Economic Freedom and Growth: The Case of the Celtic Tiger

Benjamin Powell

Ireland was one of Europe's poorest countries for more than two centuries. Yet, during the 1990s, Ireland achieved a remarkable rate of economic growth. By the end of the decade, its GDP per capita stood at $25,500 (in terms of purchasing power parity), higher than both the United Kingdom at $22,300, and Germany at $23,500 (Economist Intelligence Unit [EIU] 2000: 25). In 1987, Ireland's GDP per capita was only 63 percent of the United Kingdom's (*The Economist* 1997). As Figure 1 shows, almost all of the catching up occurred in a little over a decade. From 1990 through 1995, Ireland's GDP increased at an average rate of 5.14 percent per year, and from 1996 through 2000, GDP increased at an average rate of 9.66 percent (International Monetary Fund 2001).

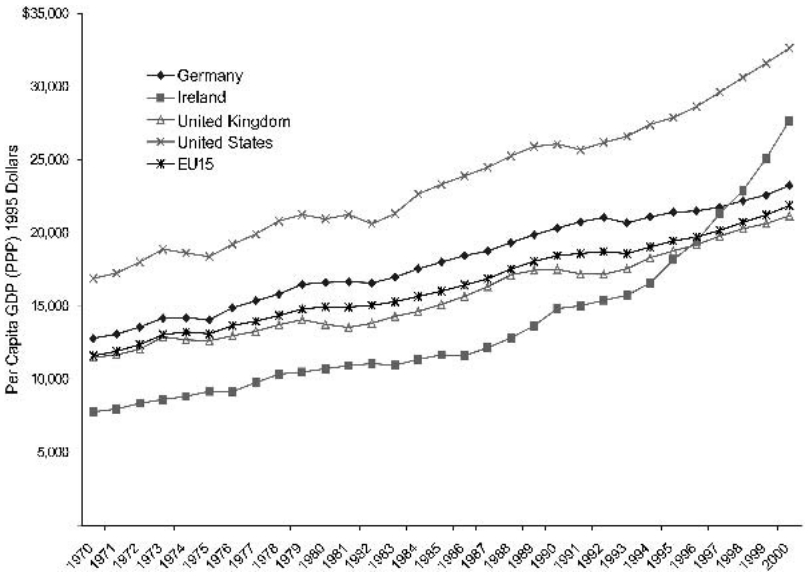
Most theories of economic growth can be dismissed as an explanation for the rapid growth of the Irish economy. The thesis of this paper is that no one particular policy is responsible for Ireland's dramatic economic growth. Rather, a general tendency of many policies to increase economic freedom has caused Ireland's economy to grow rapidly.

The first section of this paper looks at general policies and economic growth in Ireland from 1950 to 1973. The second section examines Ireland's experience with Keynesian policies and a fiscal crisis in the 1973–87 period. The third section considers the policies used to correct the fiscal crisis and achieve the dynamic growth that occurred from 1987 through 2000. The policies in the above periods

Cato Journal, Vol. 22, No. 3 (Winter 2003).

Benjamin Powell is a Ph.D. candidate in Economics at George Mason University and a Social Change Fellow at the Mercatus Center. He thanks Peter Boettke, Christopher Coyne, Todd Zywicki, the participants at the Association of Private Enterprise Education conference in Cancun 2002, the participants at the Mercatus Center "brown bag" series, and an anonymous referee, for helpful suggestions on earlier drafts. He also thanks the Mercatus Center and the American Institute for Economic Research for financial support.

FIGURE 1
IRELAND'S PER CAPITA GDP CONVERGENCE



SOURCE: OECD (2002).

are explained more broadly in the context of economic freedom and its relationship to economic growth in the fourth section. Other possible explanations of Irish economic growth are briefly explored. The paper ends with conclusions that can be drawn from Ireland's experience.

Early Prospects for Growth, 1950–73

The Irish Republic had a dismal record of economic growth before 1960. At the dawn of the 20th century Ireland had a relatively high GDP per capita, but it declined markedly vis-à-vis the rest of northwestern Europe up until 1960. During the 1950s, the policy stance of successive governments was that of protectionism. Exports as a proportion of GDP were only 32 percent, with more than 75 percent of those exports going to the United Kingdom (Considine and O'Leary 1999: 117). The high level of government interference in trade and the other parts of the economy caused dismal economic performance. In the 1950s, average growth rates were only 2 percent, far below the postwar European average (EIU 2000: 5). That dismal performance

was reflected in massive emigration that reduced Ireland's population by one-seventh in the 1950s (Jacobsen 1994: 68).

The Irish government slowly shifted away from highly protectionist policies in the 1960s and began to pursue a strategy of export-led growth (Considine and O'Leary 1999: 117). Unilateral tariff cuts in 1964 and again in 1965, as well as the Anglo-Irish Trade Agreement in 1965 that swapped duty-free access of Irish manufactures to Britain for progressive annual 10 percent reductions in Irish tariffs, were particularly beneficial policies that helped make Ireland more attractive to foreign investors (Jacobsen 1994: 81).

