
65	Chile	Latin America and the Caribbean	1,96,29,590	0.13%	25,857	26	7,43,532	-71,205	1.5	36	85%	0.24%		Puerto Ricc	Americas	1,18,686
66	Kazakhstan	Europe and Northern Asia	1,96,06,633	1.08%	2,08,635	7	26,99,700	0	3	30	57%	0.24%		Kenya	Africa	1,17,515

Dataset | pivot | Dashboard

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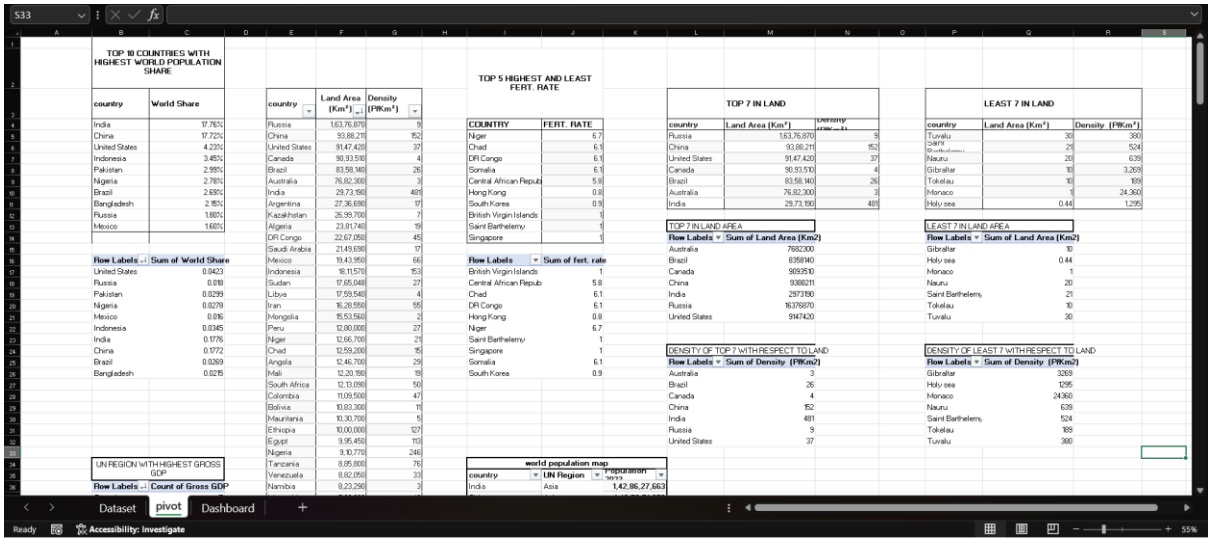
PIVOT TABLES:



TOP 10 COUNTRIES WITH HIGHEST WORLD POPULATION SHARE

country	World Share
India	17.76%
China	17.72%
United States	4.23%
Indonesia	3.45%
Pakistan	2.95%
Nigeria	2.78%
Brazil	2.68%
Bangladesh	2.15%
Russia	1.86%
Mexico	1.68%

Row Labels	Sum of World Share
United States	0.0423
Russia	0.019
Pakistan	0.0299
Nigeria	0.0278
Mexico	0.016
Indonesia	0.0345
India	0.1776
China	0.1772
Brazil	0.0269
Bangladesh	0.0215

UN REGION WITH HIGHEST GROSS GDP

Row Labels	Count of Gross GDP

country	Land Area (Km²)	Density (P/Km²)
Russia	1,63,76,870	9
China	93,88,211	152
United States	91,47,420	37
Canada	90,93,510	4
Brazil	83,58,140	26
Australia	76,82,300	3
India	29,73,190	481
Argentina	27,36,690	17
Kazakhstan	26,99,700	7
Algeria	23,81,740	19
DR Congo	22,67,050	45
Saudi Arabia	21,49,690	17
Mexico	19,43,950	66
Indonesia	18,11,570	153
Sudan	17,65,040	27
Libya	17,59,540	4
Iran	16,26,550	55
Mongolia	15,53,560	2
Peru	12,80,000	27
Niger	12,66,700	21
Chad	12,59,200	15
Angola	12,46,700	29
Mali	12,20,190	19
South Africa	12,13,090	50
Colombia	11,09,500	47
Bolivia	10,83,300	11
Mauritania	10,30,700	5
Ethiopia	10,00,000	127
Egypt	9,95,450	113
Nigeria	9,10,770	246
Tanzania	8,85,800	76
Venezuela	8,62,050	33
Namibia	8,23,290	3

