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# On Becoming European: An Economist's Education

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**Abstract:** Economics is an international discipline, but economists tend to be local thinkers. We describe how research on the Irish economy eventually led to a series of engagements with Europe, and eventually became transformed by a European dimension. We suggest that a strong sense of local identity is a pre-requisite for the emergence of a European identity, and that there is much to be gained from learning to look at Ireland through European eyes.

**Key Words**: Ireland; economics; identity formation; European Union; Structural Funds; EU enlargement; convergence.

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The work described in this paper involved long and fruitful collaborations with many colleagues in the ESRI, as well as from other Irish and European universities, research organisations and government departments. Not all are mentioned in the text, but their contributions are apparent from the authorship attributions of the jointly written papers, some of which are listed in the bibliography. However, all opinions and interpretations remain my own responsibility.

### Introductory remarks

About fifteen years ago I was sitting in the Winding Stair bookshop that overlooks the halfpenny bridge on the Liffey, drinking coffee and reading the second-hand book that I had just purchased. This was a time when the Winding Stair was still a bookshop that served coffee rather than a coffee shop that sold books. Across from me sitting at the large table I noticed two young German women, one of whom was reading Roddy Doyle's novel *The Commitments*. Having read it myself, I was puzzled how a non-Dubliner, not to mention a foreigner, could pick their way through the dense slang and exquisite expletives that make it so memorable. I could not resist asking! The explanation was very simple. The two young women lived in a colony of Germans in Dublin's inner city, supported by German social welfare payments, and basking in a culture that appeared to offer a welcome temporary respite from German regimentation.

I was reminded of that incident recently when I re-read *Dubliners*. How was it that this book is read all over the world, yet is so deeply centred in the minutiae of Irish history and Dublin everyday life of the early 20$^{th}$ century?

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More generally, how can one ever experience or understand another culture from the outside? This question had come to bother me over the past decade, as my work took me out of Ireland and into the enlarging European Union. As an economist, I believed that my discipline was universal, and that I had tools that could unlock the mysteries of development anywhere in the world. But this abstract claim sat uneasily alongside the human impressions and experiences of my European work.

Economic narratives are seldom of interest to non-economists. It has amused me that whenever I have to identify my line of work at social gatherings, people always want me to tell them about the future (house prices, the euro-dollar exchange rate, possible tax rises!). I noticed that I was never asked to explain the past. We economists are seen as strange and exotic creatures, who gaze into our computerised crystal balls, forecast the future, are invariably wrong, and are paid obscene amounts of money!

I never seem to have the opportunity to explain how, through my work as an economist, I ceased to be Irish-Irish and gradually became European-Irish. That this was no sudden epiphany, as on Sandymount Strand. That it happened so slowly that the changes were barely detectable. But at the end of the process, Europe was no longer a far away place, of big importance in the economic statistics of trade and whatever, but of very limited importance to everyday life. I had become European, had started to think as a European, and now looked back at Ireland partly through European eyes.

The research project that brought these feelings to a head was carried out late in 2004 for the Regional Policy Directorate of the European Commission. I was commissioned to evaluate the likely impact of the initial proposals for funding of the new *Structural Fund* programme that will follow the present one.[1] This new programme will cover a period of seven years from January, 2007 to December, 2013. Some "old" EU states and regions (Greece, Portugal and Spain, as well as the Italian *Mezzogiorno* and East Germany), will continue to receive investment aid. However, Ireland will be excluded, since its sustained high rate of growth during the 1990s has now taken it beyond the aid threshold. We Irish are now deemed to have caught up, and are destined to become net contributors to the EU budget, after a third of a century as a net recipient. But the main focus during the new programming period will be on the new member states. In particular, attention and resources will be directed at the eight new members from Central and Eastern Europe, as well as to the two candidate countries, Bulgaria and Romania.

After this project was completed in September, 2004, I began to reflect on the wide international scope of the work. In particular, I reviewed the sequence of events that led from purely Irish economic research that started in the mid-1970s to a situation twenty years later where many of the fruits of that early research are being applied to a wide range of the less advanced states and regions in the rest of the EU. This deep involvement with the new member states of Central and Eastern Europe was not something that I had ever anticipated.

