HSC Topic One – The Global Economy

International Economic Integration

Students learn to:

Apply economic skills

- analyse statistics on trade and financial flows to determine the nature and extent of global interdependence

Students learn about:

International economic integration

- The global economy
- Gross World Product
- Globalisation
    - trade in goods and services
    - financial flows
    - investment and transnational corporations
    - technology, transport and communication
    - international division of labour, migration
- The international and regional business cycles

The Global Economy

1. Define the 'global economy'

   We live in a globalised world where national borders are beginning to be less important for consumers and businesses. We have become connected through trade and diplomatic relations as the global economy covers all trading nations.

2. Define 'economic integration'

   Economic integration is the increasing interdependence between trading nations and how this influences government decisions. Currently, Australia's trade relationship with China is precarious following Australia's petition to the W.H.O. to investigate the origins of Covid-19. This has had significant ramifications for our trade, eg China stopped barley exports from Australia.

Classification of Countries Summary of the Country Classification
Source: IMF World Economic Outlook, 2019

The country classification in the WEO divides the world into two major groups: advanced economies and emerging market and developing economies. This classification is not based on strict criteria, economic or otherwise, and has evolved over time. The objective is to facilitate analysis by providing a reasonably meaningful method of organizing data.

Some countries remain outside the country classification and therefore are not included in the analysis. Cuba and the Democratic People's Republic of Korea are examples of countries that are not IMF members, and their economies therefore are not monitored by the IMF.

3. Why would the IMF not have a 'hard' distinction between advanced and emerging economies?

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With reference to Figure 1, answer the following question

4. Advanced economies comprise ___% of the total population, with ___ countries, and contribute ___% of world GDP. While the emerging market and developing economies comprise ___% of the total population, with ___ countries, and contribute ___ % of world GDP.

5. Which countries/regions are the main contributors to world GDP? State the %. __US: 15.2%, Emerging & developing Asia: 33.3%

6. Which countries/regions are the main contributors to exports of goods and services? State the %.

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Figure 1 - Table A. Classification by World Economic Outlook Groups and Their Shares in Aggregate GDP, Exports of Goods and Services, and Population, 2018 (Percent of total for group or world)

Source: IMF World Economic Outlook, 2019

Table A. Classification by *World Economic Outlook* Groups and Their Shares in Aggregate GDP, Exports of Goods and Services, and Population, 2018[1]
(Percent of total for group or world)

	Number of Economies	GDP		Exports of Goods and Services		Population	
		Advanced Economies	World	Advanced Economies	World	Advanced Economies	World
Advanced Economies	**39**	**100.0**	**40.8**	**100.0**	**63.0**	**100.0**	**14.3**
United States		37.2	15.2	16.1	10.1	30.6	4.4
Euro Area	19	28.0	11.4	41.8	26.3	31.7	4.5
Germany		7.9	3.2	12.0	7.6	7.8	1.1
France		5.4	2.2	5.7	3.6	6.1	0.9
Italy		4.4	1.8	4.2	2.6	5.7	0.8
Spain		3.4	1.4	3.1	2.0	4.3	0.6
Japan		10.2	4.1	5.9	3.7	11.8	1.7
United Kingdom		5.5	2.2	5.4	3.4	6.2	0.9
Canada		3.3	1.4	3.5	2.2	3.5	0.5
Other Advanced Economies	16	15.8	6.4	27.3	17.2	16.1	2.3
Memorandum							
Major Advanced Economies	7	73.8	30.1	52.8	33.2	71.6	10.3