Trade liberalization during the 1960s fueled Ireland's economic growth. Output expanded at an average annual rate of 4.2 percent, nearly double that achieved in the 1950s (EIU 2000: 5). Still, there was a great deal of state intervention in the economy during this time, and while the growth was much higher than the 1950s, it is not nearly as remarkable as the growth Ireland has experienced since 1990. During the decade of the 1960s, the rest of Europe was also experiencing about 4 percent GDP growth. Ireland's freer trade policies merely allowed it to cash in on the generally good growth rates the rest of Europe was experiencing. Ireland made no progress converging to the rest of Europe's standard of living; in fact, it actually fell slightly, from 66 percent of the EU 12 average in 1960 to 64 percent in 1973 (Considine and O'Leary 1999: 117).

Keynesian Policies and Fiscal Mismanagement, 1973–86

In the early 1970s, Ireland made further advances in trade liberalization and joined the European Economic Community in 1973. For the most part, however, the period from 1973 until 1986 was characterized by Keynesian policies that led to a fiscal crisis. Following the first oil shock in 1973 and continuing through the second oil shock in 1979, Ireland tried to boost aggregate demand through increased government expenditures—a policy that failed to revive the Irish economy.

The expansionary fiscal policies had the effect of putting the government in poor fiscal condition. The government had run substantial deficits, associated with the first oil shock, mostly for the purpose of financing capital accumulation up until 1977, which caused a ballooning current-account deficit (Honohan 1999:76). After 1977, the government engaged in an even more unsustainable fiscal expansion causing public-sector borrowing to rise from 10 percent of GNP to 17

percent, despite increased taxation. All categories of government spending increased between 1977 and 1981: wages and salaries increased due to national pay agreements; public bodies took on more staff to try to reduce unemployment; transfer payments increased; and an ambitious program of public infrastructure expansion caused capital spending to increase (Honohan 1999: 76). Interest payments also increased during this time. International interest rates were at an all-time high, and lenders required Ireland to pay a high risk premium. Interest rates in Ireland were 15 percent higher than in Germany (Considine and O'Leary 1999: 118).

The government reacted, in the early 1980s, by increasing taxes on labor and consumption to try to reduce the budget deficit. Although the primary deficit was cut in half, the debt-to-GDP ratio continued to climb, and by 1984 further tax increases were not seen as a viable solution to Ireland's fiscal situation (Lane 2000). The level of accumulated debt was 116 percent of GDP by 1986 (Considine and O'Leary 1999: 119). High levels of government debt, interest payments, and expenditures put the Irish government in a precarious fiscal position.

Ireland's economic growth during this time period was as dismal as its fiscal condition. Ireland averaged 1.9 percent expansion of GDP per year between 1973 and 1986 (Considine and O'Leary 1999: 111). Although that low growth rate was the same as during the 1950s, the difference was that the rest of Europe also grew slowly. Consequently, Ireland remained at about two-thirds the level of GDP per capita of the European Union. There was one sector of the Irish economy that did do relatively well during the 1973–86 period. Because of Ireland's increasing openness to trade, foreign-owned firms continued to expand, increasing their employment by 25 percent (Considine and O'Leary 1999: 119).

Unleashing the Tiger, 1987–2000

A radical policy shift was needed because of Ireland's fiscal crisis. The newly elected prime minister, Charles Haughey, had not followed a policy of limited government while previously in office (1979–82). In fact, his big spending policies played a part in creating the crisis (*The Economist* 1988). Prior to the 1987 reforms, Haughey and the incoming Fianna Fail government had campaigned on a populist platform against cutting public spending. It was the urgency of the fiscal crisis, not an ideological shift, that caused policy to change in Ireland. As Lane (2000: 317) notes, "The fiscal adjustment

program was broadly based and non-ideological. Rather, there was a wide consensus that drastic action was the only option, with the alternative being a full-scale debt crisis requiring external intervention from the IMF or EU." Haughey himself said, "The policies which we have adopted are dictated entirely by the fiscal and economic realities, I wish to state categorically that they are not being undertaken for any ideological reason or political motives" but because they are "dictated by the sheer necessity of economic survival" (Jacobsen 1994: 177). Even the main opposition party supported Haughey's reforms (Lane 2000).

Since Ireland was a member of the European Monetary System (EMS), and had just successfully cut back its rate of inflation from 19.6 percent in 1981 to 4.6 percent in 1986, monetizing the debt through inflation was not a viable option (Lane 2000). Tax increases had already failed to resolve the crisis in the early 1980s. With both inflation and tax increases ruled out, reducing government expenditures was Ireland's only option to resolve its fiscal crisis.

In order to bring Ireland's budget under control, health expenditures were cut 6 percent, education 7 percent, agricultural spending fell 18 percent, roads and housing were down 11 percent, and the military budget was cut 7 percent. Foras Forbatha, an environmental watchdog, was abolished as were the National Social Services Board, the Health Education Bureau, and the Regional Development Organizations. Through early retirement and other incentives, public sector employment was voluntarily cut by nearly 10,000 jobs (Jacobsen 1994: 177–78).

