EU Regional Innovation Strategies: Regional Experimentalism in Practice?

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Abstract

This paper reviews the emergence of regional policy initiatives designed to stimulate learning, innovation and regional development in Europe's less favoured regions. Drawing on the European Commission-sponsored Wales Regional Technology Plan as a case-study, it examines progress and outcomes using the conceptual framework of regional experimentalism (Sabel, 1996). The paper concludes that the Wales RTP has helped to develop significant interactive learning processes amongst the regional state, firms and intermediaries. Important questions, however, are raised as to whether the RTP process in Wales has engendered the sufficiently path breaking forms of dialogue anticipated by theorists. In this respect, the paper suggests that regional experimentalism underestimates the problems associated with creating novel policy processes in environments characterised by well entrenched interests and responsibilities.

(A) Introduction

Regional development policy in Europe's less favoured regions (LFRs) has, in recent years, undergone a period of significant change. In addition to the traditional repertoires of inward investment and physical infrastructure provision, many regions have sought to experiment with policy initiatives designed to promote learning, innovation and indigenous economic development. Underlying many of these attempts has been the principle of networking the disparate sources of local knowledge and expertise contained in public, private and intermediary organisations. These trends, in part, have been inspired by the increasing competition and costs associated with attracting mobile inward investment. They have also been stimulated by the experiences of dynamic regions in parts of Italy, Germany and the US, where economic prosperity has been found to be intimately linked to the presence of dense networks of co-operation, local pooling of knowledge and expertise and the support of business services (see, for example, Saxenian, 1994; Cooke and Morgan, 1998; Amin, 1999).

While these networking initiatives have largely been driven by regional development institutions keen to seek out new ways of improving the competitiveness of local firms, the European Commission has also played a clear role in encouraging these activities in LFRs. This has been particularly

apparent in its use of funds from Article 10 of the European Regional Development Fund (ERDF) to promote the introduction and dissemination of good practice in the area of regional development policy and policy-making[1]. In this respect the European Commission has been responsible for funding a wide range of learning networks ranging from the STRIDE (Science and Technology for Regional Innovation in Europe) programme in 1990 (Landabaso, 1997), to the more recent RTP (Regional Technology Plan), RIS (Regional Innovation Strategies) and RITTS (Regional Innovation and Technology Transfer Strategies) exercises (European Commission, 1997; Morgan and Nauwelaers, 1999).

The feasibility of encouraging innovation and learning through networks in LFRs is an issue that has both theoretical and practical interest. Of the small number of empirical studies that have been undertaken to date, most have tended to draw on the experiences of some of Europe and North America's most innovative economies (Glasmeier and Fuellhart, 1996). It is far from clear, however, whether less prosperous regions, lacking clusters of innovative firms, high levels of institutional support, strong pre-existing networks and relational assets, are capable of building these processes (Lovering, 1997; Hudson, 1999). Indeed, research in the UK (Curran and Blackburn, 1994) and US (Rosenfeld, 1996) has indicated that short-term, arm's length linkages may well be the norm in many parts of the world. Further doubts have been raised

by authors who have suggested that few, if any, of the regions that have provided inspiration for current initiatives, developed their networks through planned action (Enright, 1996).

In this paper the discussion focuses on the theoretically informed attempts of authors such as Sabel, 1994, 1996; Storper, 1997; Maskell *et al.*, 1988 and Amin, 1999, to explore these new departures in regional development policy. These accounts describe a more discursive, learning-oriented approach to regional policy making, design and delivery, in which regional state, firms and intermediaries define development problems interactively, ascribe responsibilities and monitor outcomes in a way that facilitates both learning and adaptation. By entering into this process, it is claimed that these disciplines can help regions and firms to keep ahead of 'competitors'. Yet, despite these ideas becoming increasingly popular in the regional development literature, it is generally agreed that little has been done to assess their value empirically (Maskell, 1997). This task is all the more pressing in light of the increasing diffusion of experimental network initiatives to LFRs in Europe and North America.

The broad objective of this paper, then, is to address these issues by exploring the efforts of Wales (UK); one of the first regions to take part of the EU's RTP programme - a strategy-making exercise designed to encourage regional state,

firms and intermediaries to engage in interactive learning processes designed to improve knowledge of the regional economy and the support needs of firms. The paper draws on findings from research undertaken between 1994 and 1999, including participant observation at Steering Group meetings and RTP annual conferences, documentary analysis and some 21 face-to-face interviews with key participants (Henderson, 1999).