		Emerging Market and Developing Economies	World	Emerging Market and Developing Economies	World	Emerging Market and Developing Economies	World
Emerging Market and Developing Economies	**155**	**100.0**	**59.2**	**100.0**	**37.0**	**100.0**	**85.7**
Regional Groups							
Commonwealth of Independent States[2]	12	7.5	4.4	8.1	3.0	4.5	3.9
Russia		5.3	3.1	5.5	2.0	2.3	1.9
Emerging and Developing Asia	30	56.2	33.3	48.9	18.1	56.4	48.3
China		31.6	18.7	28.8	10.7	21.8	18.7
India		13.1	7.8	6.2	2.3	20.9	17.9
Excluding China and India	28	11.5	6.8	13.9	5.2	13.7	11.7
Emerging and Developing Europe	12	6.1	3.6	9.8	3.6	2.8	2.4
Latin America and the Caribbean	33	12.6	7.5	13.7	5.1	9.8	8.4
Brazil		4.2	2.5	3.0	1.1	3.3	2.8
Mexico		3.2	1.9	5.2	1.9	2.0	1.7
Middle East, North Africa, Afghanistan, and Pakistan	23	12.5	7.4	15.0	5.6	11.0	9.4
Middle East and North Africa	21	10.9	6.5	14.7	5.4	7.3	6.2
Sub-Saharan Africa	45	5.1	3.0	4.5	1.7	15.6	13.4
Excluding Nigeria and South Africa	43	2.7	1.6	2.6	1.0	11.7	10.0
Analytical Groups[3]							
By Source of Export Earnings							
Fuel	28	17.3	10.2	22.0	8.2	11.8	10.1
Nonfuel	126	82.7	49.0	78.0	28.9	88.2	75.6
Of Which, Primary Products	35	5.0	3.0	5.1	1.9	8.9	7.6
By External Financing Source							
Net Debtor Economies	122	51.5	30.5	49.4	18.3	68.3	58.5
Net Debtor Economies by Debt-Servicing Experience							
Economies with Arrears and/or Rescheduling during 2013–17	27	3.5	2.1	2.5	0.9	6.5	5.5
Other Groups							
Heavily Indebted Poor Countries	39	2.5	1.5	1.9	0.7	11.7	10.0
Low-Income Developing Countries	59	7.3	4.3	6.9	2.5	23.0	19.7

Gross World Product

The size of the global or world economy is measured by the International Monetary Fund (IMF) through the compilation of data which values countries' Gross Domestic Products (GDPs) at purchasing power parities (PPP). World GDP at PPP is the total market value of all goods and services produced by all countries over a given time period (usually one year), adjusted for national variations in prices and different exchange rates. World GDP at PPP is valued in US dollars as this is the world's reserve currency and is a measure of the value of world output or production in real terms (Riley, 2019, p. 6).

7. Define 'Gross World Product' (GWP)

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8. Why would GWP be measured against US dollars?

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Figure 2 - Table A1. Summary of World Output (Annual percent change)

