

SOUTH KOREA AND THE “ASIAN DEVELOPMENT MODEL”

GRADES: 10, 11, 12, AP Macroeconomics

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TOPIC/THEME: Economics, Asian Development

TIME REQUIRED: One to two 40-minute class periods

BACKGROUND:

In 1960 South Korea’s per capita GNP was \$76, one of the poorest in the world, behind the Philippines (\$170) and Thailand (\$220). Today the Republic of [South] Korea is in the world’s top twenty based on per capita GDP. **HOW DID KOREA GROW SO FAR SO FAST?** Following Japan’s model, The Republic of Korea (ROK), and Taiwan, Singapore, and Hong Kong, used export-driven development to achieve economic goals and wealth. These policies left most other countries and regions in the dust, despite—in nearly all cases—limited natural resources. Instead, the “Asian Model” utilized cheap labor, factory work (often in “sweatshops”), trade, and government involvement in infrastructure creation, business-friendly practices, and currency manipulation. Today Asian countries are the largest holders of U.S. Government debt in the form of Treasuries.

Prior to its economic takeoff, The Republic of Korea suffered Japanese occupation (1910 – 1945), World War II, civil unrest, partition (with it the loss of most of its power and industrial capacity to the north) and the Korean War (1950-1953). By 1953 approximately 44 percent of Korea’s pre-war assets were destroyed. Korea became one of the poorest nations on earth, with GNP less than that of the Sudan and one third that of Mexico. Beginning in 1961 with a military coup, the government of Park Chung Hee pushed exports at all cost: women sold hair, educated laborers moved to foreign countries to send money home, assembly factories were established to attract manufacturing with low wage rates. In a series of 5-year plans and high levels of trade, the economy was transformed. In the 1980s a backlash against low-wage rates and authoritarian rule led to pro-democracy demonstrations, many of them violent. Today the ROK is a democracy with one of the highest standards of living in the world.

CURRICULUM CONNECTION:

This lesson reinforces basic economic concepts: comparative advantage, free trade, compound growth (or interest) rates, and cultural capital (education, work ethic). It ties into Macroeconomic development work, but also raises questions about government’s role in planning outcomes, since ROK rebelled against its authoritarian political leadership in the 1980s. Some topics this lesson connects with: Governments’ involvement in currency manipulation; labor laws (strong or lax); ease of foreign investment; role of women (in factories); early industrial development (in the US, Western Europe and worldwide), globalization, free trade.

CONNECTION TO STUDENTS LIVES:

Based on students’ learning they can write congressional representatives to pass or shelve free trade legislation (in 2011 that was with Columbia and Republic of South Korea). Students could research reasons for the delay in passing trade legislation. Areas of concern may be worker rights, environmental standards in ROK or Colombia, and political interests in the US (and ROK, Columbia) opposed to increased trade, which is for the most part viewed by economists as a good thing.

MATERIALS REQUIRED:

- Computer with Internet access
- Outline map of world from <http://www.worldatlas.com/aatlas/printpage/worldanb.htm>
- Handout #1 GDP Per Capita and GDP Per Capita Growth Rates (attached)
- Handout #2 What is the Asian Model for Economic Development? (attached)
- Note to Teachers on Data and Answer Sheet (attached)
- Possible articles for research (URLs provided for a few to kick start the research)
- Pencils, pens.

OBJECTIVES:

Students will be able to:

- Locate countries on a world map
- Differentiate between real (inflation-adjusted) and nominal growth
- Classify countries based on real overall economic growth rates 1970-2008
- Analyze reasons for the developmental success of the “Asian Model”
- Critique the pros/cons of the Asian Model through outside research
- Formulate a formal letter to a member of Congress

STANDARDS:

National Council for History Standards: World History, Era 9, Standard 2B:

Explain the emergence of the Pacific Rim economy and analyze how such countries as South Korea or Singapore have achieved economic growth in recent decades.]