After cutting government spending in 1987, a budget was set for 1988, which had the biggest spending cuts Ireland had seen in 30 years. Current spending was reduced by 3 percent and capital spending was cut by 16 percent (*The Economist* 1988: 9). The reductions in government spending got Ireland out of its fiscal crisis. The primary deficit was eliminated in 1987, and the debt-to-GDP ratio started falling sharply from its 1986 peak. By the end of 1990, government debt was less than 100 percent of GDP (Honohan 1999: 81).

Although the reductions in government spending were made to solve the fiscal crisis and not as an attempt to achieve a more economically liberal state, over the course of a few years, they did have the effect of reducing the size of the government's role in the economy. Government noninterest spending declined, from a high of about 55 percent of GNP in 1985, to about 41 percent of GNP by 1990 (Honohan 1999: 80).

With the size of government in the economy reduced, the macroeconomic environment stabilized, and the free trade policies that had

existed for decades, Ireland's economy began growing at a rate of 4 percent by 1989 (Jacobsen 1994: 181). That level of growth was impressive compared with the 1.9 percent growth between 1973 and 1986, when the government had been pursuing activist fiscal policies. However, the 4 percent growth is not nearly as remarkable as the "tiger" growth experienced in the late 1990s. The government made further policy changes in the 1990–95 period, which helped to bring about the higher rate of growth.

Once Ireland resolved its fiscal problems, there was the possibility that it could begin engaging in reckless expansionary fiscal policies again. The signing of the Maastricht Treaty in 1992 helped to make Ireland's commitment to sound fiscal policies more credible and permanent. The treaty required members to maintain fiscal deficits below 3 percent of GDP and set a target of a 60 percent debt-to-GDP ratio by the start of the Economic and Monetary Union in 1999. Those provisions constrained Ireland's ability to issue debt in order to expand government spending.

Inflation is another option to finance an expansion of government spending. Ireland has been a member of the EMS from the outset in March 1979. There is a fixed exchange rate between the Irish currency and the other EMS members, limiting Ireland's ability to pursue an expansionary monetary policy and inflation. With the exception of an early bout of high inflation through 1984, Ireland's annual rate of change in the CPI was less than 5 percent in all but two years up to 1995, and inflation averaged only 1.9 percent from 1995 through 1999.

With commitments limiting the government's ability to fund increased spending through inflation or debt issue, increased taxation is the only other available method. Traditionally, it has been harder to increase government spending through taxation, because it is a more obvious burden to voters. This reality has helped to assure investors that the government is not likely to engage in another dramatic increase in spending.

High levels of taxation were already in place in Ireland before either monetary or debt policy was constrained. Ireland had top marginal tax rates as high as 80 percent in 1975 and 65 percent in 1985. During the 1990s both personal and corporate tax rates decreased dramatically, and tariff rates continued to decline. In 1989 the standard income tax rate was lowered from 35 percent to 32 percent, and the top marginal rate was lowered from 58 percent to 56 percent (Jacobsen 1994: 182). The standard rate was down to 24 percent and the top down to 46 percent by 2000. Those rates were further reduced for 2001 to 22 percent and 44 percent, respectively (EIU 2000:

28).[1] Although Ireland has had relatively free trade for a long time, the mean tariff rate continued to decline from 7.5 percent in 1985 to 6.9 percent in 1999.

The standard corporate tax rate fell from 40 percent in 1996 to 24 percent by 2000 (EIU 2000: 29). There is also a special 10 percent corporate taxation rate for manufacturing companies and companies involved in internationally traded services, or located in Dublin's International Financial Services Centre or in the Shannon duty-free zone (EIU 2000: 29). Ireland came under pressure from the European Commission to eliminate the special 10 percent corporate tax. In an agreement with the EC, Ireland promised to raise the special 10 percent rate, however, it will also lower the standard rate. In 2003 the standard rate will be lowered to 12.5 percent, and the 10 percent rate will not be offered to new firms. Some firms, who are currently eligible, will keep the 10 percent rate until 2005 or 2010. Overall, this change should be beneficial to Ireland's economy because it will almost cut in half the standard corporate tax rate and eliminate the bias to particular industries and areas that the special 10 percent rate created.

Because of the many decreases in tax rates and the growth of the Irish economy, Ireland now enjoys a lower tax burden than any other EU country except Luxembourg. Ireland's total tax revenue in 1999, (including social security receipts) was 31 percent of GDP, much lower than the EU average of 46 percent (EIU 2000: 28).

