When Irish Eyes are Smiling:
Maintaining Economic Growth in Ireland

By all accounts, Ireland’s economy experienced a boom in the late 1990s. More recently, this speedy growth has curbed, raising some questions about the Emerald Isle’s macroeconomic future. With the country’s relatively new status as a member of European Monetary Union (EMU), these questions arise within a different framework, with more complicated solutions. The challenge facing Ireland today is how to sustain growth in the context of EMU membership, political pressures to balance the country’s budget, and global economic downturn resulting from the technology bust, September 11th, and war in Iraq.

I. THE CURRENT SITUATION: NUMBERS AND TRENDS

Gross Domestic Product:
After experiencing gross domestic product (GDP) growth of approximately 10% every year in the late 1990s and 2000, the y-o-y increase of GDP has slowed considerably. According to the Irish Government’s Central Statistics Office, GDP grew by 5.7% in 2001 and provisional estimates of 2002 show a 4.5% y-o-y increase. Notably, gross national product (GNP) growth has stalled even more abruptly, with an increase of 4.6% in 2001 and an estimated increase of only 1.8% in 2002.  

A more complete picture of the current trends in national income is provided in Figures 1-3.

Balance of Payments:
The Internet boom and globalization of the world economy drove large sums of foreign investment into the Irish economy. As the Internet bubble lost its influence on the capital markets, the level of foreign investment declined, pushing Ireland’s current account into deficit. Prior to and leading up to the information technology (IT) boom, Ireland’s current account had been in a surplus from 1993 until 1999. Ireland had generated a US$1 to 2 billion annual current account surplus through 1998, but the 1999 surplus declined to less than US$400 million. The current account turned to deficit in 2000. The deficit persisted throughout 2000 and into 2001 where the end of the year balance was over US$1 billion (see Figure 5).

The high-tech industry has attracted the most foreign direct investment (FDI) to Ireland. Flows of FDI have helped transform the country and ultimately became a leading force in the growth of the country in the late 1990s. The level of foreign investment peaked in 2000, when over US$24 billion (an amount equivalent to almost 25% of GDP) entered Irish capital markets.

significantly slowed the amount of FDI, but the level of foreign investment is still quite robust compared to the rest of the world (see Figure 4).

Ireland’s government also deserves some of the credit for the significant inflow of foreign investment. The government instituted the National Development Plan (NDP), which outlines a roadmap for sustaining Ireland’s economic growth. The NDP has four basic strategic objectives: (1) continuing sustainable national economic and employment growth; (2) consolidating and improving Ireland’s international competitiveness; (3) fostering balanced regional development; (4) promoting social inclusion. This development plan was implemented in 2000 and will run through 2006. It is a major reason foreign direct investment numbers have held pretty strong even in the light of the terrorist attacks of 9-11 and the significant downturn in the world economy.

**Inflation and Unemployment:**
Perhaps the most interesting story in Ireland’s macroeconomic outlook is that of unemployment and inflation. In the context of impressive growth, the country’s inflation remained higher than the rest of the euro-zone, while unemployment was much lower. The tide is turning. After experiencing a labor force boom in the late 1990s, employment growth in Ireland has slowed recently. According to the Irish government’s Central Statistics Office, employment increased by approximately 1% in 2002, compared to growth of over 6% in 1999. In addition, the unemployment rate is rising, reaching a rate of 4.5% in 2002.

While unemployment and long-term unemployment rates are increasing, inflation has decreased (as measured by growth in the CPI). Reaching low levels of approximately 1.5% in 1993, 1996, 1997, and 1999, the inflation rate increased to 5.6% in 2000. Inflation and unemployment trends are documented in Figure 6.

Figure 7 charts inflation and unemployment forecasts, plotting Ireland’s Phillips curve. Surprisingly, the actual data follows the predicted relationship of the Phillips curve and Okun’s law, demonstrating the short-run tradeoff between inflation and unemployment in this economy. Okun’s law, \(\pi = \pi^e - \beta (u - u^n) + \nu\), states that inflation expectations, deviations of unemployment from its natural rate, and supply shocks determine inflation outcomes. As Ireland’s unemployment rate has risen recently, inflation has fallen in accordance with theory.

Ireland’s economic growth may have provided a supply shock, as the labor supply increased. The sheer expansion in the number of workers willing to work may have contributed to inflation, but wages have likely also played a role. Tightening labor market conditions and wage levels established by the national pay deal have created very high wages in Ireland. While these high wages have certainly contributed to immigration, the shock has also affected inflation and may make Ireland less desirable to relocating corporations.

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II. POLICY DEVELOPMENTS

Monetary Policy:
As one of the twelve member countries of the European Monetary Union (EMU), Ireland cannot determine its own monetary policy. Instead, they are subject to the decisions of the European Central Bank (ECB). Ireland is represented on the ECB’s Governing Council by the Governor of the Central Bank of Ireland.\(^8\) Thus, in the context of the IS-LM model, Ireland faces the same LM curve as the other members of the EMU.