The paper begins, first, by outlining the emerging literature exploring the linkages between proximity, learning and regional development, and the claims made by theorists for a regional policy based around regional experimentalism. This model is then used as a template to explore these new departures in the context of European Commission regional policy, and the concrete case-study of the Wales RTP. The paper concludes by reflecting on the outcomes of the Wales RTP exercise and the implications for the regional experimentalism agenda.

(A) Regional Experimentalism In Theory

The linkages between learning, proximity and regional development have, in recent years, come to represent one of the most important research agendas in economic geography (Glasmeier and Fuellhart, 1996; Cooke and Morgan, 1998; Maskell *et al.*, 1998; Storper, 1997, Special Issues of Regional Studies,

Vol. 33,4 and Cambridge Journal of Economics, Vol. 23,2). The cornerstone of this growing body of work – which draws on a range of cognate disciplines such as evolutionary economics (Nelson and Winter, 1982; Dosi *et al.*, 1988; Lundvall, 1992), organisational and business studies (Cohen and Sproull, 1998; Easterby-Smith *et al.*, 1999) - is the rejection of the neo-classical view of the economy as a product of fixed flows of goods and services. Instead, it suggests a more dynamic conception based around learning and knowledge creation. Maskell and Malmberg, 1999, for example, maintain that the most successful regional economies are those which are characterised by the capacity of firms and institutions to learn - in products, processes and organisational structures - and adapt to changing competitive pressures. As Storper, 1997, puts it:

> Those firms, sectors, regions and nations that can learn faster or better (higher quality or cheaper for a given quality) become competitive because their knowledge is scarce and therefore cannot be immediately imitated by new entrants or transferred, via codified and formal channels, to competitor firms, regions or nations (p. 265).

Here, learning is not, as traditionally envisaged, an activity associated with the lone inventor in a laboratory. Rather, it is viewed as an interactive social process (Lundvall, 1992), drawing on everyday routine activities both within

the firm and between firms and other regional organisations, and supported by 'soft' institutional norms of trust and reciprocity. For many theorists these factors are more (but not inevitably) likely to be present at the local and regional level where the greater frequency of face-to-face contacts can help to set precedents and establish confidence for future interactions (Scott and Storper, 1995; Maskell and Malmberg, 1999).

Learning, from this perspective, is viewed as a process of knowledge acquisition that provides organisations with a capacity to act (Glasmeier and Fuellhart, 1996). Yet as the work of Cohen and Levinthal, 1990, and Dosi *et al.*, 1994, suggests, it is important to recognise the incremental and cumulative characteristics of the learning process. In this respect, learning exhibits path dependent features that can prevent learning outside the confines of existing knowledge and institutional routines[2]. Clear evidence for this has already been found in the decline of once prosperous regions such as the Swiss Jura region (Glasmeier, 1994) and the Rhur region of Germany (Grabher, 1993). These experiences provide important lessons for policy-makers, and suggest that learning, alone, may not be sufficient for firms and regions to succeed in the modern economy.

From a policy perspective similar conclusions about the limits of incremental learning have been made by Charles Sabel, 1996. In a series of papers Sabel,

1992, 1994, 1996, has begun to explore new forms of regional policy that attempts to move beyond programmes designed purely to encourage incremental learning on the part of firms. Under the guise of *regional experimentalism* Sabel, 1996, has outlined a conceptual model advocating a more reflexive approach to regional policy in which the state, firms and intermediaries work in small-scale repeated interactions in an attempt (re)define regional development support services and priorities in a collective manner, establish specific targets and responsibilities, and monitor outcomes in a way that facilitates learning on the part of those in a position to respond. This regional development agenda relies less on learning as a means of incremental adaptation to existing routines, but as a form of strategic and experimental goal setting which, it is argued, can help firms and regional support organisations question the validity of existing support structures and adapt to future challenges.

Sabel's, 1994, earlier work on 'learning-by-monitoring' in Japanese companies provides the corporate analogue for regional experimentalism. This, he defines as a:

> disciplined goal-setting that links discussion of actual performance by the co-operating parties (monitoring) to discussion of how to improve operations given that performance (learning). The continuous

> discussion of boundaries and mutual obligations so transforms economic co-ordination that the normal institutions of governance, (hierarchy or contracting) lose their hold (1996; p. 23).