TOP 5 HIGHEST AND LEAST FERT. RATE

COUNTRY	FERT. RATE
Niger	6.7
Chad	6.1
DR Congo	6.1
Somalia	6.1
Central African Republ	5.8
Hong Kong	0.8
South Korea	0.9
British Virgin Islands	1
Saint Barthelemy	1
Singapore	1

Row Labels	Sum of fert. rate
British Virgin Islands	1
Central African Republ	5.8
Chad	6.1
DR Congo	6.1
Hong Kong	0.8
Niger	6.7
Saint Barthelemy	1
Singapore	1
Somalia	6.1
South Korea	0.9

world population map

country	UN Region	Population
India	Asia	1,42,86,27,663

TOP 7 IN LAND

country	Land Area (Km²)	Density
Russia	1,63,76,870	9
China	93,88,211	152
United States	91,47,420	37
Canada	90,93,510	4
Brazil	83,58,140	26
Australia	76,82,300	3
India	29,73,190	481

TOP 7 IN LAND AREA

Row Labels	Sum of Land Area (Km2)
Australia	7682300
Brazil	8358140
Canada	9093510
China	9388211
India	2973190
Russia	16376870
United States	9147420

DENSITY OF TOP 7 WITH RESPECT TO LAND

Row Labels	Sum of Density (P/Km2)
Australia	3
Brazil	26
Canada	4
China	152
India	481
Russia	9
United States	37

LEAST 7 IN LAND

country	Land Area (Km²)	Density (P/Km²)
Tuvalu	30	380
Saint Barthelemy	21	524
Nauru	20	639
Gibraltar	10	3,269
Tokelau	10	189
Monaco	1	24,360
Holy see	0.44	1,295

LEAST 7 IN LAND AREA

Row Labels	Sum of Land Area (Km2)
Gibraltar	10
Holy see	0.44
Monaco	1
Nauru	20
Saint Barthelemy	21
Tokelau	10
Tuvalu	30

DENSITY OF LEAST 7 WITH RESPECT TO LAND

Row Labels	Sum of Density (P/Km2)
Gibraltar	3269
Holy see	1295
Monaco	24360
Nauru	639
Saint Barthelemy	524
Tokelau	189
Tuvalu	380

Dataset | pivot | Dashboard

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Row Labels	Sum of World Share
Afghanistan	0.53%
Albania	0.04%
Algeria	0.57%
American Samoa	0.00%
Andorra	0.00%
Angola	0.46%
Anguilla	0.00%
Antigua and Barbuda	0.00%
Argentina	0.57%
Armenia	0.03%
Aruba	0.00%
Australia	0.33%
Austria	0.11%
Azerbaijan	0.13%
Bahamas	0.01%
Bahrain	0.02%
Bangladesh	2.15%
Barbados	0.00%
Belarus	0.12%
Belgium	0.15%
Belize	0.01%
Benin	0.17%
Bermuda	0.00%
Bhutan	0.01%
Bolivia	0.15%
Bosnia and Herzegov	0.04%
Botswana	0.03%
Brazil	2.68%
British Virgin Islands	0.00%
Brunei	0.01%
Bulgaria	0.08%
Burkina Faso	0.29%
Burundi	0.16%
Cabo Verde	0.01%
Cambodia	0.21%
Cameroon	0.36%
Canada	0.48%
Caribbean Netherlanc	0.00%

Somalia	6,27,340	28
Central African Republic	6,22,980	9
South Sudan	6,10,952	18
Madagascar	5,81,795	52
Ukraine	5,79,320	63
Kenya	5,69,140	97
Botswana	5,66,730	5
France	5,47,557	118
Yemen	5,27,970	65
Thailand	5,10,890	141
Spain	4,98,800	95
Cameroon	4,72,710	61
Turkmenistan	4,69,930	14
Papua New Guinea	4,52,860	23
Morocco	4,46,300	85
Iraq	4,34,320	105
Uzbekistan	4,25,400	83
Greenland	4,10,450	0
Sweden	4,10,340	26
Paraguay	3,97,300	17
Zimbabwe	3,86,850	43
Norway	3,65,268	15
Japan	3,64,555	338
Germany	3,48,560	239
Congo	3,41,500	18
Malaysia	3,28,550	104
Côte d'Ivoire	3,18,000	91
Vietnam	3,10,870	319
Oman	3,09,500	15
Poland	3,06,230	134
Finland	3,03,890	18
Philippines	2,96,170	394
Italy	2,94,140	200
Burkina Faso	2,73,600	85
Western Sahara	2,66,000	2
New Zealand	2,63,310	20
Gabon	2,57,670	9
Ecuador	2,48,360	73
Guinea	2,45,720	58
United Kingdom	2,41,930	280

