

Parente and Prescott update: L Balanced Panel (101 countries)

This is the 2018 update. It is the first to use PWT9.0.

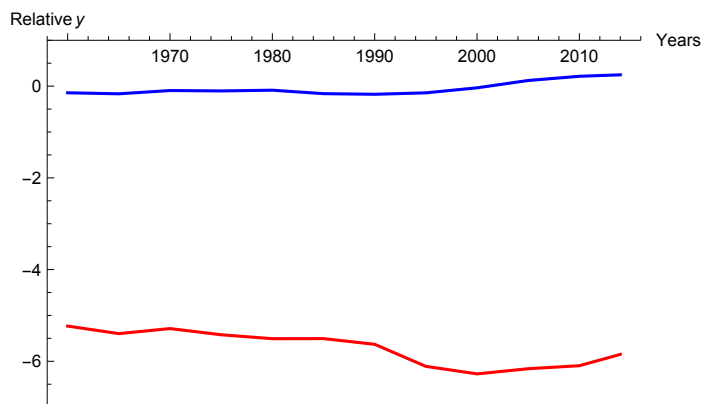
Data averaged: lowest and highest L

$\log_2 L$ for Richest and Poorest: Chart 1

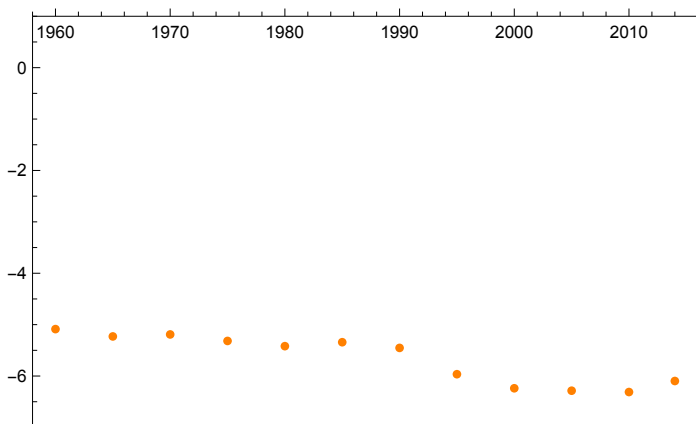
Intro

Chart 1

Show[`{grpoorR, grrichR}`, AxesLabel \rightarrow {Years, Relative y}]



```
grdiffR = ListPlot[Transpose[{dec, diffR}], PlotRange -> {{1958, 2016}, {-7, 1}},
  AxesOrigin -> {1958, 1}, PlotStyle -> Directive[PointSize[Medium], Orange]]
```



These are the factors by which the 5 richest exceed the 5 poorest.

$2^{-\text{diffR}}$

```
{33.9848, 37.5239, 36.5242, 39.8731, 42.7791,
 40.5614, 43.7966, 62.4488, 75.4927, 78.0022, 79.4189, 68.4395}
```

Standard Deviation of $\log_2 L$: Chart 2

Definitions:

The *variance* `Variance[list]` is defined to be $\text{var}(x) = \sigma^2(x) = \sum (x_i - \mu(x))^2 / (n - 1)$.

The *standard deviation* `StandardDeviation[list]` is defined to be $\sigma(x) = \sqrt{\text{var}(x)}$.

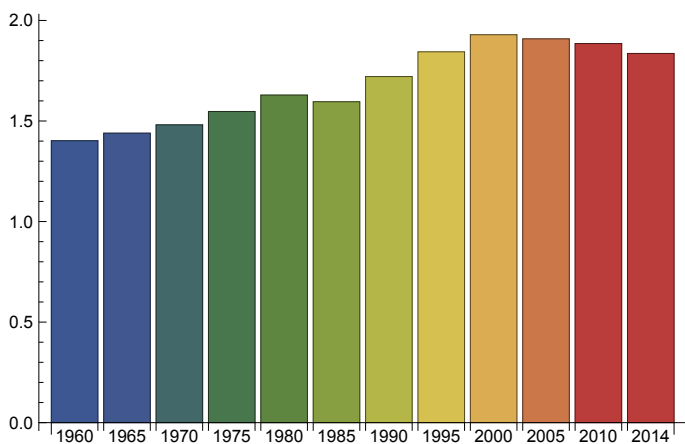
Interestingly the standard deviation of R itself rises over time, but the standard deviation of $\log(2)R$ rises then falls. This is possible because $\log(2)R = \log_2 y(j,t) - \log_2 y(US,t)$ and the latter is a constant within t. So we are really just picking up the stdev of $\log_2 y(j,t)$ (note: y = CGDP here).