A key element of regional experimentalism and learning-by-monitoring, then, is the notion of discourse as one of the main arenas in which the state can act (Storper, 1997). In this respect, it implies a more 'interactive' and discursive approach to policy-making, which aims to bring about a process of collaborative problem solving between regional actors (Hausner, 1994; Morgan, 1996).

This policy agenda is clearly suggestive of a new form of regional development strategy, which is neither top-down nor 'technocratic'. Rather, it draws strength and validity from its inclusive and interactive nature. By bringing together regional state, firms and intermediaries, the policy-making process aims to stimulate dialogue as a means of building the norms and routines of confidence and trust vital to interactive learning. The end result of this process of 'learning by strategy-making' (Henderson and Thomas, 1999) could, it is argued, provide a better understanding of the regional economy, the needs of firms and appropriate support systems; the means to monitor progress towards the pre-specified goals; and action on the basis of local experience (Sabel, 1996; Storper, 1997; Glasmeier, 1999).

Whatever the merits of the policy 'models' associated with regional experimentalism it is only recently that these claims have begun to be explored in an empirical context. The following sections of this paper attempt to broaden the regional experimentalism research agenda to LFRs, by exploring the EU's RTP exercise; a programme which it has been claimed embodies many of these experimental learning-oriented policy ideas (Morgan, 1997).

(A) Experimentalism In EU Regional Policy

Through the innovative use of Article 10 funds the European Commission has, in recent years, been at the forefront of regional policy experimentation in Europe. Unlike conventional mechanisms for distributing EU regional policy funds - development programmes negotiated with Member States - Article 10 provides an opportunity for the EU to help establish its own innovative regional pilot studies. It is worth remembering, however, that while Article 10 provides the means for the European Commission (in collaboration with regional institutions) to experiment with new policy initiatives, it does not do so in an overly prescriptive manner. Instead, Article 10 relies on the principle of helping regions to help themselves through initiatives designed to mobilise local knowledge in a process of collective social learning (Messina, 1997).

Article 10 not only provides an opportunity for the European Commission to engage in policy-related learning. Its operating mechanisms also provide a powerful impetus for regional institutions to think strategically about the needs of firms and the appropriate role for public sector intervention. In this sense then, Article 10 aims to set in train a series of interactive intra- and inter-regional learning processes designed to refresh conventional regional policies. These features have been particularly evident in the Article 10 programmes: RTP and RIS.

The origins of the RTP/RIS can be found in the context of the growing realisation that Europe's most prosperous regions have succeeded in appropriating the overwhelming share of EU science and technology resources - the so called Framework Funds. The European Commission's own estimates, for example, suggest that some 50 per cent of all research and technological development (RTD) funds has been concentrated in just 12 'islands of innovation' - Amsterdam, Rotterdam, Ile de France, the Ruhr, Frankfurt, Stuttgart, Munich, Lyon, and so on (European Commission, 1996). The European Commission was also becoming aware that the traditional regional development priorities – physical infrastructure projects – had not been able to fully redress what it saw as 'developmental problems' (Landabaso, 1997).

Launched in 1994, the Regional Technology Plan was a product of the new European Commission thinking in this area (and the culture of experimentation made possible by Article 10). It was principally established to help regional innovation and technology support institutions develop a better understanding of the needs of their firms (European Commission, 1994). This, it was argued, would require regions to:

> establish and promote organisational and co-operative structures, between administrations and the private sector and other elements of the regional economy, through which the strategy could be implemented...[and] assist in the exchange of knowledge and expertise' (Landabaso, 1993; p. 390).

RTP, however, was not viewed as a one-off study. Instead, it was seen as first and foremost a strategy-making process which could help to establish dialogue between 'previously separate' regional support institutions and firms over an eighteen month period (Landabaso, 1993).

At the heart of the RTP process is a comprehensive 'audit' of the capabilities of regional firms to innovate, the role of support structures and the support needs of firms. This relies on a combination of research and structured discussion amongst firms, policy-makers and 'social partners' to harness collective

knowledge, and is supported through the use of mechanisms for the continuous monitoring of progress against targets. These factors, it was envisaged, could help to produce a series of collectively agreed priorities for inclusion within a region's EU regional development programme.

