THE UNIVERSITY OF TAMPA
SYKES COLLEGE OF BUSINESS

A University of Tampa Semi-Annual Review
Summer 2013

AACSB ACCREDITED

the tampa bay economy

THE U.S. AND LATIN AMERICAN BUSINESS CYCLES: TOO CLOSE, TOO FAR?

by Karla Borja, Ph.D.

Latin America and the Caribbean (LAC) countries are highly integrated with the U.S. economy through numerous venues such as trade, labor, foreign investment and international aid. Predictably, economic events in the U.S. can rapidly affect the LAC region, carrying subsequent waves of side effects that can persist over several quarters. This article outlines the business cycle properties between the U.S. and LAC economies, revealing potential opportunities and risks for the Western Hemisphere. In particular, three remarks are of importance:

- The U.S. and LAC countries are closely linked; thus, the frail U.S. economic recovery will have an adverse impact on LAC's economic outlook.
- South America's business cycle is less synchronized with the U.S. economy, in part, because of market diversification and the remarkably high commodity prices.
- Countries in the LAC region should continue efforts to expand to new markets and strengthen regional free trade agreements.

The business cycle of an economy is the barometer measuring the mood swings of market participants. During some periods, an economy seems elated and overjoyed, defined by economists as expansionary cycles, and at other times, it seems gloomy and irritable, technically termed a recessionary cycle. Yet more interesting is the understanding of the business cycle synchronization between two or more nations, which can provide market analysts with a powerful prediction tool in the short run.

In particular, analyzing the relationship between the U.S. and LAC business cycles is important for several reasons. In 2012, Mexico, Brazil and Venezuela imported almost $278 billion of goods and services from the U.S., just below China's total imports of U.S. goods and services. To put this number in perspective, the LAC region accounted for 25 percent of the total U.S. exports and 20 percent of the total U.S. imports. Therefore, the economic outlook in Latin America is of special interest to the U.S. trading community.

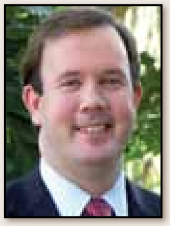
In practice, economists use several statistical approaches to extract the business cycle from GDP values, but to make this analysis a straightforward one, GDP growth rates will suffice. Figure 1.1 shows a close correspondence between the U.S. and LAC GDP growth rates for the past 30 years. Although the U.S. business cycle is less volatile than that of the LAC, both rates show a close positive relationship for most of the years under analysis. The gap between the U.S. and LAC growth rates closes during certain periods (1992-1997) and expands as we move into the 21st century. Finally, during much of the 1980s the economies of the U.S. and LAC moved countercyclically, with a wide gap between both rates (1985-1991).

Identified as the 'lost decade,' the 1980s was a turbulent period for a Latin America that struggled with an enormous external debt burden and devastating hyperinflations. For instance, Argentina experienced a 3,000 percent inflation rate in 1989 and Bolivia surpassed 15,000 percent in 1985. In addition, most LAC economies endorsed the Import-Substituting Industrialization program, in which domestic production replaced imports, isolating the region in terms of trade and eventually exposing most countries to a long and deep recessionary cycle. Table 1.1 shows the correlation factor — a statistical indicator of the association between two variables — of the U.S. and LAC growth rates. It is noteworthy that during the period of 1970–1989 (second row), the correlation factor reached a mere 0.21, saying plenty about the poor relationship between these economies during this period.

continued on page 2

Inside this Issue of The Tampa Bay Economy:

F. Frank Ghannadian, Ph.D.
Dean, John H. Sykes
College of Business



The U.S. and Latin American Business Cycles: Too Close, Too Far?

continued from page 1

Following the disastrous economic outcomes stemmed from the Import-Substituting Industrialization program policies, most LAC countries gradually began to support prudent monetary policies, flexible exchange rates and a deliberate policy of open trade. These changes brought the region into closer synchronization with the U.S. economy, as evidenced by the higher correlation value of 0.57 during the 1990–2012 period. Average GDP growth reached three percent during the 1990s, twice the 1980s rate, but economic stability was jeopardized. As shown in Figure 1.1, LAC's volatility during the 1990s increased, partially explained by higher exposure to international markets.

