### tepav

### Economic Policy Research Foundation of Turkey

# CORRUPTION, INSTITUTIONAL QUALITY INVESTMENT CLIMATE AND ECONOMIC GROWTH IN THE MENA REGION



## **Serdar Sayan**TOBB University of Economics & Technology

and TEPAV

06560 Ankara, Turkey

serdar.sayan@etu.edu.tr



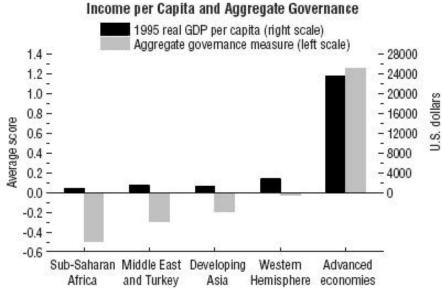
### Framework

- S. Sayan (ed.). Economic Performance in the Middle East and North Africa: Institutions, Corruption and Reform, London and New York: Routledge, 2009.
- Why (and how) do institutions matter for growth?
- Governance indicators
- Institutional quality and development in the MENA region: Where do MENA countries stand?
- Why is corruption control score significant?
- The nature of the relationship between corruption control and per capita income.

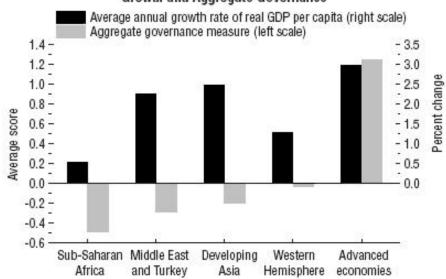


Why does institutional quality

matter?

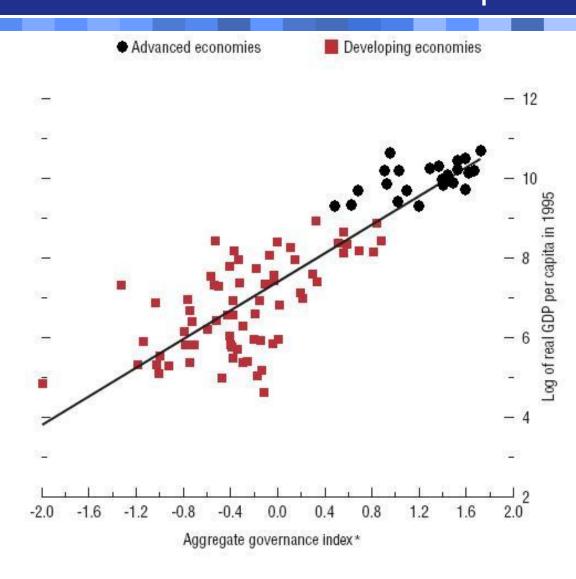








Why does institutional quality matter?



<sup>\*</sup> This index measures the overall quality of governance, including the degree of corruption, political rights, public sector efficiency, and regulatory burdens (for further details, see Appendix 3.1).

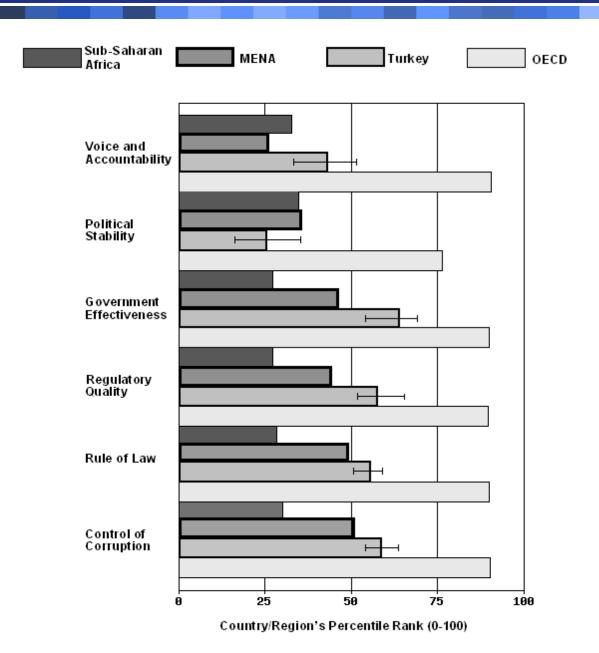


### Governance indicators

- World Bank Indicators 1996-2008
  - → Voice and accountability
  - → Effectiveness of Government
  - → Political stability
  - → Quality of regulation
  - → Rule of law
  - → Control of corruption
  - →2008 indicators are based on hundreds of specific and disaggregated individual variables measuring various dimensions of governance, taken from 35 data sources provided by 33 different organizations