Common Core Standards: RI 7 Integrate and evaluate multiple sources of information in different media or formats (e.g. visually, quantitatively) as well as in words in order to address a question or solve a problem.

PROCEDURE:

THE DELIVERY OF THE CONTENT:

1. Hand out world outline maps and tell students to label the following countries: Brazil, Chile, China (People’s Republic); China (Hong Kong); Egypt; Ghana; Iran; Japan; Kenya; Mexico; Nigeria; Pakistan; Republic of Korea (South Korea); Singapore; South Africa; Thailand; Turkey; Vietnam. Note that all of these countries were poor by United States standards in the 1960s, and many were destitute in the 1950s.
2. Ask students to guess those countries whose standards of living, as measured by real GDP per capita, approach that of the United States today.
3. Briefly explain the difference between real (with the effects of inflation removed) and nominal (growth may seem higher because of inflation). You can use the example of a manufacturer who produces 1 item for \$1 in year one, and the next year produces a similar item which costs \$2 because of inflation--there has been no real growth in production, only nominal (i.e. numerical).
4. Ask students to guess which countries achieved the highest sustained rates of real per capita GDP growth..
5. Handout #1—“GDP Per Capita and GDP Per Capita Growth Rates”
6. Give students several minutes to compare data then direct them, in groups, to answer the questions at the bottom of the handout. (see final page following handouts, Note to Teachers on Data, for answers to questions)
7. Ask the groups to suggest ways Asia’s high growth could have been achieved. Ask what economic news students have heard about Asia, what policies they have read about or seen in the news.
8. Refer students to four articles from the time period covered (links attached in references):

- a. Susan Chira's "South Korea's Economy Facing Maturity Pangs" *NYTimes*
 - b. Paul Krugman's "In Praise of Cheap Labor" *Slate*
 - c. Paul Williamson's "The Next Miracle Region could be South Asia" *NYTimes*
 - d. "Economics 101" from *The Economist*
9. Direct students to extract reasons for economic success from the articles. Discuss. Handout #2 "The Asian Model for Economic Development" (attached). Discuss all points (see references).

THE APPLICATION OF THE CONTENT:

1. Ask students to research the pros and cons of "sweatshops" (defined as factories with one or more labor violations) and cheap labor in economic development. This leads to a very spirited debate. Students are generally astonished to find a case for low-wage factories.
2. Ask students to choose a developing country and using real data (see Shane in references) to complete one or more of the blank tables at bottom of handout #1 for per capita GDP growth and growth rates (math application). Have students research which lessons or policies of the "Asian Model" may be transferable to this country's development for class discussion or an essay: "What are the arguments for or against, or impediments to, implementation of similar policies outside East Asia.?"
3. Ask students to assess whether economic liberalism (free markets) leads to democracy. What examples pro and con can be found in Asia.

ASSESSMENT:

Assess students on class participation in overall discussion or based on role in optional sweatshop debate or country paper (see Applications).

RESOURCES:

Chira, Susan "South Korea's Economy Facing Maturity Pangs" *The New York Times*. August 23, 1987 <http://www.nytimes.com/1987/08/23/weekinreview/the-world-south-korea-s-economy-facing-maturity-pangs.html>

"Economics 101" in Free Exchange. *The Economist*. December 5th, 2006. http://www.economist.com/blogs/freeexchange/2006/12/economics_101

Kim, Linsu *The Dynamics of Korea's Technological Learning*. Boston: Harvard Business School Press. 1997 <http://hbr.org/products/5746/5746p4.pdf>

Krugman, Paul. "In Praise of Cheap Labor" *Slate* March 21, 1997. www.slate.com/id/1918/

Kuznets, Paul W. "An East Asian Model of Economic Development: Japan, Taiwan and South Korea" *Economic Development and Cultural Change*. Vol 36, No. 3 The University of Chicago Press April 1988 <http://www.jstor.org/stable/1566537>