**The Irish years: 1975-1990**

I started work as an economic researcher in the Central Bank of Ireland in the mid-1970s, and continued in the Economic and Social Research Institute (ESRI) from the early 1980s. With hindsight, I now see that our economic research programme —which examined the inner workings of the Irish economy in a deeper way than had been attempted before— was innovative and path-breaking. But at the time we were struggling to understand how the catastrophic Irish policy errors of the late 1970s could ever have been made, what the disastrous consequences were, and how we could recover from that debacle. We were Europe's failing economy, and tried to keep a low profile in Brussels since we caused embarrassment.[2]

But a crucial spillover benefit from that research came in late 1988 when the ESRI received a call from the Department of Finance. The first programme of EU *Structural Funds* was about to be launched, starting in 1989. This was a massive programme of investment aid that was made available by the more advanced EU states to the poorer (or "lagging") states, mainly Greece, Ireland, Portugal and Spain. A pre-condition of receiving the aid was that the recipient countries were obliged to commission detailed *ex-ante* evaluations of the likely effects of the policy proposals that were to be incorporated into systematic *National*

*Development Plans (NDPs)*, within which the *Structural Funds* would operate. The ESRI was requested to carry out an *ex-ante* impact evaluation study?[3]

The project that followed was both fascinating and challenging. It was fascinating, because a huge programme of public investment, spanning five years, was being designed. It was challenging, because we were initially uncertain as to how the likely impacts of the programme might be analysed. But the ESRI economic research of the previous years had produced an understanding of the behaviour of the Irish economy that was uniquely suited to guide analysis of the likely beneficial impacts of large-scale public investment programmes in the areas of infrastructure and human resources.

At the time, we had little idea that what we were doing was in any way novel, or that it might be of wider interest elsewhere in the EU. Indeed, we neglected our final report after it was submitted to the Department of Finance and passed over to the European Commission. More than a year was to elapse before we even considered publishing it. By then we had begun to notice that we were getting many requests from abroad for the manuscript. The report eventually came out as an ESRI publication almost two years after the work was completed (Bradley, Fitz Gerald and Kearney (eds.) 1992). Indeed, one might say that the European Commission uncovered the wider relevance of our work before we ourselves did (Toulemonde 1995). This was obviously a simpler, more modest age, when the need to promote and sell your research consultancy wares in the marketplace was not as urgent as it has become today! By examining Ireland in great detail, we had unwittingly opened up ways of studying how other less developed EU states might better understand how to escape from a low income trap.

## Taking on the southern EU periphery

The next stage in my path towards Europe came in 1992, when the ESRI was encouraged by the European Commission to put together and direct a research project involving Greece, Ireland, Portugal and Spain, the other main recipients of *Structural Funds*. The aim was to expose these other countries to the same rigorous analysis that Ireland had undergone. The research network was quite successful, and the results ended up being published in two books (Bradley, Whelan and Wright 1993; Bradley *et al* 1995) as well as in a special issue of the UK journal *Economic Modelling* (Bradley, Herce and Modesto 1995).[4]

My experience in the three countries of the southern European periphery tended to confirm my view that we in Ireland had the good fortune of exposure to the rigors of Anglo-American academic macroeconomics, modelling, and policy analysis, a research literature that is mainly published in the English language. The standard of existing academic economic research in southern European countries was equally high, if not even higher, particularly in the case of Spain. But curiously, in few cases had this academic expertise transferred into a serious effort to analyse or model the impacts of their own *National Development Plans*. In even fewer cases had the design of the *NDP*s been subjected to the kind of rigorous scrutiny that was being applied in Ireland. In no case did there appear to have been much interest in the wider *NDP* process taking place in the rest of the lagging economies of the EU periphery. Only the Irish seemed to take ownership of the challenge in an international context

## Travelling east

The next stage of my path to Europe originated in 1995 from conversations between myself and a colleague from University College Dublin (Dr Frank Barry). We had followed the spectacular collapse of the Berlin Wall, and the liberation of the countries of Central and Eastern Europe from Communism. Both of us had become interested in the economic processes of transition from central planning to liberal market-based economies that were taking place in Central and Eastern Europe. The initial stages of the transition process — what Olivier Blanchard has called "a combination of reallocation, restructuring and disorganisation" (Blanchard 1997)— were nearing completion. Frank and I believed that the latter stages of post-Communist "transition" were probably going to resemble the European notion of "cohesion" (or real convergence of income levels). In the least developed EU economies, Portugal, Greece and Ireland had started in the late 1980s from levels of about 55, 60 and 65 per cent of the EU average income per head, respectively.

The greater seriousness of the post-Communist transition challenge was very obvious, since the poorest CEE countries had an income per head below 30 per cent of the EU average. This highlighted the extreme importance of the development challenge. We considered that "transition" was about to mutate into "cohesion", and we sensed that research funding might be extracted from the Commission to look into these issues.