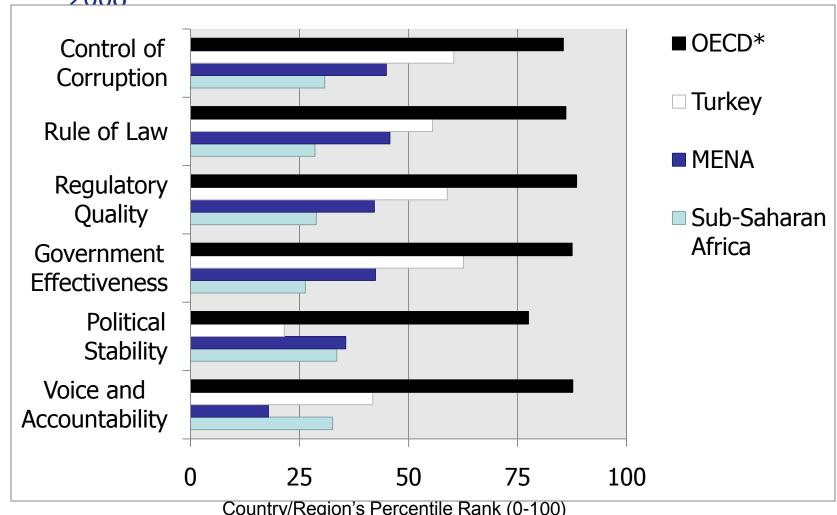


How does the region fare? 2006





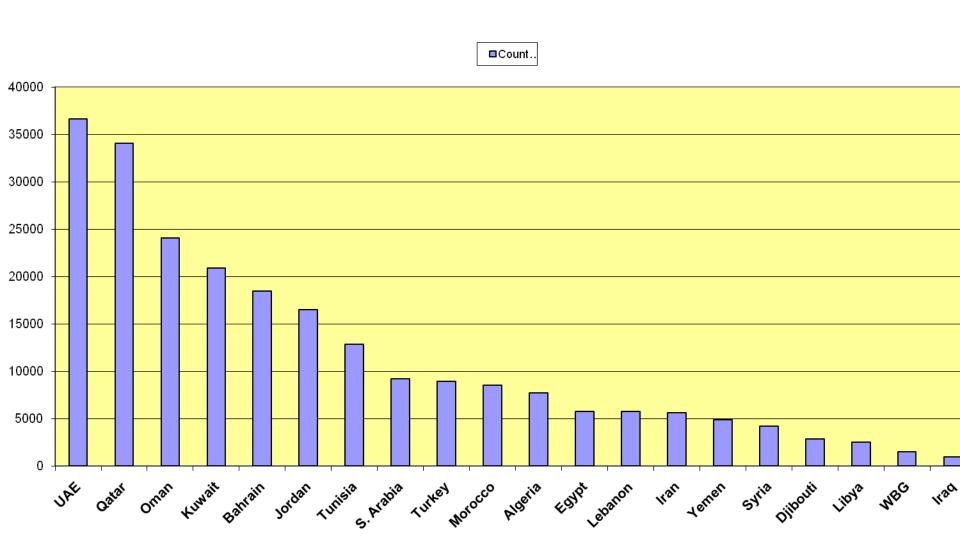
### How does the region fare? 2008



Country/Region's Percentile Rank (0-100)