Shane, Mathew. *Real Historical Gross Domestic Product (GDP) Per Capita and Growth Rates of GDP Per Capita for Baseline Countries/Regions (in billions of 2005 dollars) 1969-2010*" ERS International macroeconomic Data Set. December 27, 2010 www.ers.usda.gov/data/macroeconomics

Sarel, Michael. *Growth in East Asia: What we Can and What we Cannot Infer*. International Monetary Fund. September 1996. www.imf.org/external/pubs/ft/issues1/index.htm

Sung, Keuk-Je. *Korean Economic Development*, a lecture given at the Korean Studies Workshop, June 27, 2011 Korea University, June 27, 2011

Williamson, John “The Next ‘Miracle’ Region could be South Asia”. *The New York Times*. *Opinion Section* ,October 9, 1997 <http://www.nytimes.com/1997/10/09/opinion/09iht-edjohn.t.html>

**PER CAPITA GDP GROWTH
AND PER CAPITA GDP GROWTH RATES
FOR SELECTED COUNTRIES/REGIONS**

Republic of Korea

Year	GDP pc	Time Period	Av. Annual %Growth
1970	2,497	1972-80	5.62
1980	4,320	1981-90	7.34
1990	8,761	'91-2000	5.25
2000	14,468	'01-2010	3.74
2010	20,855	'71-2010	6.10

EAST ASIA:

China: People's Republic

Year	GDP pc	Time Period	Av. Annual %Growth
1970	148	1972-80	4.38
1980	226	1981-90	7.68
1990	470	'91-2000	9.4
2000	1,152	'01-2010	9.3
2010	2,802	'71-2010	7.15

China: Hong Kong (SAR)

Year	GDP pc	Time Period	Av. Annual %Growth
1970	5,071	1972-80	6.89
1980	9,622	1981-90	5.39
1990	16,158	'91-2000	2.84
2000	21,250	'01-2010	3.4
2010	29,529	'71-2010	4.98

Japan

Year	GDP pc	Time Period	Av. Annual %Growth
1970	14,740	1972-80	3.32
1980	20,375	1981-90	3.56
1990	28,875	'91-2000	0.95
2000	31,708	'01-2010	0.90
2010	34,589	'71-2010	2.61

Singapore

Year	GDP pc	Time Period	Av. Annual %Growth
1970	4,812	1972-80	7.05
1980	9,795	1981-90	4.87
1990	15,686	'91-2000	4.70
2000	24,701	'01-2010	3.19
2010	33,423	'71-2010	5.65

Thailand

Year	GDP pc	Time Period	Av. Annual %Growth
1970	619	1972-80	4.66
1980	948	1981-90	6.18
1990	1,720	'91-2000	3.39
2000	2,362	'01-2010	3.5
2010	3,323	'71-2010	4.65

Vietnam

Year	GDP pc	Time Period	Av. Annual %Growth
1970	225	1972-80	0.22
1980	230	1981-90	1.49
1990	266	'91-2000	5.66
2000	461	'01-2010	5.9
2010	817	'71-2010	2.46

*Data are REAL per capita GDP (inflation effects removed) in constant 2005 dollars (exchange rate effect removed) see Slade, M., ERS Int'l Macroeconomic Data Set 12/11

Egypt

Year	GDP pc	Time Period	Av. Annual %Growth
1970	482	1972-80	4.45
1980	718	1981-90	2.85
1990	950	'91-2000	2.75
2000	1,245	'01-2010	2.80
2010	1,639	'71-2010	3.25

Iran*

Year	GDP pc	Time Period	Av. Annual %Growth
1970	2,368	1972-80	-1.81
1980	1,990	1981-90	-0.31
1990	1,918	'91-2000	0.82
2000	2,020	'01-2010	4.01
2010	2,981	'71-2010	-0.37

Pakistan

Year	GDP pc	Time Period	Av. Annual %Growth
1970	308	1972-80	2.83
1980	386	1981-90	2.81
1990	509	'91-2000	1.40
2000	584	'01-2010	3.23
2010	801	'71-2010	2.18