Source: IMF World Economic Outlook, 2019

	Average									Projections		
	2001–10	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2024
World	**3.9**	**4.3**	**3.5**	**3.5**	**3.6**	**3.4**	**3.4**	**3.8**	**3.6**	**3.3**	**3.6**	**3.7**
Advanced Economies	**1.7**	**1.7**	**1.2**	**1.4**	**2.1**	**2.3**	**1.7**	**2.4**	**2.2**	**1.8**	**1.7**	**1.6**
United States	1.7	1.6	2.2	1.8	2.5	2.9	1.6	2.2	2.9	2.3	1.9	1.6
Euro Area	1.2	1.6	–0.9	–0.2	1.4	2.1	2.0	2.4	1.8	1.3	1.5	1.4
Japan	0.6	–0.1	1.5	2.0	0.4	1.2	0.6	1.9	0.8	1.0	0.5	0.5
Other Advanced Economies[2]	2.8	3.0	2.0	2.3	3.0	2.0	2.1	2.7	2.2	1.9	2.2	2.2
Emerging Market and Developing Economies	**6.2**	**6.4**	**5.4**	**5.1**	**4.7**	**4.3**	**4.6**	**4.8**	**4.5**	**4.4**	**4.8**	**4.9**
Regional Groups												
Commonwealth of Independent States[3]	5.5	5.3	3.6	2.5	1.0	–1.9	0.8	2.4	2.8	2.2	2.3	2.4
Emerging and Developing Asia	8.4	7.9	7.0	6.9	6.8	6.8	6.7	6.6	6.4	6.3	6.3	6.1
Emerging and Developing Europe	3.9	6.7	2.6	4.9	3.9	4.8	3.3	6.0	3.6	0.8	2.8	3.1
Latin America and the Caribbean	3.2	4.6	2.9	2.9	1.3	0.3	–0.6	1.2	1.0	1.4	2.4	2.8
Middle East, North Africa, Afghanistan, and Pakistan	5.1	4.4	4.8	2.6	2.9	2.6	5.2	2.2	1.8	1.5	3.2	2.8
Middle East and North Africa	5.1	4.4	4.9	2.4	2.7	2.4	5.3	1.8	1.4	1.3	3.2	2.8
Sub-Saharan Africa	5.9	5.3	4.7	5.2	5.1	3.2	1.4	2.9	3.0	3.5	3.7	4.0
Memorandum												
European Union	1.6	1.8	–0.3	0.3	1.9	2.4	2.1	2.7	2.1	1.6	1.7	1.6
Low-Income Developing Countries	6.5	5.3	4.7	6.0	6.0	4.6	3.6	4.9	4.6	5.0	5.1	5.3
Analytical Groups												
By Source of Export Earnings												
Fuel	5.5	5.2	5.0	2.6	2.2	0.3	2.1	1.0	1.0	0.7	2.3	2.1
Nonfuel	6.4	6.7	5.4	5.7	5.3	5.2	5.1	5.6	5.3	5.1	5.3	5.3
Of Which, Primary Products	4.2	5.0	2.5	4.1	2.1	2.8	1.8	3.0	1.7	2.1	3.1	3.7
By External Financing Source												
Net Debtor Economies	5.1	5.3	4.4	4.7	4.5	4.1	4.1	4.8	4.6	4.4	4.8	5.2
Net Debtor Economies by Debt-Servicing Experience												
Economies with Arrears and/or Rescheduling during 2013–17	4.7	2.6	1.6	3.0	1.9	1.0	2.8	3.3	3.8	3.8	4.5	5.0
Memorandum												
Median Growth Rate												
Advanced Economies	2.2	1.9	1.0	1.5	2.5	2.3	2.4	2.8	2.7	2.1	2.2	2.0
Emerging Market and Developing Economies	4.5	4.7	4.4	4.2	3.7	3.3	3.3	3.5	3.2	3.5	3.5	3.6
Low-Income Developing Countries	5.2	6.0	5.1	5.2	5.0	3.9	4.2	4.7	3.9	5.0	5.0	5.0
Output per Capita[4]												
Advanced Economies	1.1	1.2	0.7	0.9	1.6	1.7	1.2	1.9	1.8	1.3	1.3	1.2
Emerging Market and Developing Economies	4.6	4.9	3.6	3.6	3.2	2.8	3.1	3.3	3.2	3.0	3.5	3.6
Low-Income Developing Countries	3.8	3.6	1.7	3.7	3.7	2.2	1.2	2.6	2.4	2.7	2.9	3.1
World Growth Rate Based on Market Exchange Rates	**2.5**	**3.1**	**2.5**	**2.6**	**2.8**	**2.8**	**2.5**	**3.2**	**3.1**	**2.7**	**2.9**	**2.9**
Value of World Output (billions of US dollars)												
At Market Exchange Rates	49,851	73,245	74,639	76,770	78,852	74,689	75,735	80,145	84,740	87,265	92,310	114,577
At Purchasing Power Parities	70,655	95,045	99,926	105,120	110,836	115,750	120,828	127,693	135,178	142,046	150,169	187,689

Refer to Figure 2 to answer the following questions

9. What is the projection of growth over the next three years?

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10. The growth in 2019 is attributed mainly which type of economies? Why do you think this?

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11. Which regions/areas have strong growth in 2019?

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12. Which regions/areas have weak growth in 2019?

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13. Are there any concerns about the accuracy of the data? Such as??