Globalization, technological changes, and financial market development have aligned the LAC business cycle closer to the U.S. business cycle. The integration with the U.S. economy is even more evident during the 21st century and corroborated by an impressive correlation factor of 0.84 (Table 1.1).

U.S. direct and portfolio investments, financial aid and migration account for the region's economic impact stemming from U.S. shocks, but none of these is as relevant as the trade linkage. Latin America is characterized primarily by commodity-export-driven economies trading mostly into the U.S. market (Table 1.2). A closer look at trade between the U.S. and selected LAC countries suggests a strong transmission mechanism from the U.S. economy to LAC's economic landscape. For instance, Mexico and Honduras send 72 percent and 54 percent of their total exports to the U.S. market and acquire respectively 52 percent and 51 percent of their imports from the U.S. In addition, most domestic markets in the LAC region are relatively small, and thus, international trade represents an important portion of their aggregate GDP.

Table 1.1: U.S. and LAC Business Cycle: Correlations
Source: Author's Calculations

Period	Correlation U.S. GDP and LAC GDP	P-Value
1961-2012	0.369	0.02
1970-1989	0.212	0.37
1990-2012	0.566	0.00
2000-2012	0.836	0.00

Note: Correlation refers to the statistical relationship between two variables. A value of +1 indicates a perfect positive linear relationship and –1 indicates a perfect negative linear relationship. A value close to zero indicates a poor or weak linear relationship. P-values less than 0.05 denote rejections of the null hypothesis that the variables are not correlated.

Figure 1.2 shows that Mexico and Central America are highly integrated with the U.S. markets (correlation = 0.85). The April 2013 International Monetary Fund World Outlook projects a slowdown of these economies from 4.4 percent in 2012 to 3.8 percent in 2013, which is consistent with the 2013 projected moderation in the U.S. growth rate of 1.9 percent. Opportunities as well as risks are associated with highly integrated business cycles. Despite its current fragile position, the U.S. remains a strong and fairly stable economy and Mexico and Central America's economies enjoy less business cycle volatility through their solid linkage with a steadier economy. The challenge rests in their limited market diversification and thus, their reliance on a single market. Departing from the single-commodity-exporting arrangement and developing a well-planned market diversification strategy, including regional free trade agreements and markets that run countercyclically with the U.S. economy, should be strategies incorporated in the regional policy agenda.

South America is less integrated with the U.S. markets (correlation = 0.47). Its impressive growth rate of six percent after the U.S. market crash of 2008 was due mostly to favorable commodity prices. During the years 2009 to 2011, China and India grew at an average 9.6 and 8.1 percent respectively albeit a global recession, contributing to a strong commodity demand and a favorable international environment for the South

Figure 1.1: U.S. and Latin America Business Cycle
Source: World Bank Development Indicators

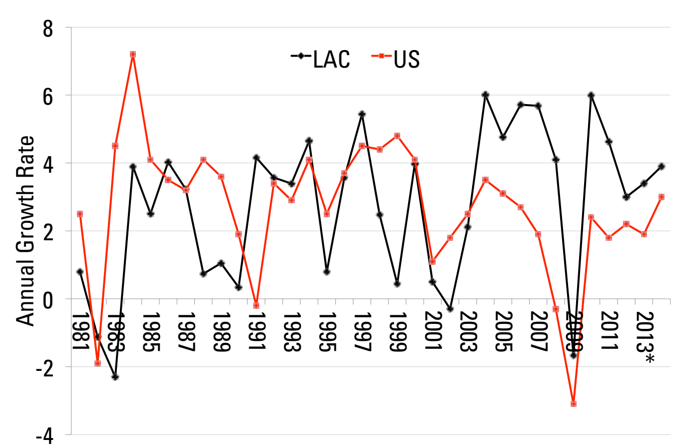


Figure 1.2: U.S. and LAC GDP Growth by Region
Source: World Bank Development Indicators & IMF Projections