Turkey

Year	GDP pc	Time Period	Av. Annual %Growth
1970	2,183	1972-80	1.74
1980	2,617	1981-90	2.92
1990	3,476	'91-2000	1.78
2000	4,100	'01-2010	2.32
2010	5,082	'71-2010	2.20

SUB-SAHARAN AFRICA

Ghana

Year	GDP pc	Time Period	Av. Annual %Growth
1970	484	1972-80	-2.14
1980	400	1981-90	-1.10
1990	354	'91-2000	1.74
2000	420	'01-2010	2.98
2010	563	'71-2010	-0.36

Kenya

Year	GDP pc	Time Period	Av. Annual %Growth
1970	314	1972-80	2.69
1980	467	1981-90	0.43
1990	486	'91-2000	1.21
2000	539	'01-2010	1.07
2010	599	'71-2010	1.96

Nigeria

Year	GDP pc	Time Period	Av. Annual %Growth
1970	553	1972-80	0.84
1980	652	1981-90	-1.22
1990	562	'91-2000	0.20
2000	573	'01-2010	3.69
2010	821	'71-2010	0.28

South Africa

Year	GDP pc	Time Period	Av. Annual %Growth
1970	4,247	1972-80	0.73
1980	4,599	1981-90	-1.20
1990	4,062	'91-2000	0.25
2000	4,154	'01-2010	2.28
2010	5,198	'71-2010	-0.04

Brazil

Year	GDP pc	Time Period	Av. Annual %Growth
1970	2,640	1972-80	5.53
1980	4,624	1981-90	-0.40
1990	4,398	'91-2000	1.02
2000	4,856	'01-2010	2.18
2010	6,010	'71-2010	2.14

Chile

Year	GDP pc	Time Period	Av. Annual %Growth
1970	2,928	1972-80	0.72
1980	3,278	1981-90	2.21
1990	4,009	'91-2000	5.05
2000	6,530	'01-2010	2.75
2010	8,548	'71-2010	2.87

Mexico

Year	GDP pc	Time Period	Av. Annual %Growth
1970	4,142	1972-80	4.36
1980	6,108	1981-90	-0.30
1990	5,884	'91-2000	1.85
2000	7,025	'01-2010	0.54
2010	7,373	'71-2010	1.85

The United States**

Year	GDP pc	Time Period	Av. Annual %Growth
1970	20,820	1972-80	2.14
1980	25,640	1981-90	2.30
1990	32,112	'91-2000	2.17
2000	39,750	'01-2010	0.69
2010	42,517	'71-2010	2.20

Other (choose a country, find the data):

Year	GDP pc	Time Period	Av. Annual %Growth
1970		1972-80	
1980		1981-90	
1990		'91-2000	
2000		'01-2010	
2010		'71-2010	

Year	GDP pc	Time Period	Av. Annual %Growth
1970		1972-80	
1980		1981-90	
1990		'91-2000	
2000		'01-2010	
2010		'71-2010	

Year	GDP pc	Time Period	Av. Annual %Growth
1970		1972-80	
1980		1981-90	
1990		'91-2000	
2000		'01-2010	
2010		'71-2010	

**the U.S. is in no way a “developing economy”. It is included as a comparison and because all data are in 2005 dollars.

Country	Total change in REAL GDP per capita 1970-2010
Brazil	127 %
Chile	192 %
China: People's Republic	1793 %
China: Hong Kong	482 %
Egypt	240 %
Ghana	16 %
Iran	26 %
Japan	134 %
Kenya	91 %
Mexico	78 %
Nigeria	48 %
Pakistan	160 %
Republic of Korea	735 %
Singapore	595 %
South Africa	22 %
Thailand	437 %
Turkey	133 %
United States	104 %
Viet Nam	263 %