Data

Chart 2

This is the bar chart of Standard Deviation ($\log_2 Y_j / Y_{US}$).

```
grstd = BarChart[stdyear, ChartLabels → dec, ChartStyle → "DarkRainbow"]
```

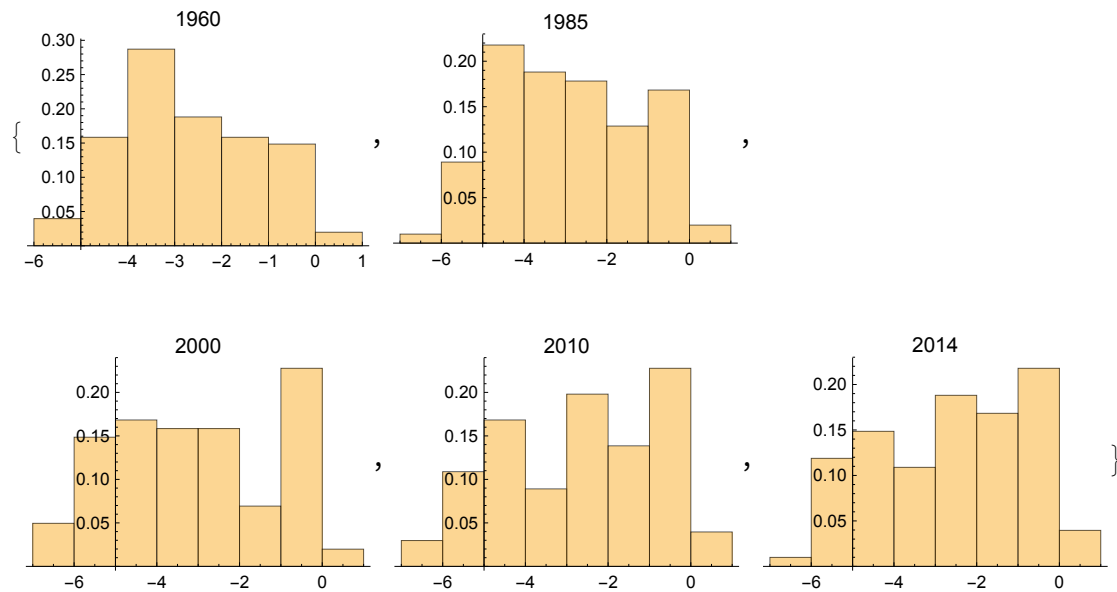


Distribution of $\log_2 L$: Chart 6

Data

Figure

```
Table[Histogram[{dt[j]}, 6, "Probability", AxesOrigin → {-5., 0.}, PlotLabel → j],
{j, {1960, 1985, 2000, 2010, 2014}}]
```



Parente and Prescott update: Q

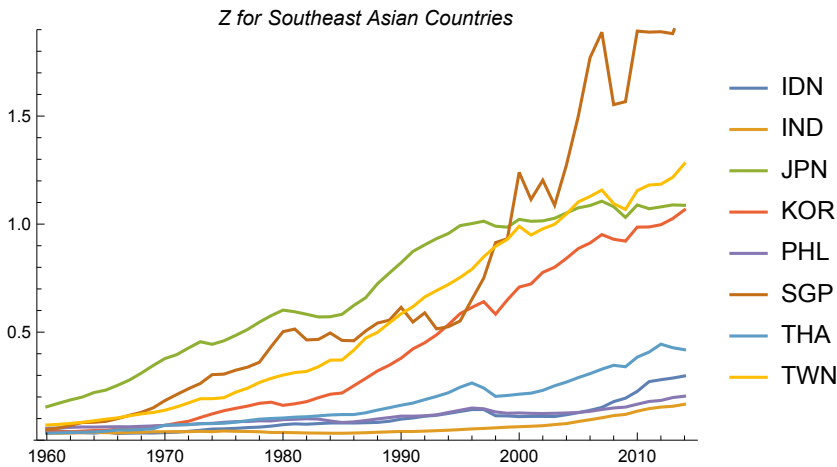
Balanced Panel (101 countries)