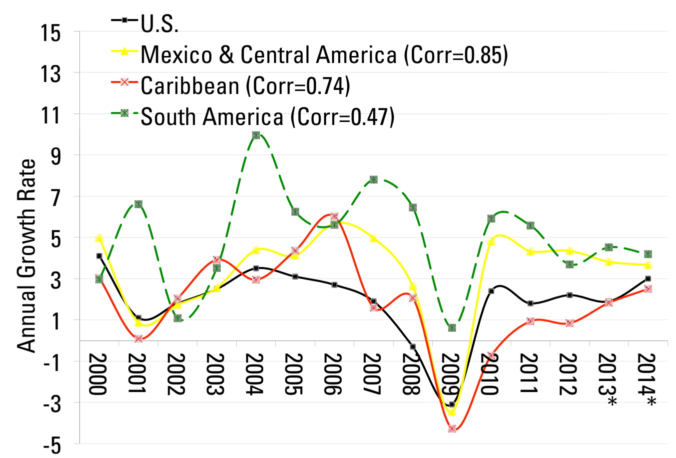


Table 1.2: International Trade—U.S. and Selected LAC Countries (2011)
Source: World Bank Development Indicators & U.S. Department of Commerce

Country	U.S. Import / Total Import (Percent)	U.S. Export / Total export (Percent)
Argentina	11.4	4.6
Bahamas	78.2	22.2
Brazil	14.2	10.8
Chile	23.9	11.1
Colombia	23.2	36.9
Costa Rica	35.0	65.8
Dominican Republic	41.9	35.8
Ecuador	26.8	49.1
El Salvador	30.9	38.4
Guatemala	34.2	36.6
Honduras	51.4	54.3
Mexico	52.1	72.0
Venezuela, RB	20.9	45.7

American region. According to data collected by the IMF, the Commodity Metals Price (CMP) index almost doubled from March 2009 to March 2010, and it experienced an additional 20 percent increase by March 2011, setting new record highs. The remarkable high CMP index, which includes the prices of copper, aluminum, iron ore, tin, and nickel, has practically sponsored the expansion of the mineral industry in Brazil, Chile and Peru. For instance, in 2011, about 50 percent of the total Peruvian exports comprised ore, metals and oil; sectors that grew 48 percent in the region (Figure 1.3). At the same time, Peru experienced an outstanding GDP growth rate of seven percent that same year.

The Caribbean economies profited little from the higher commodity prices. The Commodity Food Price (CFP) index, which includes products such as bananas, sugar, meat and cereal, increased 38 percent from January 2009 to December 2010. However, exports in the region fell by 13.5 percent in 2009 and merely increased by 5 percent in 2010. These countries are linked to the U.S. economy mostly through tourism revenues, which have slowly recovered from post-U.S. crisis values (Figure 1.4). In addition, a significant portion of tourism revenues come from European travelers, which is likely to drag down growth in the sector owing to Europe's continuing crisis.

Overall, LAC economies have significant trade exposure to the U.S. markets. Mexico and Central America show the largest trade linkages with the U.S., suggesting deeper business cycle synchronization. South America has a smaller U.S. trade ratio, reducing its exposure to U.S. economic shocks. Other factors connecting LAC with the rest of the world will pose risks in the near future. The fiscal and monetary crisis in Europe may have an impact, albeit a small one. Oil shock prices and high volatility in commodity prices represent a more immediate threat, compromising the expected steady growth rate in the region. For instance, the CMP index declined by 17 percent between March and August 2012, but recovered last year's high value in February 2013. In the financial arena, international capital flows remain volatile, causing additional pressures on exchange rates and financing. Finally, natural disasters such as hurricanes and severe droughts can explain some periods of low correlation between LAC and the U.S. economy.

Disentangling the spillover effects from a large economy to smaller economies is a complex task that must be done after considering all the factors mentioned above, but the preliminary exercise presented in this article offers insights into the close relationship between Latin America and the U.S. markets and the opportunities and risks associated with moderate to deep-rooted synchronized business cycles.

Write to Prof. Borja at kborja@ut.edu.