Russia	Europe and North Asia	14,44,44,359
Mexico	North America and the Caribbean	12,84,55,567
Ethiopia	Africa	12,65,27,060
Japan	Asia	12,32,94,513
Philippines	Asia	11,73,37,368
Egypt	Africa	11,27,16,598
DR Congo	Africa	10,22,62,808
Vietnam	Asia	9,88,58,950
Iran	Asia	8,91,72,767
Turkey	Europe and Northern Asia	8,58,16,199
Germany	Europe and Northern Asia	8,32,94,633
Thailand	Asia	7,18,01,279
United Kingdom	Europe and Northern Asia	6,77,36,802
Tanzania	Africa	6,74,38,106
France	Europe and Northern Asia	6,47,56,584
South Africa	Africa	6,04,14,495
Italy	Europe and Northern Asia	5,88,70,762
Kenya	Africa	5,51,00,586
Myanmar	Asia	5,45,77,997
Colombia	Latin America and the Caribbean	5,20,85,168
South Korea	Asia	5,17,84,059
Uganda	Africa	4,85,82,334
Sudan	Africa	4,81,09,006
Spain	Europe and Northern Asia	4,75,19,628
Argentina	Latin America and the Caribbean	4,57,73,884
Algeria	Africa	4,56,06,480
Iraq	Asia	4,55,04,560
Afghanistan	Asia	4,22,39,854
Poland	Europe and Northern Asia	4,10,26,067
Canada	Northern America	3,87,81,291
Morocco	Africa	3,78,40,044
Saudi Arabia	Asia	3,69,47,025
Ukraine	Europe and Northern Asia	3,67,44,634
Angola	Africa	3,66,84,202
Uzbekistan	Asia	3,51,63,944
Yemen	Asia	3,44,49,825
Peru	Latin America and the Caribbean	3,43,52,719
Malaysia	Asia	3,43,08,525
Ghana	Africa	3,41,21,985
Mozambique	Africa	3,38,97,354
Nepal	Asia	3,08,96,590

Dataset | pivot | Dashboard

Ready | Accessibility: Investigate

DASHBOARD:

Conclusion:

The development of an Excel-based data visualization dashboard for analyzing global demographic and economic trends represents a significant contribution to data-driven decision-making processes. By providing users with a powerful tool for exploration and analysis, the dashboard empowers stakeholders to gain actionable insights and drive positive outcomes in a rapidly evolving global landscape.

The conclusions drawn from the analysis:

1. Population Trends:

- China has the largest population among the listed countries, followed by India and the United States.
- Nigeria and Pakistan also have significant populations, ranking fourth and fifth respectively.

2. Fertility Rate:

- Nigeria has the highest fertility rate among the listed countries, followed by Pakistan and India.
- Japan has the lowest fertility rate, indicating a potential demographic challenge in terms of population aging.

3. Land Area:

- Russia has the largest land area among the listed countries, followed by China and the United States.

- Bangladesh has the smallest land area, indicating potential challenges related to space for population growth and development.

4. Population Density:

- Bangladesh has the highest population density among the listed countries, followed by Japan and Pakistan.
- Russia has the lowest population density due to its vast land area and relatively smaller population.

5. GDP (Gross Domestic Product):

- The United States has the highest GDP among the listed countries, followed by China and Japan.
- Despite having a large population, India's GDP is lower compared to its population size, indicating potential economic challenges.

6. Economic Efficiency:

- Japan has a relatively high GDP per capita despite its lower population, indicating economic efficiency and productivity.
- China's GDP, while ranking high overall, is moderated by its large population, resulting in a lower GDP per capita compared to the United States.

7. Population Growth Potential:

- Countries with high fertility rates like Nigeria, Pakistan, and India may experience significant population growth in the coming years, potentially impacting infrastructure, resources, and socio-economic development.
- Countries with low fertility rates like Japan may face challenges related to aging populations and workforce shortages, which could impact economic growth and sustainability.

8.Resource Management:

- High population density countries like Bangladesh and Japan need to focus on efficient resource management, urban planning, and sustainable development to support their populations.
- Countries with vast land areas like Russia and Canada may have opportunities for resource extraction and development, but they also need to consider environmental sustainability and conservation efforts.

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