During the period from 1987 through 2000 Ireland closed and surpassed the living standard differential with the rest of Europe. There was strong growth in the early part of the 1990s and remarkable "tiger" growth in the late 1990s when GDP growth averaged more than 9 percent from 1996 through 2000. The policies undertaken during that time were not the sole cause of the growth that has taken place. Rather, they are better viewed as the final missing piece,

[1]The social partnership agreement between government, employer federations, and labor unions has played a role in the continued tax reductions and low inflation. The agreements began in 1987 and have been continually renewed with minor revisions since. Those agreements have effectively turned unions into a force lobbying for reductions in taxes and inflation. Lane (2000) notes that the unions promised wage moderation, partly compensated by a reduction in labor taxes and with the implicit promise that the government would maintain price stability. McMahon (2000) argues the holding down of wage rates by these agreements was important for making Ireland more competitive in attracting companies which resulted in growth. It is important to remember though, that the wage constraint on the part of the unions was not so much a sacrifice by workers to attract business, as it was the unions forcing a reduction in taxes to compensate the workers, so their real after-tax wage could still increase, while attracting more businesses and creating more jobs.

which when finally put in place, allowed the broader cause of economic growth to take hold.

Economic Freedom and Growth in Ireland

Government actions that hinder people's ability to engage in mutually beneficial exchanges limit the standard of living that the people are able to achieve. Restrictions on international trade and domestic regulations interfere with some mutually beneficial trades. Taxes and inflation take wealth away from citizens that could have been used to make trades to increase their well being. Legal security and the rule of law give people the confidence that when they undertake long-term projects for mutual benefit, the government or other citizens will not be able to arbitrarily seize their increased wealth. While an imperfect measure, per capita GDP roughly reflects the standard of living. As Ireland increased economic freedom, per capita GDP rose.

Holcombe (1998) provides a theory of the relation between entrepreneurship and economic growth, in which the entrepreneur is the endogenous engine of economic growth.[2] According to Holcombe, when entrepreneurs take advantage of profit opportunities, they create new entrepreneurial opportunities that others can act upon. In this way, entrepreneurship creates an environment that makes more entrepreneurship possible. Since the Kirznerian entrepreneur (see Kirzner 1973) is alert to profit opportunities that satisfy consumer desires, the more entrepreneurship there is, the more consumer desires are satisfied, and the more growth will result. The Kirznerian entrepreneur is also omnipresent; hence, the institutional environment in which he operates must be considered to explain differences in economic growth. According to Holcombe (1998: 58–59),

> When entrepreneurship is seen as the engine of growth, the emphasis shifts toward the creation of an environment within which opportunities for entrepreneurial activity are created, and successful entrepreneurship is rewarded. Human and physical capital remain inputs into the production process, to be sure, but by themselves they do not create economic growth. Rather, an institutional environment that encourages entrepreneurship attracts human and physical capital, which is why investment and growth are correlated. When the key role of entrepreneurship is taken into account, it is

[2] For a survey of the endogenous growth literature that Holcombe is incorporating his theory into and contrasting his theory with, see Romer (1994).

apparent that emphasis should be placed on market institutions rather than production function inputs.

Harper (1998) examines the institutional conditions for entrepreneurship. His central thesis is that the more freedom people have, the more likely they are to hold internal locus-of-control beliefs, and the more acute will be their alertness to profit opportunities. That increased alertness leads to more entrepreneurial activity.

Combining Holcombe (1998) and Harper (1998), we have a theoretical argument for why increases in economic freedom provide an institutional environment that promotes more entrepreneurship, and how more entrepreneurship functions as an endogenous source of growth. Their argument is consistent with empirical investigations into the relationship between economic freedom and growth.

There is vast amount of literature linking economic freedom to growth and measures of well being. Studies by Scully (1988 and 1992), Barro (1991), Barro and Sala-I-Martin (1995), Knack and Keefer (1995), Knack (1996), Keefer and Knack (1997) all show that measures of well-defined property rights, public policies that do not attenuate property rights, and the rule of law tend to generate economic growth. Gwartney, Holcombe, and Lawson (1998) found a strong and persistent negative relationship between government expenditures and growth of GDP for both OECD countries and a larger set of 60 nations around the world. They estimate that a 10 percent increase in government expenditures as a share of GDP results in approximately a 1 percentage point reduction in GDP growth. Using the Fraser and Heritage indexes of economic freedom, Norton (1998) found that strong property rights tend to reduce deprivation of the world's poorest people while weak property rights tend to amplify deprivation of the world's poorest people. Grubel (1998) also used the Fraser Institute's index of economic freedom to find that economic freedom is associated with superior performance in income levels, income growth, unemployment rates, and human development. All of those findings are consistent with Holcombe's entrepreneurial theory of endogenous growth and Harper's theory of institutional conditions conducive to entrepreneurship. That theoretical structure and those empirical regularities are also consistent with Ireland's economic freedom and growth.

Some aspects of economic freedom have been present in Ireland for a long time. During times when gains in economic freedom occurred, growth improved. The rapid growth of the "Celtic tiger" only occurred once all aspects of economic freedom were largely respected at the same time.

After the protectionist decade of the 1950s, when economic growth

averaged only 2 percent a year, the 1960s saw the liberalization of trade policy, which increased economic freedom and growth improved, averaging 4.2 percent over the course of the decade. The 1970s saw further advances in the liberalization of international trade, but, at the same time, the government was engaging in Keynesian interventionist fiscal policies that interfered with citizen's economic freedom. Growth stagnated in Ireland as well as in the rest of Europe. During the early 1980s, high inflation, fiscal instability, a high level of government spending, and high taxation all limited economic freedom—resulting in an average growth rate of only 1.9 percent from 1973 to 1986. The contraction in the level of government spending, in response to the fiscal crisis, increased economic freedom and growth resumed. During the 1990s further tax reductions and credible commitments not to engage in a reckless expansion of government spending continued to increase economic freedom. Never before have all of the components of economic freedom been present simultaneously in Ireland. When all aspects of economic freedom were respected in Ireland, the synergy between the components allowed the dynamic growth that occurred in the late 1990s.