Figure 1.3: Exports of Ore, Metals and Oil
Source: United Nations/Comtrade; Countries: Brazil, Bolivia, Chile, Paraguay, and Peru

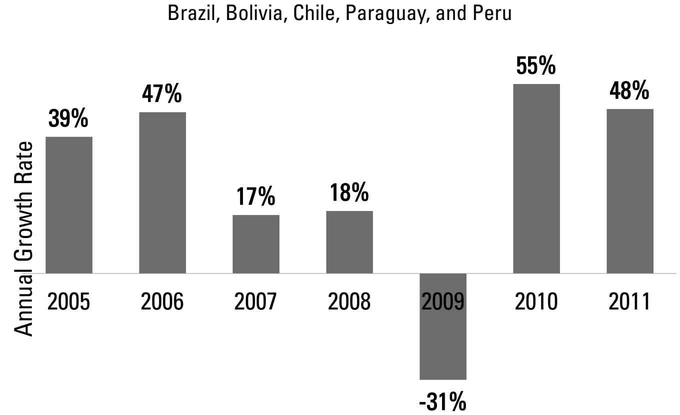
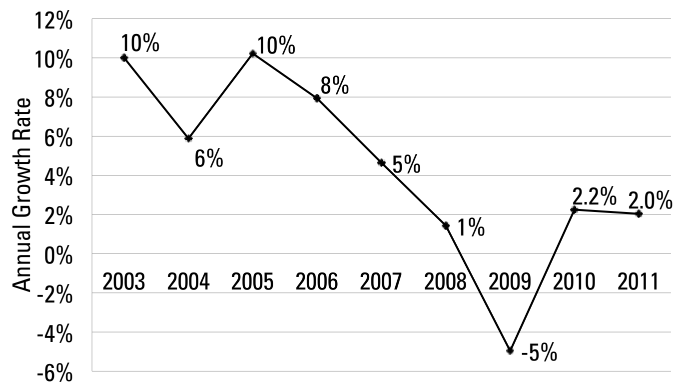


Figure 1.4: The Caribbean: Tourism Receipts
Source: World Bank Development Indicators



THE TAMPA BAY ECONOMY: MAY UPDATE

by Brian T. Kench, Ph.D.

The Tampa Bay metropolitan statistical area's (Hernando, Hillsborough, Pasco and Pinellas counties) recovery from the great recession is accelerating. Gross taxable sales continue to grow, employment in Tampa Bay is expanding faster than most other Florida metro areas, unemployment is declining, new home construction is accelerating and existing home values are improving.

Gross taxable sales in Tampa Bay totaled \$8.8 billion in February 2013, a 3 percent increase from February 2012 (see figure 2.1). The year-on-year change in gross taxable sales averaged 5.2 percent per month for 2012, which was slower than the 2011 average by 1.8 percentage points. Since March 2010, the year-on-year change in gross sales has averaged 6.4 percent per month.

Figure 2.2 illustrates Tampa Bay's job loss duration because of the Great Recession and the last two U.S. recessions. As of March 2013, 63 months have passed since the recession began in December 2007 and the area remains net negative 55,700 jobs, which is 4.5 percent of December 2007 employment level. Figure 2.3 reveals that Tampa Bay has been adding nonfarm payroll jobs at an accelerated pace over the last few months—second only to Ocala. Indeed, nonfarm payroll jobs in Tampa Bay increased 3.1 percent in March 2013, relative to a year earlier, continuing a 39-month trend of positive job growth. If the trend continues, Tampa Bay may claw its way back to pre-recession employment levels within the next year.

The unemployment rate measures the ratio of those unemployed and looking for work divided to the labor force. In Tampa Bay, the unemployment rate (NSA) was 6.9 percent in March 2013, which is lower than the national unemployment rate (SA) by 0.7 percent and the unemployment rate (NSA) for the state of Florida by 0.6 percent. Despite its elevated level, the Tampa Bay unemployment rate fell in March 2013 relative to March 2012 by 2.2 percent. Lastly, in March 2013, the unemployment rate (NSA) was 8.4 percent in Hernando County, 6.6 percent in Hillsborough County, 7.5 percent in Pasco County and 6.7 percent in Pinellas County.

Figure 2.4 reports Tampa Bay's 2012 employment shares by sector relative to the U.S. Higher ratios indicate the sectors in which Tampa Bay specializes. The analysis neutralizes common macroeconomic events in the dataset by comparing local sector shares relative to national sector shares. The

continued on page 5

Figure 2.1: Gross Sales in Tampa Bay: January 2007 – February 2013
Source: Florida Department of Revenue