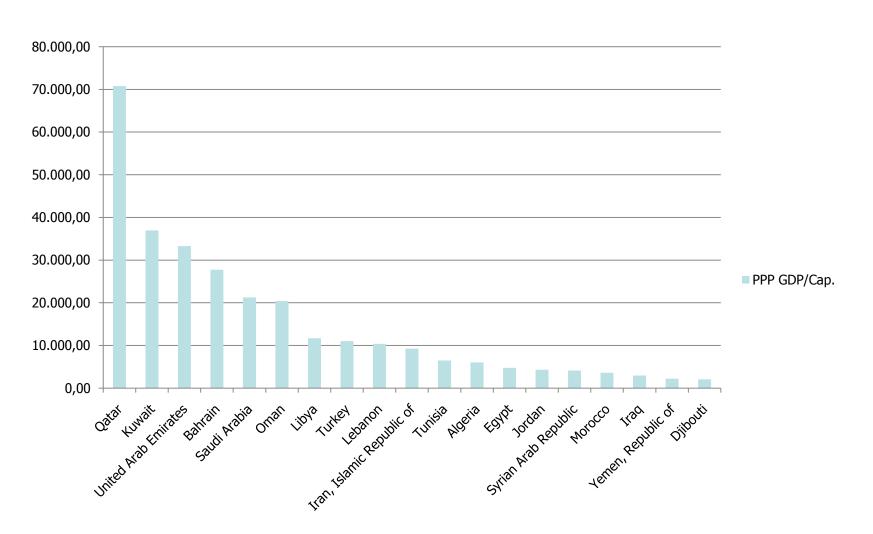


## Per capita income (PPP) (in US dollars at 2000 prices)\*



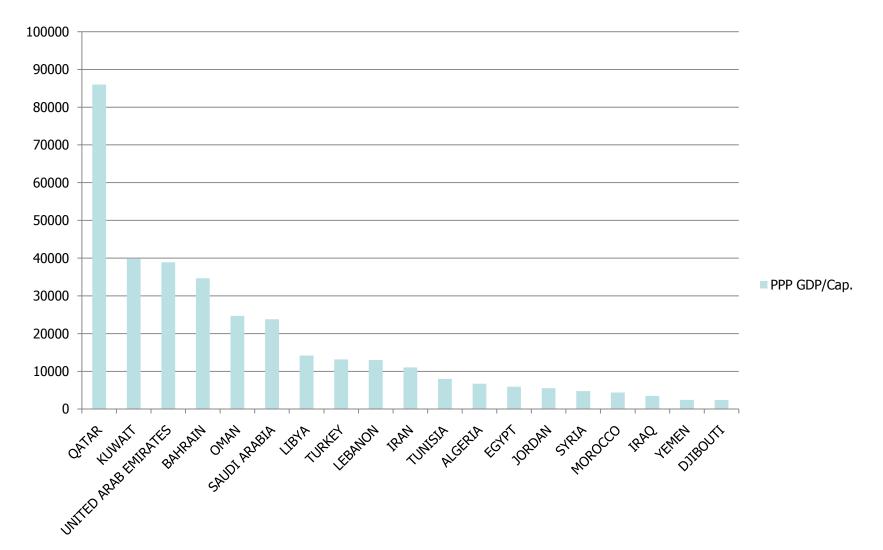


## Per capita income (PPP) - 2005 (in US dollars at current prices)





## Per capita income (PPP) - 2008 (in US dollars at current prices)



| Countries | Voice &<br>Accountability | Political<br>Stability | Government<br>Effectiveness | Regulatory<br>Quality | Rule of Law | Control of Corruption | PPP<br>GDP/Cap. |
|-----------|---------------------------|------------------------|-----------------------------|-----------------------|-------------|-----------------------|-----------------|
| UAE       | -0,78                     | 0,68                   | 0,78                        | 0,80                  | 0,67        | 1,16                  | 34109           |
| Qatar     | -0,51                     | 0,86                   | 0,53                        | 0,45                  | 0,93        | 0,83                  | 36632           |
| Oman      | -0,77                     | 0,66                   | 0,46                        | 0,75                  | 0,71        | 0,71                  | 18498           |
| Kuwait    | -0,36                     | 0,28                   | 0,28                        | 0,51                  | 0,75        | 0,67                  | 20886           |
| Bahrain   | -0,71                     | -0,42                  | 0,35                        | 0,72                  | 0,62        | 0,58                  | 24067           |
| Jordan    | -0,62                     | -0,53                  | 0,19                        | 0,41                  | 0,45        | 0,38                  | 5610            |
| Tunisia   | -1,15                     | 0,21                   | 0,55                        | 0,23                  | 0,38        | 0,20                  | 8975            |
| S. Arabia | -1,42                     | -0,65                  | -0,28                       | -0,02                 | 0,17        | 0,18                  | 16505           |
| Turkey    | -0,19                     | -0,65                  | 0,23                        | 0,21                  | 0,08        | 0,06                  | 9240            |
| Morocco   | -0,63                     | -0,31                  | 0,02                        | -0,15                 | -0,03       | -0,06                 | 5765            |
| Algeria   | -0,83                     | -0,89                  | -0,35                       | -0,61                 | -0,63       | -0,39                 | 7747            |