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_____

Gross World Product (GWP)

Source: IMFDataMapper, 2021

14. What is the general trend of the graph over the past 40 years?

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Globalisation (over two pages)

15. Complete the table below using the textbook. This table goes over two pages.

Indicator	Definition & Description	Relationship to Globalisation
Trade in goods and services		
Financial flows		
Investment and transnational corporations		
Technology, transport and communication		
International division of labour, migration		

Discussion (+/-) on Globaliastion	Evaluation to Globalisation

Fault Lines Widen in the Global Recovery

Source: IMF

- Economic prospects have diverged further across countries since the April 2021 World Economic Outlook (WEO) forecast. Vaccine access has emerged as the principal fault line along which the global recovery splits into two blocs: those that can look forward to further normalization of activity later this year (almost all advanced economies) and those that will still face resurgent infections and rising COVID death tolls. The recovery, however, is not assured even in countries where infections are currently very low so long as the virus circulates elsewhere.

- The global economy is projected to grow 6.0 percent in 2021 and 4.9 percent in 2022.The 2021 global forecast is unchanged from the April 2021 WEO, but with offsetting revisions. Prospects for emerging market and developing economies have been marked down for 2021, especially for Emerging Asia. By contrast, the forecast for advanced economies is revised up. These revisions reflect pandemic developments and changes in policy support. The 0.5 percentage-point upgrade for 2022 derives largely from the forecast upgrade for advanced economies, particularly the United States, reflecting the anticipated legislation of additional fiscal support in the second half of 2021 and improved health metrics more broadly across the group.

- Recent price pressures for the most part reflect unusual pandemic-related developments and transitory supply-demand mismatches. Inflation is expected to return to its pre-pandemic ranges in most countries in 2022 once these disturbances work their way through prices, though uncertainty remains high.

- Elevated inflation is also expected in some emerging market and developing economies, related in part to high food prices. Central banks should generally look through transitory inflation pressures and avoid tightening until there is more clarity on underlying price dynamics. Clear communication from central banks on the outlook for monetary policy will be key to shaping inflation expectations and safeguarding against premature tightening of financial conditions. There is, however, a risk that transitory pressures could become more persistent and central banks may need to take preemptive action.

- Multilateral action has a vital role to play in diminishing divergences and strengthening global prospects. The immediate priority is to deploy vaccines equitably worldwide.

- Countries also need to redouble collective efforts to reduce greenhouse gas emissions. These multilateral actions can be reinforced by national-level policies tailored to the stage of the crisis that help catalyze a sustainable, inclusive recovery. Concerted, well-directed policies can make the difference between a future of durable recoveries for all economies or one with widening fault lines—as many struggle with the health crisis while a handful see conditions normalize, albeit with the constant threat of renewed flare-ups.

The international and regional business cycles

16. Define the four phases of the business cycle
    a. Downturn — In a downturn, economic growth begins to weaken and unemployment and inflation can be experienced.
    b. Recesion — In a recession, the economic outlook can be bleak with negative economic growth and a contractionary phase of economic activity.
    c. Recovery — Employment figures will begin to lift, consumer and business confidence becomes more upbeat and inflationary pressures may begin to emerge.
    d. Boom — In a boom, an economy will experience economic growth, full employment and governments will use a restrained fiscal policy and experience budget surpluses.
17. Define the 'international business cycle'

    The international business cycle refers to the integration of individual economy's business cycles as trade and integrated financial networks transmit economic events across wider areas of influence.

18. Define the 'regional business cycle'

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19. How has globalisation impacted the international business cycle

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20. The international and regional business cycle is strengthened through the following transmissions of economic activity. Match the transmissions to the definition.

Transnational corporations (TNC)	If there is a boom or recession in one country, this will affect its demand for goods and services from other nations
Financial market and confidence	Stronger economic conditions of one country will make it more likely that businesses in that country will invest in new operations in other nations, which will then add economic growth
Trade flows	Means by which global upturns and downturns are spread throughout the global economy
Commodity prices	Consumer confidence of investors are constantly influenced by conditions in other countries
Investment flows	Monetary policy conditions in individual economies are increasingly influenced by interest rate changes in other countries.
Global interest rate levels	Global prices of key commodities play a critical role in the general level of inflation in the world economy, and therefore affect investment, employment and growth