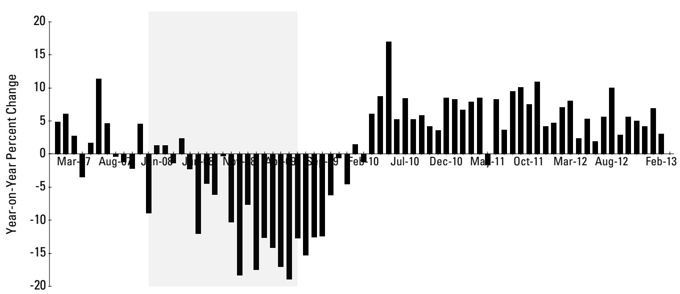


Figure 2.2: Duration of Job Loss in Tampa Bay
Source: Bureau of Labor Statistics

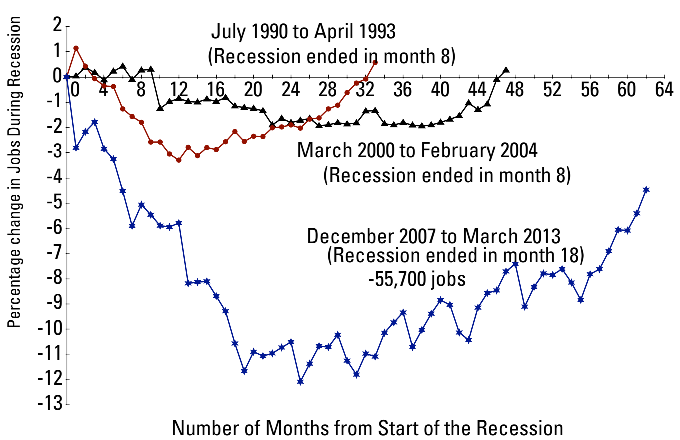
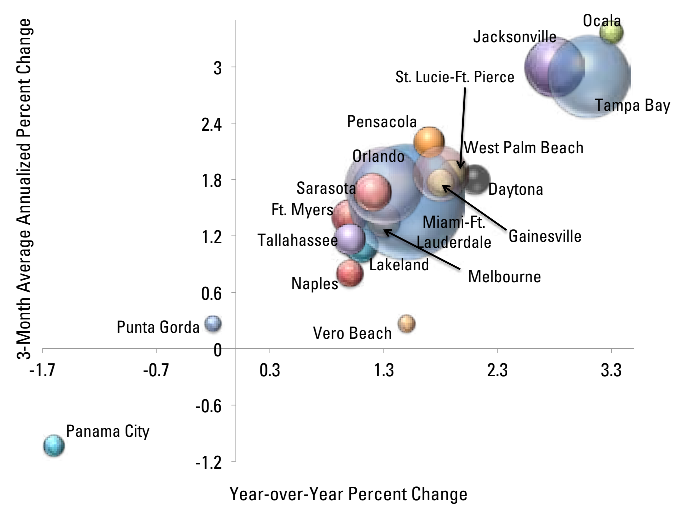


Figure 2.3: Florida Employment Momentum by Metro Area: March 2013
Source: Bureau of Labor Statistics
Note: The size of the bubbles reflects the relative employment size of each metro area.



The Tampa Bay Economy: May Update

continued from page 4

analysis reveals that the top sectors in Tampa Bay are wired telecommunications, arts, entertainment, and recreation, insurance, physicians, ambulatory care, banks, and professional and business services.

The S&P's Case-Shiller housing price index (HPI) for Tampa Bay is based on observed changes in home prices in the area. Tampa Bay's seasonally adjusted HPI hit its maximum value of 239.05 in May 2006. Since that time, the HPI fell 47.7 percent over 5 ½ years to its lowest post-bubble reading of 124.57 in November 2011. Over the subsequent 15 months the Tampa Bay HPI has increased 11.9 percent to its February 2013 reading of 139.37.

The Price-Rent Index (PRI) for Tampa Bay measures the price of area homes relative to their implicit rental value. The price component of the PRI is the S&P's Case-Shiller HPI for Tampa Bay. The rent component of the PRI is the owner's equivalent rent index (OWRI) for Tampa Bay, published by the Bureau of Labor Statistics. Each series is adjusted to one in 1987 and the PRI computes the HPI/OWRI ratio. A PRI greater than one means that home prices are high relative to rents in Tampa Bay, while a PRI less than one means that home prices are low relative to rents in the Tampa Bay. Figure 2.5 informs the reader that from 2003 to 2007 home prices were high relative to rents – in retrospect, a clear sign of a housing bubble. During the Great Recession, the PRI declined dramatically. By the end of 2011, the price-rent ratio reached a level not seen over the period of study. Although, off its low point, the 2012 PRI of 0.81 reveals that in Tampa Bay an individual could purchase a home and maintain a monthly payment for less than what would be required to rent the same home.