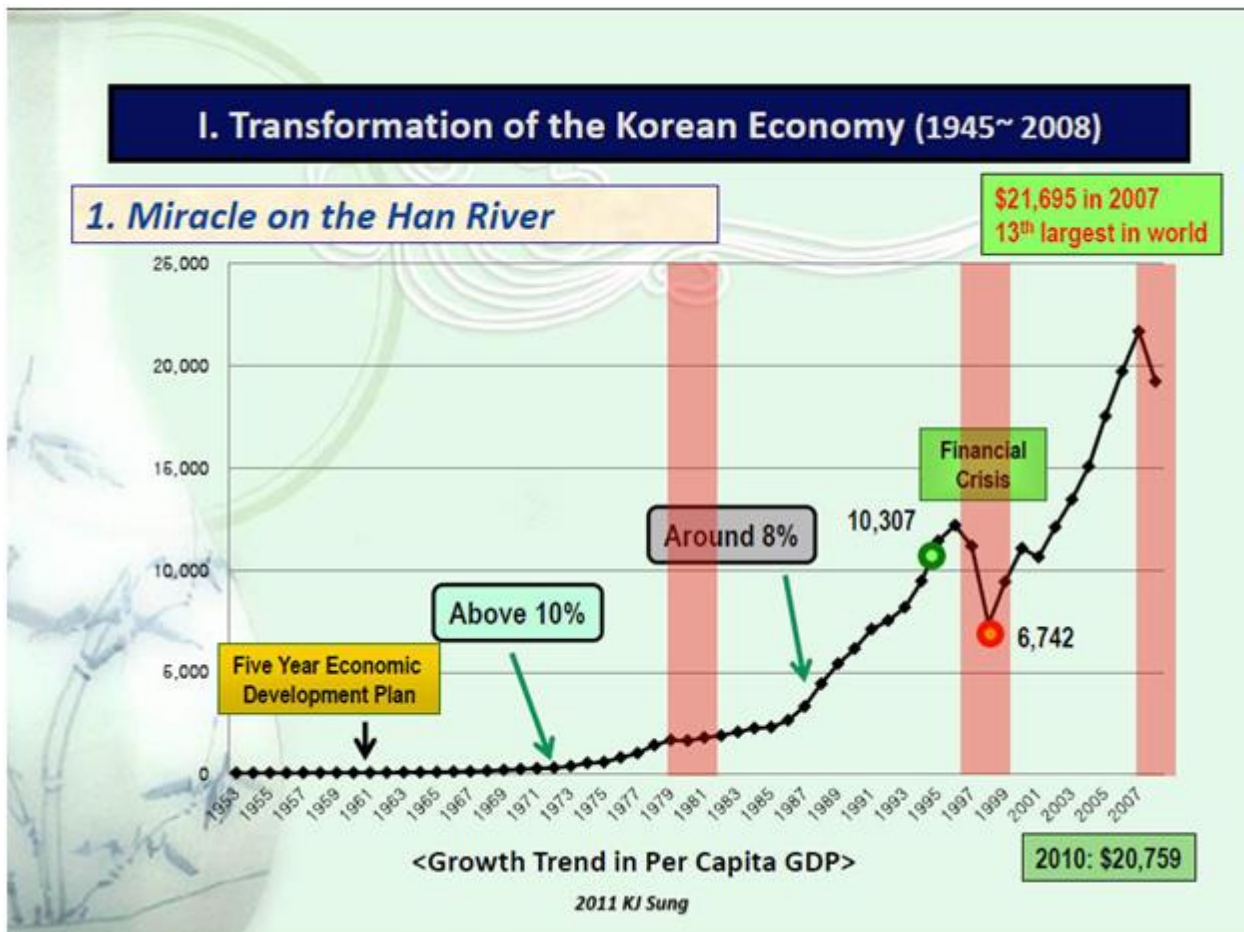
Using the tables answer the following questions:

- Which five countries had the greatest Real GDP per capita growth 1970-2010?
- Hong Kong and Singapore are virtually city-states, with no exportable natural resources. What advantages did these areas have in 1970?
- Which two countries are members of the Organization of Petroleum Exporting Countries (OPEC) and have vast oil wealth?
- The United States has the largest GDP in the world, and one of the highest GDP per capita. Explain why it had a mediocre growth rate 1970-2010 compared to some other countries.
- The Republic of Korea (South Korea) achieved stellar growth rates during the period 1960-2010. Japan achieved stellar growth in the period 1950-1990. How might the choice of time period 1970-2010 skew overall growth data for countries?
- Many of the countries listed have suffered political turmoil (wars, revolutions, regime change) that have effected economic outcomes. Identify three countries.....
- Based on the evidence above, some countries have had vastly more successful economic growth than others. What may these countries have in common?

WHAT IS THE 'ASIAN' MODEL FOR ECONOMIC DEVELOPMENT?

1. high investment ratios, including in education
2. small public sectors
3. competitive labor markets (i.e. low wage rates)
4. export orientation (including possible exchange rate depreciation)
5. government intervention in economic matters
6. low share of state-owned-enterprises in GDP

Republic of Korea as Case Study



Ambitious, but almost impossible export goals...

First draft in August, 1961, announcement in 1962
 Severe shortage in foreign reserve in 1963



Year	Export target (M)	Actual export		Growth rate
		Amount(M)	%	
1962	-	55	-	34.1%
1963	-	87	-	58.4%
1964	120	121	100.8%	39.3%
1965	170	180	106.2%	49.4%
1966	250	256	102.3%	41.7%
1967	350	359	102.5%	40.2%
1968	500	500	100.1%	39.6%
1969	700	703	100.4%	40.5%
1970	1,002	1,004	100.4%	42.8%

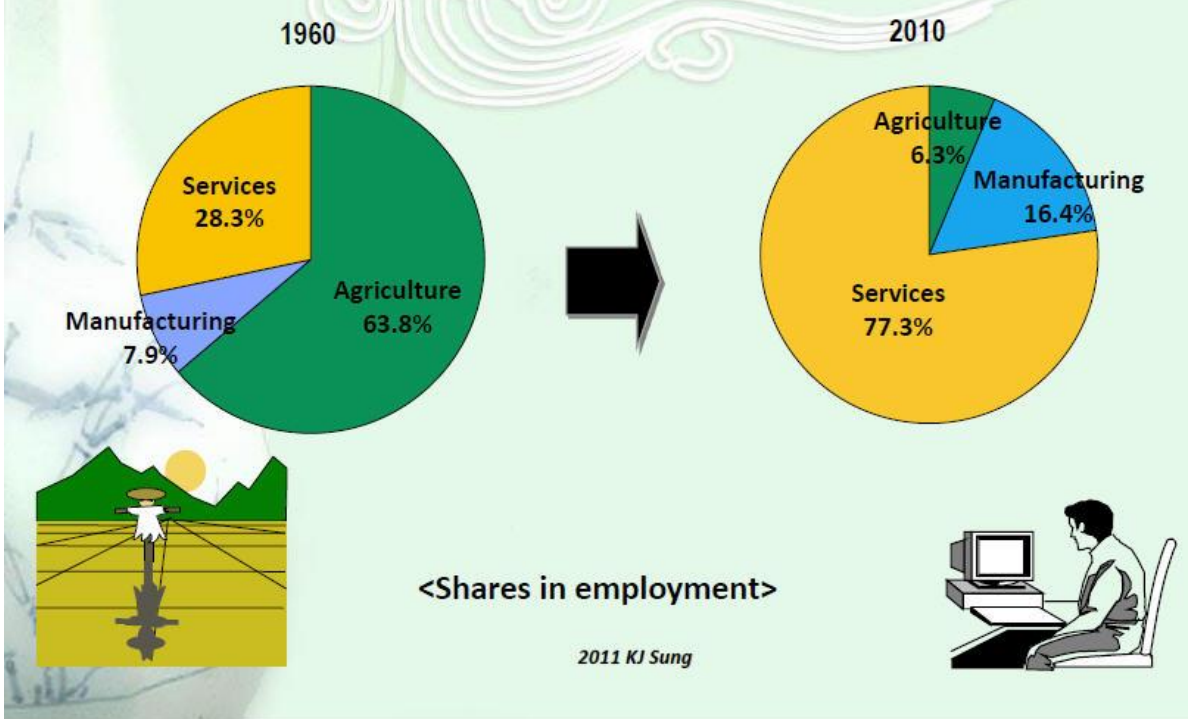
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Composition of 10 Largest Export Items