21. List the factors which weaken global economic integration of individual economies

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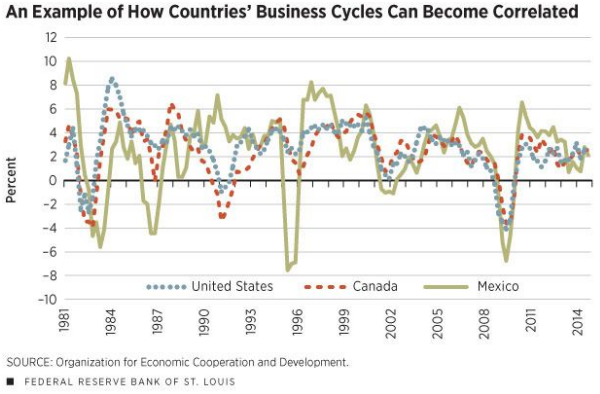
Regional vs. Global: How Are Countries' Business Cycles Moving Together These Days?
Source: By Diana A. Cooke , M. Ayhan Kose , Christopher Otrok , Michael T. Owyang, Federal Reserve Bank of St. Louis, Thursday, April 16, 2015

An economy moves between extended periods of positive output growth (expansions) and shorter periods of negative growth (recessions). Shifting between these phases is typically referred to as the business cycle. This cycle is a prominent feature in economies—both advanced and developing—and can be correlated across countries. The correlation of business cycles implies that groups of countries are in the same phase for stretches of time. An example of this can be seen in the figure, which shows the annual gross domestic product (GDP) growth rates in the United States, Canada and Mexico from 1981 through 2014. Notice that U.S. and Canadian data moved similarly over the past 30 or so years. In the past decade, the Mexican economy also fell into sync: The correlation between U.S. and Mexico increased by over 100 percent.



Business cycle synchronicity might occur because countries experience shocks common to all countries (e.g., oil price shocks that increase or decrease the price of oil for everyone) or shocks common to countries in the same region (e.g., weather disruptions or regional conflicts). Alternatively, shocks could occur in one country and propagate rapidly to nearby countries. The degree to which business cycles synchronize across countries might depend on, among other things, physical distance, the amount of bilateral trade, similarities in institutions or language, or historical trade routes.

One way to think about business cycle synchronicity is to imagine each country's business cycle as having a global component, a regional component and a country component. The global component captures the common movements in all countries' business cycles and represents global synchronicity. The regional component captures the common movements with a country's (possibly geographic) neighbors and represents regional synchronicity. A country component captures the movements in the business cycle that are unique to that country and lead to a more independent business cycle.

The strength of the correlation of countries' business cycles depends on the relative importance of these components. For example, if the regional component of a country's cycle is larger than the global and country components, the country may appear more synchronized with its neighbors than with the world as a whole. In a 2003 article, economists Ayhan Kose, Christopher Otrok and Charles Whiteman assessed the relative importance of the global, regional and country components of business cycles in 60 countries. In their initial sample (1960 to 1990), they found that the global and country components explained a substantial portion of the cyclical movements for most countries; regional components explained far less.

Over time, determinants of business cycle synchronicity—institutions, trade patterns, etc.—can change. For example, the formation of the European Union and the ratification of the North American Free Trade Agreement enabled goods to flow more easily across borders. Declines in transportation costs and the ability of more ports to off-load large shipping containers also may have increased bilateral trade between countries that previously may not have traded. In the past, more openness in trade led to globalization; more recently, regional trade agreements may have shifted the landscape toward more regionalized—rather than globalized—business cycle synchronicity.

In a more recent paper, economists Hideaki Hirata, Kose and Otrok found that the importance of regional cycles—especially in Europe and Asia—had risen substantially. Understanding synchronicity—and, in particular, which countries are synchronized—can be an important component for implementing countercyclical policy. Downturns in other countries that have synchronous cycles can forecast domestic downturns, leading to more timely policy. Understanding synchronicity can also provide insight into the impact of trade diversification, of the increase in financial flows and of regional trade agreements, all of which have helped to define the global economy in the 21st century.