Figure 2.6 shows the absolute number of privately owned one-unit residential permits for new homes in the Tampa Bay area. New permits for March 2013 totaled 733. The number of new permits in the first three months of 2013 exceeded those issued in the first three months of 2012 by 43 percent.

In summary, recent data continue to point in a very positive direction. Gross taxable sales in Tampa Bay continue to grow on a year-on-year basis. The area is adding nonfarm payroll jobs—the year-on-year change in nonfarm payroll jobs has been positive for 39 months and Tampa Bay is a leader in employment momentum. Unemployment rates are falling. And the housing market is strengthening. The Case-Shiller HPI has risen 11.9 percent between November 2011 and February 2013, purchasing a home costs less than renting the same sized home, and one-unit residential permits for new homes are accelerating.

Write to Prof. Kench at
bkench@ut.edu.

Figure 2.4: Tampa Bay's 2012 Employment Share by Sector
Source: Bureau of Labor Statistics, Personal Calculations

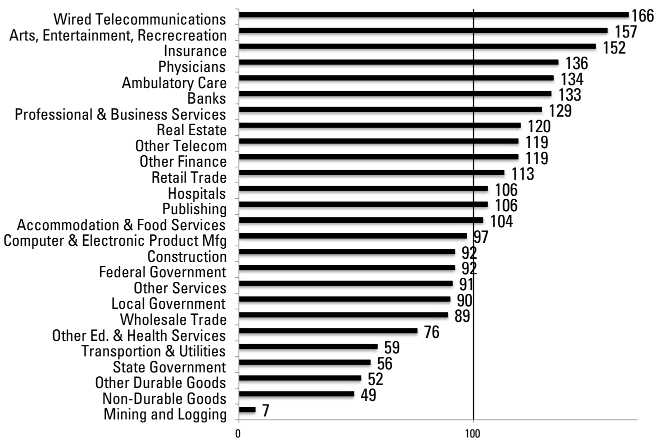


Figure 2.6: Number Residential Building Permits: January 1990 – March 2013
Source: U.S. Department of Housing and Urban Development

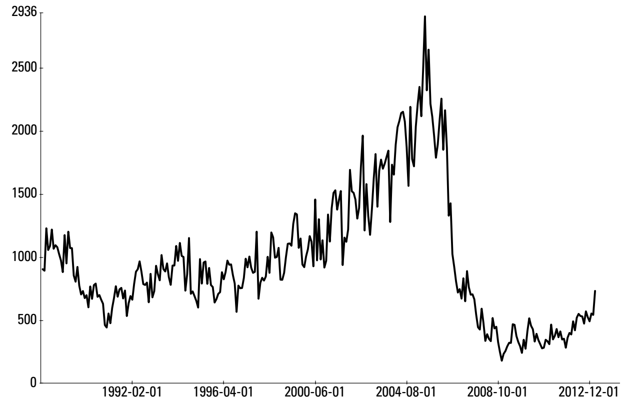
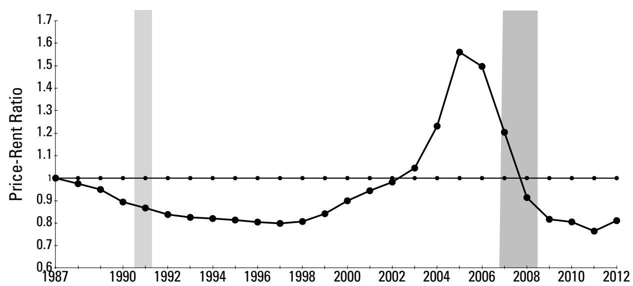


Figure 2.5: Price-Rent Index: 1987 – 2012
Source: S&P Case-Shiller HPI and Bureau of Labor Statistics



The University Of
TAMPA

The University of Tampa | John H. Sykes College of Business
401 W. Kennedy Blvd. | Box O | Tampa, FL 33606-1490 | **www.ut.edu**