1961	2008
Iron Ore	Oil Tankers
Tungsten	Wireless Comm. Appr.
Raw yarns	Petroleum Product
Coals	Parts of Electronics
Cuttlefish	Automobile
Live Fish	Parts of Comm. Appr.
Graphite	Other Vessels
Plywood	Processors and Controllers
Rice	Memory Chips
Swine Bristles	Parts of Automobile
62% of 40.9 mil	40% of 422,007 mil

2. Changes in Industrial Structure



Note to teachers on Data:

Much data on GDP and per capita GDP growth is nominal, often referred to as “current” prices (Undata, for example). Most data series are from 1970 onwards, making it difficult to achieve consistency in the numbers. Please stress the importance of REAL vs. nominal data with the students. Inflation can amplify nominal numbers and many of the countries listed have suffered chronic (Turkey) or shorter bouts of intense inflation (Brazil).

Gross Domestic Product is used as a measure of overall economic production in a geographic region. It replaced Gross National Product (the production of citizens or companies of a nation) in 1990. Per capita GDP growth is overall GDP growth minus population growth. Clearly slower population growth boosts per capita numbers in the short run but interestingly may lead to long term problems in overall output (Japan, South Korea and much of Europe face negative population growth with replacement levels below 2.1 births per woman).

Asian Financial Crisis 1997-1998 began in Thailand with a flight out of the baht. Currencies crashed throughout East Asia and led to widespread economic suffering.

Growth rates calculated by dividing difference between 2 years’ per capita GDP by the per capita GDP of the original year.

Example:
$$\frac{1980 \text{ pcGDP} - 1970 \text{ pcGDP}}{1970 \text{ pcGDP}}$$

Answers to Handout Questions (you can add to these based on your own knowledge or research)

1. China (People’s Republic), Republic of Korea, Singapore, China (Hong Kong), Thailand. (note, Taiwan, one of the 4 Asian “Tigers” along with Korea, Singapore and Hong Kong, was omitted from the list. It’s overall growth during this period would place it in the top 5.
2. Among others, cheap labor and good ports making them ideal links in world trade.
3. Iran and Nigeria. Mexico also has significant oil reserves.
4. The U.S. is a developed country and achieved higher rates of growth earlier in its history. It is easier to achieve high growth rates off a low base (just as infants can double their weight).
5. Including earlier data would increase Korea and Japan’s overall achievement in the tables. Japan was the first to adopt the “Asian Model” as it was dubbed by the World Bank in the early 1990s. Korea began in 1961. China liberalized its economy beginning in the 1980s, India (not on this list but a significant economic player) in 1991.
6. Examples: Iran’s revolution of 1979, transformation into an Islamic Republic and war with Iraq in the 1980s; constant civil strife in Nigeria; end of Apartheid system and white rule in South Africa early 1990s; Civil War in Vietnam through mid-1970s; authoritarian regime change in Chile, Hong Kong’s absorption into People’s Republic of China late 1990s....etc.
7. Government policies can make a big difference. Other factors may include cultural capital and regional factors. Clearly Japan benefited from U.S. involvement in Korean War in early 1950s and Korea benefited from U.S. involvement in Vietnam War in 1960s.