In this article, we document some facts about business cycle synchronicity—in particular for countries in the Organization for Economic Cooperation and Development (OECD). We focus on the global and regional components, which indicate cross-country comovement, rather than the country components, which indicate how data within the country move. We first consider the importance of these components for each country's cycle over a 30-year period beginning in 1960. Countries are sorted into seven "continental" regions based on geographic proximity.3 We then consider whether geographically defined regions are

optimal and provide some evidence for using economic institutions, in addition to physical distance, as a measure of forming regions. Finally, we document whether the regional component of countries' cycles has become more important.

Documenting International Business Cycles

Although business cycles are most commonly used to describe the state of a single country's economy, globalization and the proliferation of regional trade agreements have prompted economists to study common movements of these cycles across multiple countries. The eurozone, for example, is an economic and monetary union consisting of 19 European countries. These countries are in close geographic proximity, have adopted the euro as their form of currency and are members of the European Union, which facilitates freer flow of trade among member countries. Changes in the European Central Bank's monetary policy, then, can affect all of the countries in the monetary union and make their business cycles move together. This interconnectedness means that shocks—good or bad—will be experienced by all member countries. The European Central Bank's quantitative easing has already played a role in increasing forecasts of GDP growth across all member countries. On the other hand, the uncertainty surrounding the rumored exit by Greece from the eurozone could destabilize the European economy.

In the aforementioned 2003 article, Kose, Otrok and Whiteman examined how 60 countries' business cycles were related. The countries and their continental regions are shown in the accompanying table. In particular, they considered whether the countries moved together as a whole, whether countries on the same continent moved together or whether each country moved independently of the others. Using the growth rates of output, consumption and investment, they measured the fraction of each country's business cycle attributable to global, regional and country components. Although each of these components is unobserved, they can be inferred from the data, and the sum of these components is a proxy for the business cycle.

Two Ways of Looking at Countries' Business Cycle Synchronization

Latin America	Europe	Africa	North America
Costa Rica	Austria	Cameroon	Canada
Dominican Republic	Belgium	Ivory Coast	Mexico
El Salvador	Denmark	Kenya	U.S.
Guatemala	Finland	Morocco	
Honduras	France	Senegal	**Asia (Developing)**
Jamaica	Germany	South Africa	Bangladesh
Panama	Greece	Zimbabwe	India
Trinidad	Iceland		Indonesia
Argentina	Ireland	**Asia (Developed)**	Pakistan
Bolivia	Italy	Hong Kong SAR	Philippines
Brazil	Luxembourg	Japan	Sri Lanka
Chile	Netherlands	Malaysia	
Colombia	Norway	Singapore	**Oceania**
Ecuador	Portugal	South Korea	Australia
Paraguay	Spain	Thailand	New Zealand
Peru	Sweden		
Uruguay	Switzerland		
Venezuela	United Kingdom		

The relative importance of each component suggests the degree of that country's interconnectedness. The comovement of all 60 countries is significant, indicating that there is a world business cycle: Fifteen percent of the deviation in world output growth away from the norm was experienced by all 60 countries in the sample. Similarly, 9 percent and 7 percent of deviation in world consumption and investment growth, respectively, were commonly experienced by all countries. However, the importance of the global component varies across countries, indicating that some countries are more interconnected than others. The global component is more important for explaining economic activity of advanced, industrialized countries than of developing nations. When considering only the countries in the so-called Group of 7, the share of the fluctuations in output growth explained by the global component more than doubles and the share of the fluctuations in consumption growth explained by the global component more than quadruples.4

The importance of the global component suggests some interconnectedness across all of the countries during world economic downturns. The regional components, however, appear to explain only a small percentage of business cycle fluctuations, suggesting that regional interconnectedness is very limited for most countries. In particular, the regional component for (pre-European Union) Europe explains only 2 percent of the variation in the three economic variables (output, consumption and investment). The regional component for North American countries, on the other hand, explains a larger proportion of output variation than that for Europe, roughly equal to the contribution of the global component.