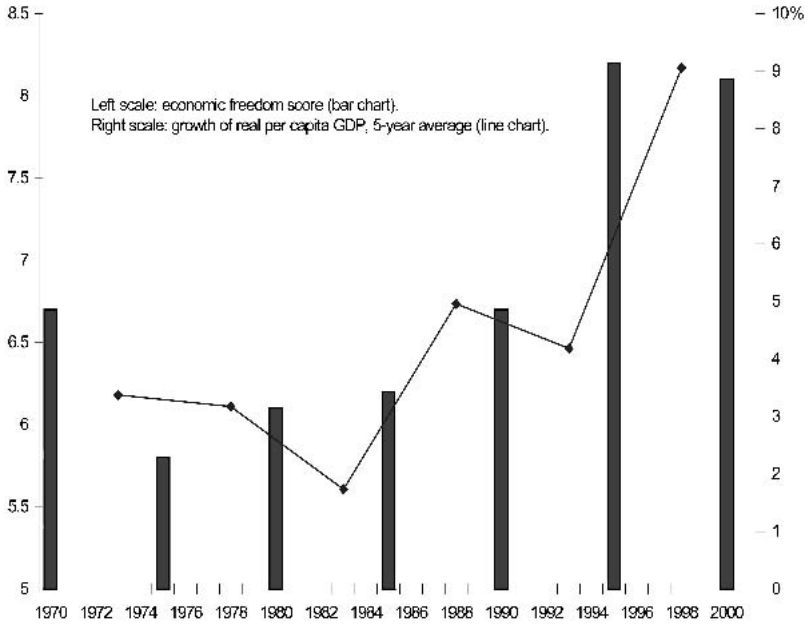
The above description of economic policies that increased and decreased economic freedom is broadly reflected in the Fraser Institute's 2002 index of economic freedom. Ireland was the 13th freest country in the world, in 1970, and had an overall summary rating of 6.7. The rating had fallen to 5.8 in 1975 and by 1985 it had increased to 6.2. By 1990, when Ireland's economic growth began to pick up, Ireland's score had increased to 6.7. When Ireland was experiencing its rapid "tiger" growth, in 1995, it was the world's 5th freest economy, and in 2000 it was the 7th freest economy, achieving scores of 8.2 and 8.1, respectively. From 1985 to 2000, Ireland improved its score on all five of the freedom index's broad categories (Gwartney and Lawson 2002).

Figure 2 plots Ireland's five-year average growth rates and its overall freedom scores from 1970 through 2000. The figure shows Ireland's growth was strongest when its freedom scores had the most dramatic improvements.

Other Possible Explanations of Ireland's Growth Considered

There are a number of other possible explanations for Ireland's dramatic economic growth. One explanation is that the neoclassical growth model predicts convergence, so Ireland's economic growth

FIGURE 2
IRELAND'S ECONOMIC FREEDOM SCORE AND GROWTH RATE



NOTE: The growth rate plotted in 1973 is the average growth rate for the years 1971–75; the point at 1978 is for 1976–80, and so forth.
SOURCES: Gwartney and Lawson (2002), OECD (2002).

should be expected. Another explanation is transfer payments from the EU have caused economic growth in Ireland. Other explanations focus on foreign direct investment (FDI) or economies of agglomeration as the source of Ireland's growth. Finally, some have even suggested that the dramatic growth is only an illusion in the GDP account. All of those explanations are either incorrect or incomplete. Each will be considered in turn.

One alternative explanation is that there has not been a "Celtic tiger." As *The Economist* (1997: 21) reported, "Is it too good to be true? Yes a few critics say: it was all done with smoke mirrors and money from Brussels." One argument is that Ireland's GDP is much higher than GNP because of the amount of profits that foreign-owned companies send back to their owners overseas. The high GDP numbers, therefore, do not necessarily translate into wealth for the Irish citizens. Yet, *The Economist* also notes that "Ireland's GNP has been growing nearly as quickly as its GDP." The dramatic economic growth

in the 1990s is not only evident from the increases in both GDP and GNP but also in other statistics. For example, by 1995 life expectancy at birth was 78.6 years for women and 73 years for men, up from 75.6 and 70.1, respectively in 1980–82 (EIU 2000: 17). The economic growth is also translating into more material goods for the Irish population. For example, between 1992 and 1999, the number of cars registered in Ireland increased by 40 percent (EIU 2000: 19). Perhaps the strongest indications that economic growth actually occurred in Ireland are the immigration statistics. Ireland has typically experienced emigration, however the trend reversed itself in the 1990s. Between 1996 and 1999, there was an average annual increase in the population of 1.1 percent—higher than the population growth rate of any other EU country during that time. In the 12 months leading up to April of 1998, Ireland had 47,500 immigrants arrive, the most immigrants Ireland had recorded up to that time (EIU 2000: 15). Regardless of any difficulties with measurement of GDP or GNP, all statistics point to a dramatic improvement in the Irish economy during the 1990s.