Frank and I put together a team from three of the CEE countries: the Czech Republic, Romania and Slovenia. Our choice of teams was quite eclectic. Frank had previous Czech contacts, who helped us select a local team. I had a previous contact with a Slovenian research institute in Ljubljana (the Institute of Economic Research – IER) through requests for off-prints of papers. I have forgotten why we selected Romania. But fate had guided us to one of the best cases of transition, one of the worst, and a middling case.

Our project was ambitious: "The comparative study of cohesion and transition". We won a competitive ACE-Phare research funding award to cover about 18 months work over 1996-98. The subsequent project was life-expanding, but not without its trials and tribulations! The senior member of the two-person Czech team resigned after six months, leaving a very young graduate —David Vavra— to carry on the work alone. I remember flying to Prague for the first time in January 1997 to pick up the pieces and work with David. We put together the main elements of the Czech economic database and early research results in four days and nights of caffeine-sustained frenetic work, broken now and again by walks in the snow through that beautiful city. David subsequently became a leading member of the Czech economics profession, and is now with the Czech National Bank. Our early work on the Czech Republic was eventually published in the *Journal of Transition Economics* (Barry, *et al* 2003).

Dealing with Romania in the mid-1990s was very difficult. In the days before universal access to e-mail, the faxes destined for Bucharest always seemed to remain stubbornly on the ESRI fax machine, un-transmitted and un-transmittable. And when we eventually held a full meeting of our group in Romania, I had to carry around brown paper bags full of US dollars, apparently the only acceptable payment mechanism for what were very basic services. As we worked in a holiday resort hotel in the Carpathian Mountains —close to Castle Dracula— our "travel agency" minder lived in a small annex, curtained off from our make-shift seminar room. If, in the course of working on the flip-chart, a team member uttered words like "has anyone got a red marker pen?", the curtains would draw aside and the "minder" would float silently into the room bearing one.[5]

At this early stage (1996/97) the EU aid to the transition countries of Central and Eastern Europe was relatively small in magnitude and had not yet been co-ordinated into systematic *National Development Plans*. Frank and I saw ourselves more as research pioneers, identifying some of the evolving market mechanisms at an early —even premature— stage. In the case of Romania —with its mid-1990s inflation rates of over 70 per cent and its flight of labour from collapsing urban economic centres to the poverty-stricken rural farmlands— our research was, indeed, premature. Our work on the Romanian economy was more about the ghost of Christmas future than about the ghost of Christmas present. All that one could say in its favour was that it appeared to make more sense than the ghost of Christmas past which still lurked in the Bucharest shadows!

Standing back from the project's technical research output, three distinct national personalities emerged. The Slovenes had made such steady and solid economic progress that they tended to be impatient with all the fuss about "transition"! When asked to select a national policy for analysis, they picked the fiscal consequences of population aging! The Czech Republic was still engaged in a vigorous and slightly chaotic embrace of capitalism, led by Prime Minister Václav Klaus, who made Margaret Thatcher look socialist! But our early research had sounded warning bells of problems in the pipeline, and we noted later with perhaps a sense of *schadenfreude* that the Czech economy slowed down dramatically in the latter part of the 1990s. In the mid-1990s, Romania was still deeply mired in a slow and tortuous disengagement from Communism, and was clearly going to have difficulty keeping up with the rest of the CEE transition. The erratic pace of transition was to culminate in their failure —together with Bulgaria— to gain membership of the EU in the 2004 enlargement.

### Tackling the first eastern European *National Development Plans*

My first serious involvement with *National Development Plans* in Eastern Europe started in 1999 in East Germany, by then part of a united Germany, and having all the characteristics of a post-Communist transition economy. Initially I did some consultancy work for the German ifo Institut, through their Dresden office. I will always remember my first visit to that tragic city. The Dresden-based ifo Director, Jűrgen Riedel, and I discovered that we were both admirers of Kurt Vonnegut's classic anti-war novel, *Slaughter House Five*, which is set during the destruction of Dresden, when the city was firebombed in 1945 by Allied planes during the final months of World War II. When Jűrgen took me on a night tour of the city, I tried to imagine myself as a young child in Dublin in the late 1940s, if all that survived had been the façade of Trinity College, a few columns from the old Irish Parliament Building, and the rest had been rebuilt in the crude style of 1950s office blocks and Ballymun high-rise flats.