The business cycles of most African and Asian (developed and developing) countries do not appear to comove with either their regional neighbors or the rest of the world. In these regions, the country component plays the dominant role in explaining movements in

the economic variables; the contributions from both the global and regional components are small. This lack of synchronicity may result from these countries' having relatively small international trade sectors or from the compositions of their economies. For example, many of the African countries in the sample have relatively large agricultural sectors.

What Is a Region?

It is puzzling why the regional component's contribution to the business cycle is small compared with the contributions of the other components. If trade is a substantial determinant of interconnectedness, low regional correlation may suggest that intraregional trade is not important compared with overall trade. If true, this finding confounds the notion that iceberg costs—transportation costs that increase over geographic distance—decrease the propensity to trade.5 (See sidebar.) Instead, other factors—e.g., language or institutions—may play a more important role.

In a 2012 paper, economists Neville Francis, Michael Owyang and Ozge Savascin found that the regional component is more important when the "region" is defined differently from simple geography. Regions based solely on geographic distance may mute the regional comovement, especially if iceberg costs are not the primary determinant of trade. Rather than choose the regions based on location, regions are created based on country-specific factors, such as the degree of economic openness to trade, the investment share of real gross domestic product, the method of conflict resolution, the legal system, language, and composition of trade and production.

The data suggest that the countries can be sorted into three groups. The accompanying table highlights the differences in the geographic regions of Kose, Otrok and Whiteman and the alternative regions of Francis, Owyang and Savascin. The latter regions are organized by color. The first group consists of the many industrialized nations, including Japan and most of Europe. The second group consists of the United Kingdom and many of its former British Commonwealth countries: Australia, Canada, India, New Zealand, South Africa and the United States. A few other countries in Africa and Asia are included in this second group. The final cluster consists of South American countries, along with Mexico, Morocco, Senegal and the Philippines. Consistent with the findings of Kose, Otrok and Whiteman, African countries' business cycles were primarily driven by the country-level component and not assigned to any region with any level of confidence.

Analysis of the formation of groups of countries into regions highlights the important features of international business cycles. While there is a role for a geographic component of regional business cycle synchronization—most European countries were grouped together, and most South American countries were grouped together—other country-specific characteristics appear to also determine business cycle synchronization within regions. Countries with common cultures—especially, languages—and common legal systems tend to have similar business cycles. Thus, Mexico is grouped with its shared-language South American neighbors, and the United States and the United Kingdom are grouped together.

Regions defined in this manner increase the share of output growth fluctuations attributable to the regional component, raising its importance relative to the global and country-specific components. Defining regions based solely on location, the regional component explains just over 2 percent of the fluctuations in output growth; these new regional components explain over 22 percent of the fluctuations in output growth. This dramatic increase in the significance of the regional component indicates that the importance of the regional factor may be misrepresented when countries are sorted into purely geographic regions. National policy is less effective if the nature of economic linkages between countries is misunderstood; thus, classification of countries into "regions" continues to evolve to match trends in trade and financial flows.

A Rise in Regionalization?

In the past 30 years, regional linkages and trade agreements have increased substantially. If trade and financial flows across countries are becoming increasingly regional, the regional component may also find a rise in importance. In a 2013 article, Hirata, Kose and Otrok studied whether economic linkages are becoming increasingly global or increasingly regional. Globalization of trade and finance might lead to stronger economic linkages among all countries, regardless of regions. But the resilience of the Asian economy during the 2008-2009 financial crisis suggests a potential increase in regional versus global linkages.

In order to assess whether the regional components of business cycles have increased in importance, the sample can be split into two periods, 1960-1984 and 1985- 2010, during which the number of regional trade agreements increased from five to 200 and during which global and financial flows increased substantially. When the sample is split, more importance is found in the regional component in the second period. For example, the average contribution of the global component to fluctuations in the output growth rate fell from 13 percent in 1960-1984 to 9 percent in 1985-2010. On the other hand, the average contribution of the regional component to fluctuations in the output growth rate rose from 11 percent in 1960-1984 to 19 percent in 1985-2010.