Both theoretical and empirical evidence show that EU subsidies have not been a major cause of Ireland's economic growth. The difficulties of economic calculation and public choice problems present theoretical reasons why transfers to the Irish government cannot be a major cause of growth.

The government needs some method to calculate which projects have the most potential, if a transfer to the Irish government from the EU is going to be used to create the greatest possible growth. When a businessman faces this problem he looks at expected profits and then uses profit-and-loss accounting to evaluate his decisions ex post to make corrections. The government does not have that method of calculation available to it (Mises 1944, 1949). It is true that when Ireland receives subsidies from the EU and spends the money on new projects there will be an increase in measured GDP. However, the government has no way to evaluate whether the project was the citizens' highest valued use of the EU transfer or if the project was valued at all. The GDP that is created is not necessarily wealth enhancing. It may actually retard growth by directing scarce resources to government projects that could have been better used by private entrepreneurs if the government had not bid the resources away.

Agricultural subsidies are one component of EU transfers and are an example of how well-meaning transfers can get in the way of economic development. McMahon (2000: 89–90) notes that, "These [subsidies] boost rural incomes but have little impact on investment and may retard economic adjustment by keeping rural populations

artificially high." The subsidies change the marginal incentives for farmers, making them more likely to stay on their farms, instead of migrating to the cities. In this way, the subsidies hinder the process of moving resources to their most highly valued use. As long as people are subsidized to stay in particular professions, Ireland will not fully exploit its comparative advantage in the international division of labor. This depresses incomes and slows growth.

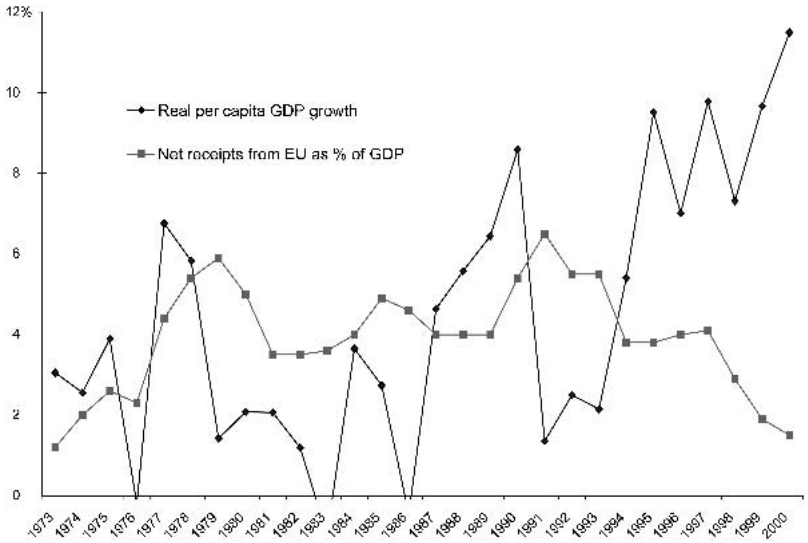
Public choice theory points to another problem with the argument that EU transfers have caused massive growth. Why would government officials ever allocate the resources to the most growth-enhancing project even if they were able to calculate? Entrepreneurs direct resources to the highest valued projects because they have a property right in the profits from the investment. Government officials have no such residual claim. They can benefit more by giving the transfers to projects that benefit their political supporters, instead of directing them to the most growth-enhancing projects. That strategy would impose a dispersed opportunity cost on the rest of society, while creating a concentrated benefit for special interest groups (Olson 1965). Unless the political process perfectly disciplines elected officials and bureaucrats for not allocating EU transfers to the most growth-enhancing projects, they will not have incentives to do so. Since voters have incentives to remain rationally ignorant, there is little reason to believe they do perfectly discipline public officials.

The presence of EU funds retards growth in another way as well. Baumol (1990) argues that while the total supply of entrepreneurs varies among societies, the productive contribution of the society's entrepreneurial activities varies much more because of their allocation between productive activities, such as innovation, and unproductive activities, such as rent seeking. The presence of EU funds creates a rent for Irish entrepreneurs to seek. This will cause some entrepreneurs, who were previously engaging in productive and innovative activity, to engage in rent seeking instead. This rent seeking wastes both physical and human resources that could have been used to satisfy consumer demands and increase economic growth.

There is no sound theoretical case for viewing EU structural funds as the cause of Ireland's economic growth. Government officials have no way to know what investment projects will generate the most growth and, even if they did, they have little incentive to undertake them.