Recently, the ECB has been increasing the supply of euros in an attempt to stimulate the economies of Germany and France. Earlier this year, the ECB effectively cut interest rates by increasing the money supply. This resulted in a outward shift of the LM curve faced by EMU countries, depicted in Figures 8 and 9.

Since the Irish inflation rate is one of the highest in Europe, the ECB’s decision was not a good decision for Ireland. According to the OECD, the Irish inflation rate was at 4.7%, more than double the average euro-zone inflation rate of 2.2%.\(^9\) If the Central Bank of Ireland had monetary independence, it would have done the opposite of the ECB and decreased the money supply, causing interest rates to rise.

When the Irish decided to join the EMU, they effectively chose full financial integration and exchange rate stability over monetary independence (the lower right hand corner of the “Impossible Trinity” triangle). It is hard to argue that Ireland has not benefited from monetary union. After all, Ireland has had a booming economy over the last decade as integration allowed Irish exporters privileged access to the European market. Additionally, the exchange rate stability offered by the EMU has been positive as the exchange rate risk on lending in Ireland has been reduced.

But the benefits of full financial integration and exchange rate stability came at the cost of monetary independence. As John Fitz Gerald points out, “the fall in interest rates, while undoubtedly of long-term benefit to the economy, has taken place at a time when the economy is already booming.”\(^10\) While Ireland’s growth has slowed in the last two years, it still has a stronger economy than a number of the larger member states in the EMU.

Fiscal Policy:
For the past several years, the Irish economy flourished and fiscal policies were expansionary. Irish citizens enjoyed tax cuts and public programs expanded. However, the 2003 budget revealed several changes in Irish fiscal policy. Due to the economic slowdown, Ireland’s government instated contractionary fiscal policies which primarily include tax increases and decreased government spending.

After years of tax cuts, Irish citizens and businesses now face tax hikes in the 2003 budget. For example, taxpayers will subsidize the pay increase for public service jobs, which will total one

\(^8\) Central Bank of Ireland, www.centralbank.ie.
\(^9\) OECD Data, Pricewaterhouse Coopers European Economic Outlook, January 2003.
billion euros.\textsuperscript{11} Also, taxpayers will be charged if they fail to index tax credits and tax bands. As a result, each household is expected to pay an additional E400 for a total of E502 billion.\textsuperscript{12}

The government also eased the immediate capital tax burden. The tax of 20 percent will now be spread over a much longer period of time, which will significantly impact sectors that require high capital investment.\textsuperscript{13} While the government raised several taxes, the corporation tax decreased to 12.5%, which is now one of the lowest in the world. Decreasing the corporation tax will continue to make Ireland an attractive place for businesses to locate, which should again provide a boost to the economy.\textsuperscript{14} Additionally, on a brighter note for taxpayers, personal income tax remains steady at 20 percent and 42 percent.\textsuperscript{15}

Ireland also faces reduced government spending, a second component of Ireland’s contractionary fiscal policy. Minister of Finance Charlie McCreevy cut capital spending as well as some public services. In 2000 a surplus existed that accounted for 4.4% of GDP, but it quickly turned into a deficit. The goal of this particular spending cut is to reduce the deficit to .8% of GDP.\textsuperscript{16} However, negative consequences of the spending cuts are loss of jobs, reduced public services, and continued inadequate infrastructure.\textsuperscript{17}

III. POLICY OPTIONS

The IS-LM Model:
Since the Irish government lacks monetary independence, their policy options within the IS-LM framework are constrained to fiscal shocks. While the government recently contracted fiscal policy significantly, through higher taxes and reduced government expenditures, Figures 8 and 9 demonstrate that expansionary fiscal policy could increase national income and create three-market equilibrium.

Ireland’s status as a small country situated within a larger monetary entity makes application of the IS-LM model slightly challenging. If Ireland is modeled as a small country with fixed exchange rates (given its membership in the EMU), Figure 8 appropriately depicts a horizontal balance of payments curve. However, Ireland could also be treated as a large country with flexible exchange rates, as its LM curve is derived from the greater euro-zone. In this case, the balance of payments curve is upward-sloping, as shown in Figure 9. Either model suggests that an outward shift in the IS curve, through tax cuts or increased government spending, results in higher GDP and a virtually unchanged interest rate. Both cases also operate under the reasonable assumption that the EMU will continue to expand the money supply.

Growth Models:
The Solow and endogenous growth models can uncover factors that contributed to growth, and illuminate policy options for promoting growth in Ireland. An influx of highly skilled workers

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\textsuperscript{11}“Budget copperfastens progress, says Harney.” \textit{The Irish Times}. December 6, 2002. \\
\textsuperscript{12}“Budget copperfastens progress, says Harney.” \textit{The Irish Times}. December 6, 2002. \\
\textsuperscript{13}“Budget shifts focus of attention to domestic influences on economy.” \textit{The Irish Times}. December 13, 2002. \\
\textsuperscript{14}Ibid. \\
\textsuperscript{15}“Budget copperfastens...” \textit{The Irish Times}. \\
\textsuperscript{16}“The tiger tamed.” \textit{The Irish Times}. December 14, 2002. \\
\textsuperscript{17}Rafter, Kevin. “Tough for McCreevy but not all doom and gloom.” \textit{Financial Times}. December 1, 2002.
\end{flushleft}
and technological improvements rotates the depreciation line inward in the Solow growth model (Figure 10). The result is a lower steady state level of capital per worker and a lower level of output per worker. To rectify this situation, the Irish government should endorse policies that would induce greater savings and investment. For example, lowering corporate taxes and easing the capital tax would result in an upward shift of the savings curve (sf(k)\(^1\) in Figure 10). This shift would result in higher steady state levels of capital and output per worker.