A second East German project followed, in collaboration with Dr Gerhard Untiedt of the GEFRA consultants based in Műnster. In a nice example of serendipity, I was able to base the East German research on previous work that I had carried out on the North of Ireland.[6] It was remarkable how similar the economies of these two regions were, in terms of their decaying industries, bloated public sectors, sclerotic structure and utter dependency on external financial subvention!

A parallel ESRI engagement with Eastern European *National Development Plans* started in 1999. We were approached by an international consultancy working with the Ministry of Finance in Riga, and asked to assist in the process of revision of the first Latvian *NDP*. The first draft effort had earlier received a critical reception by the Commission, and a revised version was needed. Not wishing to become mired in a difficult *NDP* debate that was not of my making, I proposed a programme of basic research on the Latvian economy that drew on the Irish experience, and that could be used to bring some logic to the design and evaluation work for the revised *NDP*.

One telling episode from the Latvian project sticks in my mind. We had brought a group of ten Latvian Finance and Economy Ministry officials to the ESRI for training in the use of the new techniques. At one stage I asked them to re-boot their PCs under DOS, since DOS was required to run a particular simulation package.[7] The air of puzzlement was palpable, and one of our Latvian guests turned to me and asked: "What is this DOS?" It only then dawned on me that the post-Communist generation of civil servants had obviously flourished in the world of Windows! I gave them a crash course in DOS (they were fast learners), but they continued to ask me questions like: "How do you cut and paste in DOS?" That night I made the decision to switch to a Windows-based simulation package and have not regretted it! What a nice example of how developing economies can often leap-frog over old technologies and forge ahead!

My next assignment took me to Estonia in the year 2000, and my involvement with the Ministry of Finance in Tallinn has been a long and fruitful one. Two of their young officials —Alvar Kangur and Natalie Lubenets— subsequently came to UCD to do Masters degrees, and Natalie worked part-time in the ESRI during her studies. An event that gave me much pleasure took place in May, 2004, when I was asked to address a meeting of senior policy-makers in Skopje, Macedonia, just prior to their application for EU membership. I suggested that Natalie also present the Estonian economic experience of progression to EU membership, and she did so with impressive confidence and authority. In a sense the wheel had now come round the full circle, and Estonia —an early transition success— was in a position to pass on its experience to Macedonia, the very latest aspiring applicant. I would like to think that, in a small way, exposure to the Irish-assisted research on Estonia may have helped the young policy analysts in that country better to understand the important way-points in their transition and accession, and to internationalise their experience of *NDP*s in a way that did not seem to have happened in southern Europe..

People must have begun to talk about the gradual spread of the ESRI research on the analysis of *National Development Plans*! In early 2002 I was invited to work on the Polish economy, as the Polish government prepared its first interim *NDP* for the period from their EU membership in 2004 to the end of the present programming period (2006). This had to be submitted for formal approval by the Copenhagen Summit of December, 2002. Our research collaborator was a small and very efficient regional research agency (WARR), based in the city of Wrocław in Lower Silesia (or Dolnoślaskie Voivodship). In the early stages of this work, I passed around a copy of the documentation of the construction and use of the Estonian economic model.[8] Perhaps that highest praise I have ever received came from a senior Polish policy maker, who was reported to have said that this was the first economic model he had seen that made any sense to him!

Working in Poland can give rise to a sense of dislocation. My Polish colleague, who had been Voivod (or Governor) of the region for six years, took me on a tour of his beautiful city of Wrocław. In one sector of the city, which looked more "ordinary" than the historic centre, he told me that when the Soviet army had laid siege to Wrocław in late 1944, the Germans had bulldozed the buildings and attempted to build an aircraft landing strip. My initial reaction was one of anger that another Polish city should be so mutilated by the occupying German army. But then I realised that, until 1945, Wrocław had been a German city, and only became Polish when the borders of that country were moved west after the end of the war.

The early work on the Polish national economy was successful, and the results were published in Poland, both in English (Bradley and Zaleski 2003a) and in Polish (Bradley and Zaleski 2003b). Wider aspects of the *ex ante* evaluation of the first Polish *NDP* are considered in Bradley, Zaleski and Zuber 2004. This early work has already been extended in terms of sectoral coverage, and it is now about to give rise to a whole litter of 16 regional (or voivodship) models that will be used as an input to the regionalisation of the next Polish *NDP* for the period 2007 to 2013. The early discussions on this new project were held in Herman Gőering's old hunting lodge, now used as an official guest-house by the Voivod of Dolnoślaskie. It is located on the southern Polish border with the Czech Republic, in a region that had been part of the Third Reich until 1945. It seemed strangely appropriate to be carrying out research on Polish economic development there!