Empirically, if EU transfers were a major cause for Ireland's growth, we would expect Ireland's growth to be highest when it was receiving the greatest transfers. Figure 3 demonstrates that this is not the case, and that growth rates and net transfers as a percent of GDP

FIGURE 3
NET EU RECEIPTS AND GROWTH RATES



SOURCE: Department of Finance, Ireland (2002).

have actually moved in opposite directions during Ireland's rapid growth. Ireland began receiving subsidies after joining the European community in 1973. Net receipts from the EU averaged 3.03 percent of GDP during the period of rapid growth from 1995 through 2000, but during the low growth period, from 1973 through 1986, they averaged 3.99 percent of GDP (Department of Finance 2002). In absolute terms, net receipts were at about the same level in 2001 as they were in 1985. In 1985 Ireland's net receipts were 1,162.3 million euros and in 2001 they were 1,268.8 million euros. Throughout the 1990s, Ireland's payments to the EU budget steadily increased from 359.2 million euros in 1990 to 1,527.1 million euros in 2000. Yet, in 2000, the receipts in from the EU are 2,488.8 million euros, less than the 1991 level of 2,798 million euros. Ireland's growth rates have increased, while net funds from the EU remained relatively constant and have shrunk in proportion to Ireland's economy.

If the subsides were really the cause of Ireland's growth, we would also expect other poor countries in the EU, who receive subsidies, to have a high rates of economic growth. EU Structural and Cohesion Funds represented 4 percent of Greek, 2.3 percent of Spanish, and 3.8 percent of Portuguese GDP (Paliginis 2000). None of those coun-

tries achieved anywhere near the rate of growth the Irish economy experienced. Greece averaged 2.2 percent GDP growth, Spain averaged 2.5 percent GDP growth, and Portugal averaged 2.6 percent GDP growth, from 1990 through 2000 (Clarke and Capponi 2001: 14–15).

Ireland's growth also cannot be explained by the neoclassical convergence that a Solow growth model would predict. That model predicted Irish convergence incorrectly for more than 100 years. Even during the 1960s, when Ireland's economy had a high rate of growth, it still was not converging on the standard of living of other European nations. It was actually losing ground. All of Ireland's convergence occurred in a 13-year time span, from 1987 through 2000. *The Economist* (1997: 22) was wrong when it reported, "There is more to it than the surge since 1987. Ireland has been catching up for decades. . . . In many ways the dreadful years between 1980 and 1987 were more unusual than the supposedly miraculous ones since 1990." Ireland had not done any catching up before 1987. In 1960 the Irish Republic had a GDP per capita that was 66 percent of the EU average, and in 1986 it had actually decreased to 65 percent of the average (Considine and O'Leary 1999). There had been some growth during that time but it was less than the EU experienced. The model needs to explain why Ireland converged only after 1987 and why it converged so rapidly.

Knack (1996) found empirical evidence of strong convergence in per capita incomes among nations with institutions—namely, secure private property rights—conducive to saving, investing, and producing. That form of conditional convergence, with the introduction of free-market institutions, is much more plausible in Ireland's case than neoclassical convergence. Ireland did experience increases in economic freedom just prior to and during its remarkable growth. The extent that it was conditional convergence that drove growth, as opposed to just adopting the appropriate institutions, is not clear. The fact that the Irish economy has not slowed since achieving convergence casts doubt on the importance of even conditional convergence and instead points to the adoption of market-friendly institutions as the source of growth. Once Ireland had converged with the EU and United Kingdom's standard of living, it achieved record growth of 11.5 percent during 2000 (EIU 2001: 11). While convergence conditional on an institutional environment of secure private property rights is more consistent with Ireland's experience than neoclassical convergence, both fail to explain Ireland's rapid growth in the last few years of the 1990s and in 2000.

FDI and economies of agglomeration are two explanations of Ire-

land's growth that do have some merit but that are incomplete by themselves. FDI has certainly played a role in Ireland's growth. America alone had $10 billion ($3,000 per capita) invested in Ireland by 1994, and by 1997 foreign-owned firms were said to account for 30 percent of the economy and nearly 40 percent of exports (*The Economist* 1997: 22). Economies of agglomeration, where like firms try to locate near each other to take advantage of positive externalities, have also helped. Ireland has had particular success in attracting industrial developments with large numbers of high tech and manufacturing companies that benefit from being near each other. The relevant question is, Why did massive FDI, which has spurred economies of agglomeration, not occur sooner? What changed in Ireland were the institutional conditions that attracted FDI. The FDI and economies of agglomeration are an indication of institutional factors favorable to economic growth, not the cause of the growth.

The interesting question to ask is, What gives rise to favorable conditions that allow growth to occur? This article has maintained that it is the institutional framework that hinders or helps the market achieve economic growth. The key institutional factor is the degree of economic freedom enjoyed by the people.

Conclusion

In May 1997, *The Economist* stated, "How much longer the Irish formula will deliver such striking success is difficult to say. . . . Ireland grew quickly for more than 30 years because it had a lot of catching up to do, and because policy and circumstances conspired to let it happen. Success of that kind, impressive and unusual though it may be, contains the seeds of its own demise." The article concluded by saying, "If Ireland has another decade as successful as the last one, it will be a miracle economy indeed" (*The Economist* 1997: 24).