| Egypt     | -1,08                     | -0,87                  | -0,41                       | -0,44                 | 0,00        | -0,41                 | 4895            |
| Lebanon   | -0,51                     | -1,76                  | -0,45                       | -0,09                 | -0,49       | -0,57                 | 5775            |
| Iran      | -1,33                     | -1,25                  | -0,80                       | -1,51                 | -0,81       | -0,59                 | 8535            |
| Yemen     | -1,06                     | -1,40                  | -0,93                       | -0,68                 | -0,98       | -0,60                 | 984             |
| Syria     | -1,64                     | -0,88                  | -1,03                       | -1,24                 | -0,55       | -0,66                 | 4234            |
| Djibouti  | -0,99                     | -0,20                  | -1,01                       | -0,93                 | -0,80       | -0,67                 | 2541            |
| Libya     | -1,90                     | 0,24                   | -0,86                       | -1,40                 | -0,74       | -0,89                 | 12848           |
| WBG       | -0,81                     | -2,00                  | -1,11                       | -1,17                 | -0,63       | -1,09                 | 1500            |
| Iraq      | -1,54                     | -2,91                  | -1,70                       | -1,46                 | -1,95       | -1,40                 | 2900            |

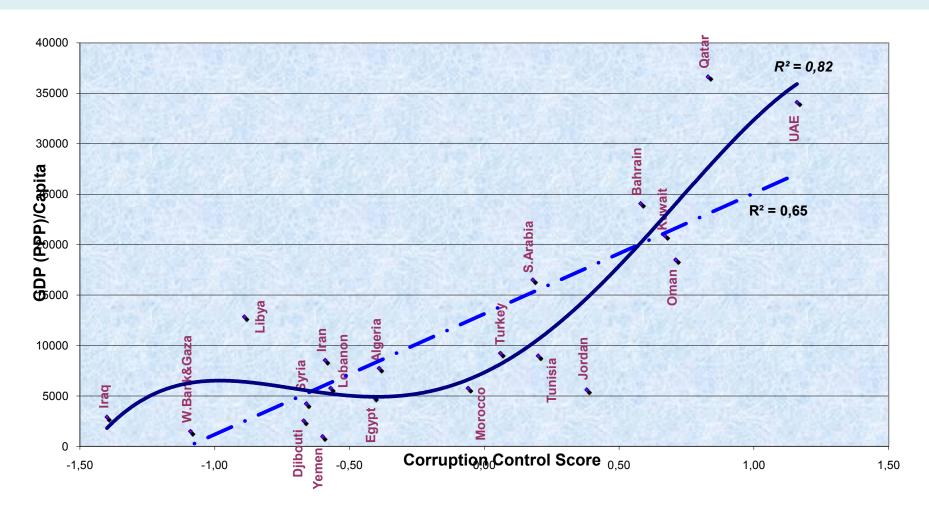


|                                | Voice &<br>Account. | Political<br>Stability | overn't<br>ect'ness | Reg.<br>Quality | Rule of<br>Law | Control of<br>Corruption | PPP<br>GDP/Cap. |
|--------------------------------|---------------------|------------------------|---------------------|-----------------|----------------|--------------------------|-----------------|
| Mean                           | -0,94               | -0,59                  | -0,28               | -0,28           | -0,14          | -0,13                    | 11612           |
| Correlation                    |                     |                        |                     |                 |                |                          | (               |
| with Control of Corruption     | 0,55                | 0,79                   | 0,95                | 0,93            | 0,94           |                          | 0,81            |
| Correlation with Income/Capita | 0,28                | 0,70                   | 0,71                | 0,66            | 0,72           | 0,81                     |                 |