My most recent research collaboration was carried out in Hungary. I had long been interested in including Hungary in our research network, but no suitable funding opportunity had arisen. In 2003 I tried to bid for an Hungarian *NDP*-related contract, but unfortunately we were forced to withdraw because of onerous contractual conditions that would have made the project unworkable.[9] My Hungarian colleague —Dr János Gács— and I decided that we would embark on the research ourselves, for our own enlightenment! Interacting via e-mail, we were able to complete a basic programme of research over a few months of part-time work. The lesson that we drew was that, when you have experienced European researchers, familiar and confident with each other and able to transfer insights between countries, very rapid progress can be made.[10]

## An endnote on *National Development Plans*

The final part of this European research odyssey came early in 2004 when the European Commission issued a call for tenders for a project designed to examine the likely effects of the *Structural Funds* during the next *NDP* programming period, covering the years 2007 to 2013. We were awarded the contract, and our group consisted of Dr Edgar Morgenroth and I (from the ESRI), Dr. János Gács (from the Hungarian Academy of Sciences in Budapest) and Dr. Gerhard Untiedt (Director of the German GEFRA Institute and by now a colleague of long standing). Our trans-European network of economic models was a modest enough research tool, and had grown more by accident than by design. But there was probably little enough opposition from other modelling networks.

The real dilemma facing us when we try to use models to evaluate the *ex-ante* impacts of yet-to-be-implemented *NDP*s is that we cannot know either how appropriate the design of the *NDP* is in addressing a country's future development challenges (were the correct barriers to growth identified?), nor can we anticipate how effectively the *Structural Fund* investment programmes will eventually be implemented (will the money be wasted). At best, we can arrive at an informed qualitative judgement on the appropriateness of the *NDP*, drawing on economic theory, detailed quantitative knowledge of the economy being analysed, and examining the impacts of any previous *NDP*-like investment programmes.[11] Concerning implementation, some countries seem to be better than others. The insistence by the Commission that strict monitoring checks be observed helps towards more effective implementation, but cannot guarantee it.

The goal of the *Structural Funds* is to promote long-term convergence. Hence, the transient "demand" effects that arise during the seven-year implementation phase are of less interest than the enduring longer-term "supply" benefits. Cutting through the technical detail, the research suggests that the recipient countries might be considered as falling into three separate groups, as follows:

*Group 1*: The *star* performers: This includes the Czech Republic, Slovenia, Estonia, Poland and Portugal.

*Group 2*: The *average* performers: This includes Latvia, Romania, Spain and Hungary.

*Group 3*: The *under* performers: This group includes East Germany, the Italian *Mezzogiorno* and Greece.

It seems that Group 1 has the nimble small open economies (the Czech Republic, Slovenia and Estonia), as well as the Polish "eagle" and Portugal, both of which appear to have economic structures that orient them towards faster growth. But in light of the problems of carrying out economic research in Eastern Europe, perhaps it would be unwise to read too much into the differences between the *star* and the *average* performers. Two of the *under* performers are large regional economies (of Germany and Italy). This suggests that it is particularly difficult to galvanise a lagging region, since most domestic inter-regional aid comes in the form of enterprise-zapping income support and not —as in the case of EU *Structural Funds*— investment aid. Having worked on the North of Ireland, this was a familiar story.

At the end of the day, we arrived at a sobering conclusion. The impacts found in our study suggested that *Structural Funds* on their own would not produce convergence of the spectacular Irish variety. We believed that the returns to *Structural Funds* are high, if the *NDPs* are well designed and efficiently implemented. But our analysis, as well as that of the regular EU *Cohesion Reports*, focused almost exclusively on an economic perspective. The debate was essentially about the rate of return on *CSF* investment programmes in isolation from all the other process going on simultaneously.

The policy instruments of *Structural Funds* (mainly physical infrastructure and human capital) provide inputs into a cohesion process, but do not guarantee it. Significant progress towards cohesion will only come about if the individual businesses in the recipient economies fully exploit the improved economic environment. We suspect, but cannot prove, that the long-run impacts of well-designed *NDP*s may be much greater than our modest figures suggest. Perhaps this is why all aspects of the spectacular Irish convergence performance is of such great interest to the new member states of Central and Eastern Europe.