The proliferation of regional trade agreements over the past 30 years might help explain the increasing significance of economic linkages. For example, Canada, Mexico and the United States implemented the North American Free Trade Agreement in 1994 to eliminate barriers to trade and investment. Subsequently, intraregional trade flows in North America accounted for nearly 55 percent of total trade during the past decade. Similarly, the establishment of the European Union and the creation of the eurozone increased intraregional trade flows in Europe to roughly 75 percent of total trade during the past decade.

The increase in regional synchronization might be attributed to the diversification of industry and the acceleration of trade in the second period. For example, the diversification of trade increases the degree of sectoral similarity across countries, increasing the likelihood that countries are exposed to similar shocks and contributing to the convergence of business cycles.

Business cycles track movements in the economy. With the rise in openness to trade, business cycles have become increasingly interconnected. Understanding the nature of comovement of business cycles is important for the formulation of domestic policies to stabilize business cycles. If business cycles are largely global in nature, then domestic policy within one country will have little impact on the nation's economy, unless accompanied by global economic reform. If business cycles are largely regional in response to trade agreements, one should consider coordinating macroeconomic stabilization policies as part of the formulation of a free-trade zone. Lastly, domestic policy should focus on smoothing business cycle fluctuations that are primarily determined by the country-specific cycle rather than those determined by the global and regional components.

The Determinants of Trade Range from Comparative Advantage to "Iceberg" Costs

The amount of trade between countries can be determined by a variety of things. One is comparative advantage. One country trades a good for which it has a comparative advantage in producing for another country's "comparative advantage" good. Comparative advantages in production can be generated by, among other things, differences in the skill sets of the labor forces of the countries, differences in the quality of the physical capital, and differences in the quality or abundance of natural resources used as inputs.

Another determinant of trade is policy. Policies that act to deter trade by imposing large barriers are deemed to "increase the size of the border" between the respective countries. Monetary policy rules that target the exchange rate can shift relative prices in the two countries and make trading more or less favorable. These types of policies tend to change the flows of trade but may not affect the overall level of trade.

Tariffs or trade agreements can affect the prevalence of trade. For example, the Transatlantic Trade and Investment Partnership (TTIP) is a trade agreement currently in negotiation between the European Union and the United States. Among other things, the TTIP would standardize regulations in the production of goods so that, for example, the safety features of cars would not have to be approved by both countries involved.

In his 1954 article, economist Paul Samuelson argued that one of the primary determinants of the amount of bilateral trade between countries was the cost of transporting goods. These "iceberg" costs increase as the physical distance between the trading countries increases. Since the transport costs are paid for in units of that good, the amount of tradable good decreases as the physical distance between the trading countries increases, just as an iceberg grows smaller as it continues to melt the farther it has floated from its origin. The implication is that the iceberg (which is a metaphor for the tradable good) melts the farther it sails from the country of origin. Iceberg costs provide economic motivation for the regional component of the business cycle: Trade within regions is less costly because of the physical proximity between countries. Distance, in an economic sense, can refer to more than simply physical distance. The cost of transporting goods can change with terrain; with distance from and access to ports, rail, highway and airports; and with a country's infrastructure.

Recently, some economists have conjectured that bilateral trade between countries may also be related to a more broadly defined economic distance. For example, the similarity in those countries' institutions, including language and laws, might also facilitate trade. Companies in one country might be more inclined to do business with another country if they have some familiarity with the laws. If firms understand the manner in which conflicts are resolved, they may be more willing to risk overseas ventures, produce goods intended for sale in other countries or move production offshore.6

In our rapidly globalizing and technologically advancing world, country-specific characteristics, such as common language spoken and laws regarding conflict resolution, supersede the significance of physical distance in determining the prevalence of trade between countries. We can continue to expect the determinants of bilateral trade to fluctuate, especially with the rise in regional trade agreements.

Refer to the article to answer the following questions

22. What influences the degree of business cycle synchronisation?

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23. What makes a country more synchronised to the regional business cycle over the international business cycle?

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24. What can change a countries synchronicity between global and business cycle?

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25. Define comparative advantage

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26. How can tariffs and trade agreements affect the prevalence of trade?

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27. Define and characterise 'regionalization'?

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28. What evidence supports a shift towards regionalization?

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