The fact is Ireland had not been catching up for 30 years; it accomplished its catching up in 13 years. Rapid rates of growth have continued to be recorded since converging with Europe's standard of living. The neoclassical growth model does not account for Ireland's success. Rather, rapid growth has been driven by increases in economic freedom. As long as Ireland continues to pursue policies that increase economic freedom, the Irish "miracle" is likely to continue.

References

Barro, R. (1991) "Economic Growth in a Cross Section of Countries." *Quarterly Journal of Economics* 106: 407–43.

Barro, R., and Sala-I-Martin, X. (1995) *Economic Growth.* New York: McGraw-Hill.
Baumol, W. (1990) "Entrepreneurship: Productive, Unproductive, and Destructive." *Journal of Political Economy* 98 (5): 893–921.
Clarke, R., and Capponi, E. (2001) *OECD in Figures*. Paris: OECD Publications.
Considine, J., and O'Leary, E. (1999) "The Growth Performance of Northern Ireland and the Republic of Ireland, 1960 to 1995." In N. Collins (ed.) *Political Issues in Ireland Today*. New York: Manchester University Press.
Department of Finance, Ireland (2002) *Budgetary and Economic Statistics March 2002* (www.irlgov.ie/finance/publications/otherpubs/bes02a.pdf).
The Economist (1988) "Survey Republic of Ireland," 16 January: 3–26.
_____ (1997) "Europe's Tiger Economy," 17 May: 21–24.
_____ (2000) "Hot and Sticky in Ireland," 29 June: 47–48.
Economist Intelligence Unit [EIU] (2000) *Country Profile 2000 Ireland.* London: Economist Intelligence Unit.
_____ (2001) *Country Report Ireland.* London: Economist Intelligence Unit (August).
Grubel, H. (1998) "Economic Freedom and Human Welfare: Some Empirical Findings." *Cato Journal* 18 (2): 287–304.
Gwartney, J.; Holcombe, R; and Lawson, R. (1998) "The Scope of Government and the Wealth of Nations." *Cato Journal* 18 (2): 163–90.
Gwartney, J., and Lawson, R. (2002) *Economic Freedom of the World: 2002 Annual Report*. Vancouver, B.C.: Fraser Institute.
Harper, D. (1998) "Institutional Conditions for Entrepreneurship." *Advances in Austrian Economics* 5: 241–75.
Holcombe, R. (1998) "Entrepreneurship and Economic Growth." *Quarterly Journal of Austrian Economics* 1 (2): 45–62.
Honohan, P. (1999) "Fiscal Adjustment and Disinflation in Ireland: Setting the Macro Basis of Economic Recovery and Expansion." In F. Barry (ed.) *Understanding Ireland's Economic Growth.* New York: St. Martin's Press.
International Monetary Fund (2001) *International Financial Statistics Year Book*. Washington: International Monetary Fund.
Jacobsen, J. (1994) *Chasing Progress in the Irish Republic*. New York: Cambridge University Press.
Keefer, P., and Knack S. (1997) "Why Don't Poor Countries Catch-Up? A Cross National Test of Institutional Explanations." *Economic Inquiry* 35: 590–602.
Kirzner, I. (1973) *Competition and Entrepreneurship.* Chicago: University of Chicago Press.
Knack, S. (1996) "Institutions and the Convergence Hypothesis: The Cross-National Evidence." *Public Choice* 87: 207–28.
Knack, S., and Keffer, P. (1995) "Institutions and Economic Performance: Cross-Country Tests Using Alternative Institutional Measures." *Economics and Politics* 7: 207–27.
Lane, P. (2000) "Disinflation, Switching Nominal Anchors and Twin Crises: The Irish Experience." *Journal of Policy Reform* 3: 301–26.
McMahon, F. (2000) *Road to Growth, How Lagging Economies Become Prosperous.* Halifax, N.S.: Atlantic Institute for Market Studies.

Mises, L. (1996 [1944]) *Bureaucracy*. Reprint. Grove City, Pa.: Libertarian Press.

_____ (1998 [1949]) *Human Action*. Reprint. Auburn, Ala.: Ludwig Von Mises Institute.

Norton, S. (1998) "Poverty, Property Rights, and Human Well-Being: A Cross National Study." *Cato Journal* 18 (2): 233–45.

Olson, M. (1965) *The Logic of Collective Action*. Cambridge, Mass.: Harvard University Press.

Organization for Economic Cooperation and Development [OECD] (2002) *Annual National Accounts—Comparative Tables* (http://cs4hq.oecd.org/oecd/eng/wdsview/dispview_url.asp).

Paliginis, E. (2000) "Institutions and Development in the EU Periphery." *Zagreb International Review of Economics and Business* 3 (2): 81–92.

Romer, P. (1994) "The Origins of Endogenous Growth." *Journal of Economic Perspectives* 8 (1): 3–22.

Scully, G. (1988) "The Institutional Framework and Economic Development." Journal of Political Economy 96: 652–62.

_____ (1992) *Constitutional Environments and Economic Growth.* Princeton, N.J.: Princeton University Press.