Comparing Economies Across Time and Space

Long run growth

**Table 1**

**Life Expectancy, 1000–2002**

(years at birth for both sexes combined)

<table>
<thead>
<tr>
<th>Year</th>
<th>World</th>
<th>West</th>
<th>Rest</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>24</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>1820</td>
<td>26</td>
<td>36</td>
<td>24</td>
</tr>
<tr>
<td>1900</td>
<td>31</td>
<td>46</td>
<td>26</td>
</tr>
<tr>
<td>1950</td>
<td>49</td>
<td>66</td>
<td>44</td>
</tr>
<tr>
<td>2002</td>
<td>66</td>
<td>79</td>
<td>64</td>
</tr>
</tbody>
</table>

What about Turkey?

- Following graphs (Tablo 1 and Grafik 2-5) are from


For a similar text in English:

Grafik 4. Kiş Winsa GSYİH, 1820-2005
Batı Avrupa ve ABD'nin Yüzdesi Olarak


Grafik 5. Kiş Winsa GSYİH, 1820-2005
Batı Avrupa ve ABD'nin Yüzdesi Olarak

The Sources of Long-Run Growth
- Definitions:

- Labor productivity
- Physical capital
- Human capital
- Technology
The aggregate production function is a hypothetical function that shows how productivity (real GDP per worker) depends on the quantities of physical capital per worker and human capital per worker as well as the state of technology.

Aggregate production function: $Y/L = f(K/L, H/L, T)$
Physical Capital and Productivity

1. The increase in real GDP per worker becomes smaller.

2. As physical capital per worker rises, productivity grows.

Technological Progress and Productivity Growth

Rising total factor productivity shifts curve up.
Aggregate and Sectoral TFP Growth in Turkey: A Growth Accounting Exercise

İzak Atiyas  Ozan Bakış

Table 3: Growth accounting for Turkey.

<table>
<thead>
<tr>
<th>Y</th>
<th>K</th>
<th>L</th>
<th>A.S</th>
<th>Lh</th>
<th>A.Sh</th>
<th>H</th>
<th>A.Hj</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971-1979</td>
<td>4.70</td>
<td>7.89</td>
<td>1.93</td>
<td>0.86</td>
<td>1.26</td>
<td>1.31</td>
<td></td>
</tr>
<tr>
<td>1980-1989</td>
<td>3.95</td>
<td>4.63</td>
<td>1.57</td>
<td>1.39</td>
<td>1.06</td>
<td>1.74</td>
<td></td>
</tr>
<tr>
<td>1990-2001</td>
<td>3.25</td>
<td>5.19</td>
<td>1.39</td>
<td>0.64</td>
<td>1.72</td>
<td>0.42</td>
<td>2.18</td>
</tr>
<tr>
<td>2002-2011</td>
<td>5.20</td>
<td>4.48</td>
<td>2.09</td>
<td>2.34</td>
<td>1.75</td>
<td>2.57</td>
<td>2.94</td>
</tr>
</tbody>
</table>

Contribution (%)

<table>
<thead>
<tr>
<th>Y</th>
<th>K</th>
<th>L</th>
<th>A.S</th>
<th>Lh</th>
<th>A.Sh</th>
<th>H</th>
<th>A.Hj</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971-1979</td>
<td>55.90</td>
<td>27.35</td>
<td>18.26</td>
<td>17.86</td>
<td>27.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1980-1989</td>
<td>39.15</td>
<td>26.45</td>
<td>35.33</td>
<td>17.89</td>
<td>44.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1990-2001</td>
<td>53.22</td>
<td>28.47</td>
<td>19.70</td>
<td>35.20</td>
<td>12.85</td>
<td>44.77</td>
<td>3.11</td>
</tr>
<tr>
<td>2002-2011</td>
<td>28.71</td>
<td>26.84</td>
<td>45.00</td>
<td>22.47</td>
<td>49.44</td>
<td>37.74</td>
<td>33.90</td>
</tr>
</tbody>
</table>

Great Depressions of the Twentieth Century*

Timothy J. Kehoe  Edward C. Prescott


\[ \log y_t = \frac{1}{1-\theta} \log A_t \]

\[ \log h_t \]

\[ \frac{1}{1-\theta} \log k_t / y_t \]
Why Growth Rates Differ

A number of factors influence differences among countries in their growth rates.

- savings and investment spending,
- foreign investment,
- education,
- infrastructure,
- research and development,
- as well as foster political stability, and
- the protection of property rights.

Poor Countries Regulate Business the Most…

Success, Disappointment, and Failure

- East Asian economies have done many things right and achieved very high growth rates.
- In Latin America, where some important conditions are lacking, growth has generally been disappointing.
- In Africa, real GDP per capita has declined for several decades, although there are some signs of progress now.

The convergence hypothesis fits the data only when factors that affect growth, such as education, infrastructure, and favorable policies and institutions, are held equal across countries.
Economics in Action: Are economies converging?

Links:

- Hans Rosling's 200 Countries, 200 Years, 4 Minutes - The Joy of Stats - BBC Four [https://www.youtube.com/watch?v=jbkSRLYSsjo](https://www.youtube.com/watch?v=jbkSRLYSsjo)