## Relationship between income per capita and corruption control

#### Is it linear or non-linear?





| Countries               | Voice &<br>Accountability | Political<br>Stability | Government<br>Effectiveness | Regulatory<br>Quality | Rule of Law | Control of<br>Corruption | PPP<br>GDP/Cap. |
|-------------------------|---------------------------|------------------------|-----------------------------|-----------------------|-------------|--------------------------|-----------------|
| ALGERIA                 | -1.05                     | -1.15                  | -0.5                        | -0.79                 | -0.7        | -0.44                    | 6,709.17        |
| BAHRAIN                 | -0.82                     | -0.18                  | 0.47                        | 0.88                  | 0.66        | 0.44                     | 34,661.80       |
| DJIBOUTI                | -1.12                     | -0.13                  | -0.98                       | -0.75                 | -0.54       | -0.33                    | 2,396.31        |
| EGYPT                   | -1.19                     | -0.67                  | -0.37                       | -0.17                 | -0.09       | -0.67                    | 5,896.67        |
| IRAN                    | -1.48                     | -1.06                  | -0.75                       | -1.63                 | -0.8        | -0.71                    | 11,052.00       |
| IRAQ                    | -1.26                     | -2.69                  | -1.41                       | -1.09                 | -1.87       | -1.48                    | 3,476.76        |
| JORDAN                  | -0.71                     | -0.32                  | 0.27                        | 0.34                  | 0.49        | 0.41                     | 5,536.96        |
| KUWAIT                  | -0.53                     | 0.45                   | 0.11                        | 0.04                  | 0.7         | 0.5                      | 39,914.89       |
| LEBANON                 | -0.4                      | -1.94                  | -0.64                       | -0.2                  | -0.73       | -0.83                    | 13,005.91       |
| LIBYA                   | -1.9                      | 0.48                   | -0.84                       | -0.93                 | -0.65       | -0.81                    | 14,192.23       |
| MOROCCO                 | -0.7                      | -0.47                  | -0.09                       | -0.03                 | -0.11       | -0.26                    | 4,362.02        |
| OMAN                    | -1.07                     | 0.95                   | 0.42                        | 0.65                  | 0.82        | 0.59                     | 24,673.95       |
| QATAR                   | -0.77                     | 1.01                   | 0.68                        | 0.66                  | 0.86        | 1.24                     | 86,008.09       |
| SAUDI ARABIA            | -1.74                     | -0.39                  | 0.01                        | 0.17                  | 0.33        | 0.11                     | 23,813.91       |
| SYRIA                   | -1.75                     | -0.56                  | -0.67                       | -1.17                 | -0.54       | -1.07                    | 4,756.57        |
| TURKEY                  | -0.19                     | -0.73                  | 0.2                         | 0.22                  | 0.09        | 0.1                      | 13,138.56       |
| TUNISIA                 | -1.26                     | 0.29                   | 0.35                        | 0.11                  | 0.24        | -0.04                    | 8,002.22        |
| UNITED ARAB<br>EMIRATES | -0.98                     | 0.74                   | 0.82                        | 0.58                  | 0.75        | 1.02                     | 38,893.68       |
| YEMEN                   | -1.18                     | -1.89                  | -0.99                       | -0.7                  | -0.93       | -0.73                    | 2,410.72        |

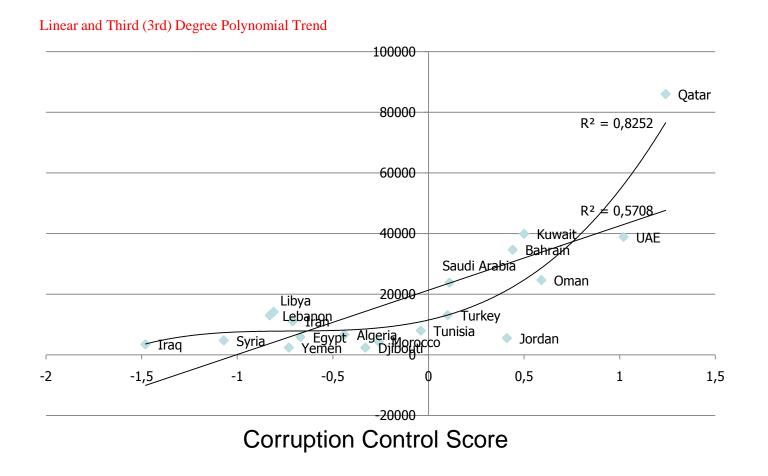


|  | Voice &<br>Account. | Political<br>Stability | Govern't<br>Effect'ness | Reg.<br>Quality | Rule of Law | Control of Corruption | PPP<br>GDP/Cap. |
|--|---------------------|------------------------|-------------------------|-----------------|-------------|-----------------------|-----------------|
| Mean                                   | -1.06               | -0.43                  | -0.21                   | -0.20           | -0.11       | -0.16                 | 18047           |
| Correlation with Control of Corruption | 0.42                | 0.77                   | 0.92                    | 0.84            | 0.93        | -                     | 0.76            |
| Correlation<br>with<br>Income/Capita   | 0.24                | 0.59                   | 0.64                    | 0.58            | 0.64        | 0.76                  | -               |