Whilst recognising the 'bottom-up' nature of the RTP process, the Commission felt it necessary to highlight a number of areas where it expected 'operational results' from the RTP. These included 'tangible' outcomes such as 'a clear strategic framework for regional innovation', the identification and preparation of a stock of innovation projects with firms, and the strengthening of regional RTD and innovation centres (European Commission, 1994; p. 16). Perhaps more importantly it was also recognised that the RTP might help regional institutions better understand firm needs, while:

> gain[ing] experience interacting between the business community, the public sector and the RTD community by means of stable, informal channels of contact through discussion groups...[thus] establishing a strategic planning *culture* at the regional level' (European Commission, no date; emphasis added).

In this sense, RTP was seen as a vehicle not only for outlining a 'framework for decision making', but also to develop stronger links and understanding

amongst regional stakeholders and novel forms of interactive regional policy-making.

(A) The EU RTP Exercise In Wales

Eight regions were selected to pilot the RTP exercise in 1994: Limburg (Netherlands), Lorraine (France), Saxony-Anhalt (Germany), Wales (UK), Castilla y León (Spain), Central Macedonia (Greece), Norte (Portugal) and Abruzzo (Italy). The exercise was further expanded in 1996 to include an additional 19 regions through an open call for proposals. The name RIS was later adopted in favour of RTP in an attempt to encourage regions to pay more attention to the non-technological aspects of innovation. The budget for the RTP exercise amounts to a maximum of 500,000 Euros per region, of which 50 per cent is funded by the European Commission. The main focus of the discussion below is to explore the extent to which the RTP exercise in Wales has been able to stimulate the experimental learning processes anticipated by theorists.

For many years Wales has struggled to cope with the decline of its once dominant coal and steel industries. In an attempt to redress these problems, regional policy has been in operation, with varying degrees of success since the early 1930s. A conspicuous feature of these efforts has been the attraction

of a large number of inward investors. This strategy, in part, has helped to contribute towards the development of a more diversified economy based around manufacturing and services. Yet despite the recent success in encouraging investment from companies such as Bosch, Sony and LG, and the claims made by several commentators that the region is experiencing something of an economic renaissance (Price *et al.*, 1994), Wales continues to suffer from a number of major structural problems. These include poor economic activity rates, below average GDP per head, and a low position in the UK regional wages league table. In light of these persistent weaknesses the Welsh Development Agency (WDA) and other business support intermediaries have, in recent years, begun to experiment - alongside their long-standing inward investment activities - with a range of small-scale networking initiatives designed to increase the capacity of firms to innovate. A prime example of these new departures in regional policy is the Wales Regional Technology Plan[3].

In many respects Wales represents an important case-study of the RTP/RIS exercise, not least because it was the first region to petition the European Commission for a regional innovation programme. The region was actively involved in the early discussions which helped shape the practical content of the RTP programme (Henderson and Thomas, 1999). More recently it has

been held up as a model of best practice by the European Commission (see, for example, European Commission, 1998).

In short, the early stages of the exercise in Wales centred on three main research activities: desk research, bringing together various reports and papers on the Welsh economy, its innovative capacity and so on; 350 Company Technology Audits and a survey of innovation and technology support infrastructure. Together these elements provided the means by which the Steering Group were able to begin to develop an understanding of the main innovation issues facing firms in Wales. An important part of the process, however, was the testing of these findings with regional firms and support intermediaries, and exploring, interactively, appropriate solutions to problems. Feedback from the early research activities was sought in two main ways. First, over 30 Panel discussions were held between February and November 1995 with representatives from industry, local government, higher and further education, schools, enterprise agencies, development bodies, trade unions and government. Panels were organised in consultation with regional business support providers and brought together existing networks such as client groups. The objective here was to encourage discussion around the key issues and trends facing Wales, and to identify potential responses. In addition to these panels, a special one-off international experts meeting was held to review the Wales RTP process, analysis and conclusions. Seeking an outside

perspective on the RTP in this manner was viewed as an important mechanism to guard against parochialism. Many of the experts present at this meeting were, themselves, also involved in RTP/RIS exercises elsewhere in Europe. For this reason the experts meeting helped to further support informal networking amongst RTP/RIS regions, as well as allowing participants to benchmark progress and exchange experiences. The value of this exercise has been highlighted by the fact that it is now part of the Commission's guidelines to RIS regions (European Commission, 1997).