While the Solow growth model assumes constant returns to scale, the endogenous growth model is based on increasing returns to scale. Thus, increases in savings and investment can lead to sustained growth.\(^{18}\) In the case of Ireland, the influx of highly-skilled labor represents an increase in the broadly-defined measure of capital in the model (K includes both physical and human capital). Since Ireland is a high capital country, its level of capital is above K\(^O\) at K\(^1\) (see Figure 11). From K\(^1\), capital and output would be expected to grow into the future since savings exceeds depreciation.

**IV. RECOMMENDATIONS**

Applying the IS-LM model suggests that expansionary fiscal policy may constitute the right policy direction for Ireland at this juncture. The Solow growth model emphasizes savings, and policies that promote increased investment and savings. According to the Solow model, which incorporates Ireland’s recent experiences with immigration and the technology boom, such policies will augment capital and output per worker. The endogenous growth model, in contrast, suggests that Ireland will continue to experience growth because it is already a capital-rich country. Given domestic political pressures, including the demand for a balanced budget, and the constraints of the Maastricht Treaty, these policy options may not prove feasible at this time.

The following three recommendations constitute reasonable action steps that the Irish government can enact on the road to continued economic growth:

- Lessen labor market restrictions and reduce the growth rate of the national pay deal to ease upward wage pressures and curb high inflation;
- Decrease heavy reliance on foreign direct investment, and encourage investment in industries not affected by the technology bust; and
- Halt the rapid increase in public sector employment to facilitate private sector employment growth, and to reduce individual tax burden.

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Figures 1 and 2: Ireland’s Gross Domestic Product (GDP) Trends

GROSS DOMESTIC PRODUCT (Millions US Dollars)

Year

GDP
45,634 52,760 60,582 70,699 81,048 90,159

Source: International Monetary Fund. Online International Financial Statistics
http://ifs.apdi.net/imf

Ireland: GDP Growth

Year

GDP Growth
15.62% 14.83% 16.70% 14.64% 11.24%

Source: International Monetary Fund. Online International Financial Statistics
http://ifs.apdi.net/imf
Figure 3: Ireland’s Gross Domestic Product Per Capita

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<th>Year</th>
<th>1997</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
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<tr>
<td>GDP</td>
<td>12,908,000,000</td>
<td>14,841,000,000</td>
<td>16,861,000,000</td>
<td>20,018,300,000</td>
<td>22,503,100,000</td>
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<td>POPULATION</td>
<td>3,660,000</td>
<td>3,700,000</td>
<td>3,750,000</td>
<td>3,790,000</td>
<td>3,840,000</td>
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<tr>
<td>GDP PER CAPITA</td>
<td>3,527</td>
<td>4,011</td>
<td>4,496</td>
<td>5,282</td>
<td>5,860</td>
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Source: International Monetary Fund. Online International Financial Statistics http://ifs.apdi.net/imf
Note: Population numbers are mid-year estimates & GDP numbers are taken from 2nd Q of each year.

Figure 4: A Comparison of Ireland’s Foreign Direct Investment (FDI) and GDP

Ireland Macroeconomy: Foreign Direct Investment and Gross Domestic Product Numbers
Figure 5: Ireland’s Current Account and GDP

Ireland’s Current Account and GDP Numbers (Millions of US Dollars)

![Bar chart showing current account and GDP numbers for Ireland from 1997 to 2001.]

Figure 6: Ireland’s Inflation and Unemployment Trends

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<tr>
<td>Unemployment Rate %</td>
<td>14.7</td>
<td>15.1</td>
<td>15.7</td>
<td>14.7</td>
<td>12.2</td>
<td>11.9</td>
<td>10.3</td>
<td>7.8</td>
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<tr>
<td>Inflation Rate % (CPI)</td>
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<td>1.5</td>
<td>2.4</td>
<td>2.5</td>
<td>1.6</td>
<td>1.5</td>
<td>2.4</td>
<td>1.6</td>
<td>5.6</td>
<td>4.9</td>
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Figure 7: Ireland’s Phillips Curve (2001-2003)

Figure 8: The IS-LM Model for a Small Country (Fixed Exchange Rate)
Figure 9: The IS-LM Model for a Large Country (Flexible Exchange Rate)

Figure 10: The Solow Growth Model

\[ y = \frac{Y}{L} \]

\[ (d+n+g)k^1 \]

\[ f(k) \]

\[ Sf(k)^1 \]

\[ Sf(k)^0 \]

\[ k = \frac{K}{L} \]
Figure 11: The Endogenous Growth Model