## Relationship between income per capita and corruption control

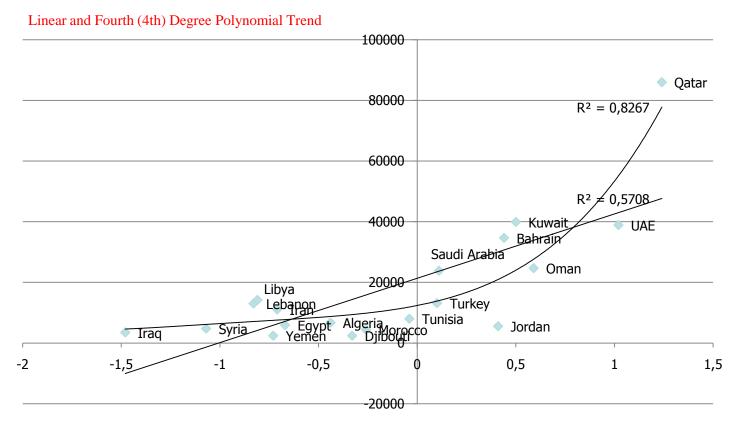
#### Is it linear or non-linear?





## Relationship between income per capita and corruption control

#### Is it linear or non-linear?



Corruption Control Score



- Tanzi and Davoodi (1997) identify four channels through which corruption may have an adverse effect on economic growth:
- higher public investment,
- lower government revenues,
- lower expenditures on business operations and maintenance,
- and lower quality of public infrastructure.
- The evidence they presented also revealed that corruption increases public investment but reduces its productivity.



Mauro (1995) identified the impact of corruption and other institutional factors, including the amount of red tape, the efficiency of the judicial system, and variables of political stability, on economic growth using a data set consisting of 67 countries for the period 1980-1983.

Running cross-country regressions, Mauro finds corruption reduces economic growth *by lowering private investment* and the relationship is robust to controlling for determinants of investment and growth.



In a follow up study, Mauro (1996) studied the influence of corruption on investment, economic growth, and government expenditure using cross-country data for 101 countries and regressions for various time periods.

Similar to his earlier work, he found corruption to adversely affect economic growth largely by reducing private investment and possibly by altering the composition of government expenditure, specifically by lowering the share of spending on education.



Mo (2000) investigated the impact of corruption on economic growth and the channels through which it affects growth using data similar to Mauro (1995).

He found that a 1% increase in the corruption level reduces the growth rate by about 0.72% and the most important channel is political instability, accounting for about 53% of the total effect.

He also found that corruption lowers the level of human capital and the share of private investment.



Busse and Hefeker (2006) investigated the links among institutions, political risk, and foreign direct investment inflows using both cross-sectional and cross-sectional timeseries analysis.

With a sample covering 83 developing countries during the period 1984-2003, their findings showed that government stability, internal and external conflict, corruption and ethnic tensions, law and order, democratic accountability of government, and quality of bureaucracy are highly significant determinants of foreign investment inflows.



Guetat (2006) attempted to separate the impact of corruption in MENA countries on growth from other countries including Latin American, Asian and Sub-Saharan Africa by estimating an economic growth model for a sample of 90 countries for the period 1960-2000.

She introduced regional dummy variables and used interaction terms between the variables in regressions and the regional dummies to distinguish among the regional-specific effects.

The results indicated that corruption deters growth more significantly in MENA countries than Latin American and other countries.



Ehrlich and Lui (1999) investigated the relationship between corruption, government, and economic growth using a panel data which includes 68 countries over the period 1981-1992.

They find that changes in both government size and corruption adversely affect the level of per capita income, but not necessarily its long-run growth rate in the more developed countries.