**Becoming European**

A child's view of identity and place is centred on its immediate and familiar environment. Which of us in middle age, when rummaging in dusty attics, has not happened on a storybook with our name written in a childish hand, followed by something like: *Dublin, Ireland, Europe, the World, the Universe*? To a child, the rest of the world is seen as through the wrong end of a telescope, and other places and identities are remote and incomprehensible. As children, we do not choose our identity consciously. A real sense of what it means to be Irish only comes with age and experience, when we interact with people of other nationalities, cultures and identities.

For most of my adult life, I have worked as an economist. This is a challenging and attractive profession, built on language and concepts that invite —even compel— international comparisons. My work has taken me mainly to the countries of Europe, both East and West, and as I grew older, I gradually came to develop an understanding of what it meant to be Irish, but also what it meant to be European.

To be Irish is a bit like being in an inter-tidal zone between alternative worlds. We are suspended between two cultures: one, British, made us citizens of the modern hard-nosed urban world of trade and commerce; the other, a gentler Gaelic heritage, made us spiritual and rural. We live in a society that is at once traditional and modern, and the tension between these forces serves to animate our thought and artistic expression. We gave up our language (a deep symbol of our uniqueness), yet retained a strong and distinct cultural identity that we express (however imperfectly) in two languages. As a child I learned the names of flowers, crops and animals in Irish and the dry facts of commerce, geography and science in English.

To be European can only happen when you come to look upon colleagues in other countries as if they were from your own country, perhaps from a different region and with a different history. The tension between the local and familiar, on the one hand, and the global and unfamiliar, on the other, can also be creative. For example, an Irish background prepares one for an understanding of other states whose right to exist is of recent origin. Perhaps this is why Joyce's and Doyle's parochialism strikes a chord internationally? Perhaps a strong sense of local identity is a pre-requisite for the emergence of a European identity?

Some years ago, I gave a lecture in Ljubljana on the Irish experience of foreign direct investment, and as I related the story of how our manufacturing sector has come to be largely owned by foreign multinationals, I became aware of how unpalatable the Slovenians found this notion. Afterwards, my Slovenian colleagues explained to me that they had not won independence in order to give their economy away to foreigners. How comfortable it is, I thought, to live on an island far away from the battlefields of marauding armies of empires in conflict! Yet how interesting and challenging it is to try to give something back to a Europe that has already given us so much.

## NOTES

1. *Structural Funds* are the investment aid that the Commission makes available to the poorer member states to assist their development and convergence to the EU average standard of living.
2. I vividly remember in 1982 attending a lecture given in the ESRI by retired Commissioner Francois Coppé, a contemporary of the EU founding fathers, where he left the audience of senior policy makers, business people and academics in no doubt that Ireland was dangerously close to pariah status.
3. One might speculate that if a major commercial consultancy firm had been awarded that crucial first *NDP* evaluation contract, the ESRI might never have got involved with the *Structural Funds* to any great extent, intensive research might not have been pressed into service, and I would not be writing this paper!
4. The Greek model was not published in the 1995 special issue of *Economic Modelling*. The Greek team leader – Nicos Christodoulakis – had very independent views on modelling, balked at the discipline of having a harmonised approach, and published his own analysis and economic model many years later (Christodoulakis and Kalyvitis 2001). Nicos subsequently became Minister of Finance in the Socialist PASOK government of Constantine Simitis.
5. It was also at this meeting that I noticed that the laptop computers funded for the CEE teams by our project, were all Dells, assembled in Limerick, and that their local versions of Windows had been customized in Dublin!
6. The North of Ireland research was carried out with Jonathan Wright in a research project supported by the International Fund for Ireland (Bradley and Wright 1993).
7. For those readers who, like the Latvians, came to computing recently, DOS stands for Disk Operating System, and was the software that launched Microsoft and Bill Gates on the path to their spectacular dominance of the PC software industry.
8. An economic model is simply a computer based system that tries to describe and replicate the features of an economy through computer simulations.
9. *NDP* contracts in eastern Europe sometimes require the researchers to be resident in the country being studied for very long periods of time. Such projects often tend to end up being run by commercial consultants who have little or no competence in economic research.
10. See Bradley, Gács, Kangur and Lubenets 2004, for a fuller account of the Hungarian modelling process.

11. For example, an examination of the long history of public financial aid to the Italian *Mezzogiorno* might lead you to the conclusion that the *Structural Fund* measures implemented since 1989 would be unlikely to succeed if they were simply a continuation of previous failed policies (CRENoS/ESRI 2004). They were. And you would be correct in your conclusion.

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