Southeast Asia: Chart 5

Data

Graph

```
ListLinePlot[m7, PlotLegends -> m8, PlotRange -> {0, 1.9},  
PlotLabel -> "Z for Southeast Asian Countries"]
```



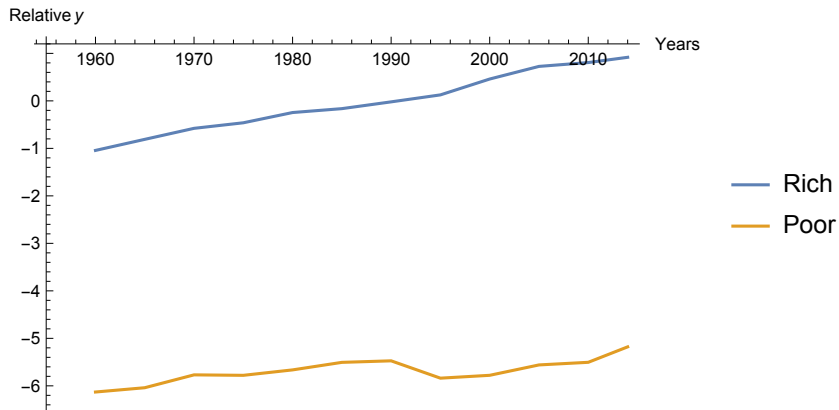
Data averaged: lowest and highest Q

Logs and Graphs: Chart 8

Intro

Chart 8

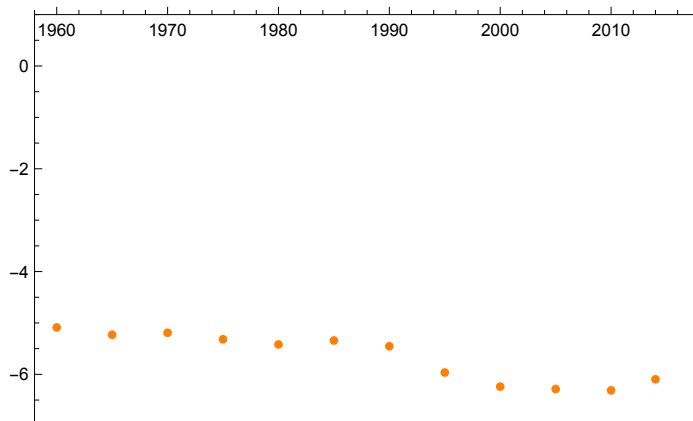
```
ListPlot[Transpose[{dec, lrichZ}], Transpose[{dec, lpoorZ}],
  Joined -> True, AxesOrigin -> {1955, 1.2},
  AxesLabel -> {Years, Relative y}, PlotLegends -> {"Rich", "Poor"}]
```



```
richZ[[-1]] (* Observation for highest 5 Z's in 2010 *)
1.88862
```

```
lrichZ[[-1]] (* In logs *)
0.917329
```

```
grdiffZ = ListPlot[Transpose[{dec, diffZ}], PlotRange -> {{1958, 2018}, {-7, 1}},
  AxesOrigin -> {1958, 1}, PlotStyle -> Directive[PointSize[Medium], Orange]]
```



These are the factors by which the 5 richest exceed the 5 poorest.

```
2-diffRr
{33.9848, 37.5239, 36.5242, 39.8731, 42.7791,
 40.5614, 43.7966, 62.4488, 75.4927, 78.0022, 79.4189, 68.4395}
```

Standard Deviation of $\log_2 Q$

Log values Q

Data

Chart

```
grstd = BarChart[stdlg2, ChartLabels -> dec, ChartStyle -> "DarkRainbow"]
```