The second aspect of the consultation exercise in Wales was the production, distribution and presentation of a Consultative Report (WDA, 1996a). This outlined, in some detail, the main innovation issues, possible priorities and projects identified through the research and panel meetings. It was launched in January 1996 and circulated widely to firms, organisations and key individuals across the region. In response, well over a 100 organisations provided feedback.

The culmination of the relatively exhaustive consultation process - involving over 600 organisations - was the launch of an Action Plan in June 1996 by the Secretary of State for Wales (WDA, 1996b). This set out details of six priority areas and some 66 'committed' projects where support had been obtained from regional support organisations and, in the majority of cases, partnerships. Of

these, the Plan designated a number of 'Flagship Projects', each associated with particular priority areas (see table 1 below). It was envisaged that these would be implemented in the period immediately following the launch of the Action Plan.

{TABLE 1 HERE}

While the publication of the Action Plan marked the formal completion of the European Commission-funded exercise, many elements of the RTP process in Wales have continued in the subsequent period. In particular, the Steering Group has remained in place, operating through various issue-based 'task forces' (e.g. university spin-outs), to ensure that the momentum built up during the RTP was maintained. One of the most significant activities undertaken by the Steering Group in recent years has been to 'revisit' the analysis and priorities set out in the original Action Plan. This monitoring and evaluation exercise, in part, emerged from the growing feeling that the original target of establishing 'a consensus on a strategy to improve the innovation and technology performance of the Welsh economy' had largely been met (Steering Group Minutes, 1997). It was also a product of the 1997 referendum on devolution in Wales which led to the establishment of the Welsh Assembly. These factors, the Steering Group anticipated, could lead to the RTP being

'sidelined' to more immediate concerns within Wales' new institutional structures (Steering Group Minutes, 1997).

In response to these concerns the Steering Group established a new review process to provide the basis of a revised 'RTP 1998' which could determine progress and contribute towards this strategy debate. In a similar way to the consultation activities which supported the first Action Plan, RTP 1998 sought to generate an iterative and interactive process of discussion and knowledge exchange amongst a broad range of regional organisations. This incorporated a series of some 30 meeting with over 600 individuals, and largely confirmed the validity of the main priorities set out in table 1 above (WDA, 1998). The review also highlighted progress towards implementing 57 of the original 66 Action Plan projects (Steering Group Minutes, 1997). Despite the substantial progress made during this period it was acknowledged that there was a need to further communicate the RTP objectives and priorities to the business support community. This, along with other priorities highlighted in the report - evaluating the RTP against its original targets and establishing a formal system to independently monitor progress – form the basis of the recently launched 'RTP 2000' programme in Wales. This followed Wales' successful application to the EU's RIS+ fund for 500,000 Euros[4].

(B) Discussion

The RTP/RIS exercise is primarily designed to build the soft institutional norms underlying interactive learning amongst regional state, firms and intermediaries. As such these represent new ways of designing and delivering regional policy in LFRs such as Wales. The 'intangible' nature of the processes set in train by initiatives such as the RTP and RIS, and the likelihood that they will take relatively long periods of time to filter through to changes in economic performance at the regional level presents particular problems for evaluating progress and impacts. For this reason the discussion below is necessarily tentative and concentrates on the RTP process, rather than the Action Plan projects which have been implemented in the subsequent years.

In assessing the results of the RTP exercise in Wales three areas of impact, anticipated by the European Commission, 1997, are explored: (1) a better understanding of the innovation process and the needs of firms amongst regional state and intermediaries; (2) new interactions and relationships between regional state, intermediaries and firms; and (3) more inclusive regional policy-making routines in the field of innovation.

Beginning with the claim that the Wales RTP has been able to build new insights and awareness of firm needs. This process was perhaps most evident in the use of interactive activities such as Steering Group meetings, panel discussions and so on, allowing many support intermediaries to be exposed to new ideas about the needs of firms and the efficacy of different policy mechanisms. As a senior representative of the Welsh Funding Council noted: 'RTP has forced us to look at how we do things and to consider whether our initiatives or approaches are effective' (interview, 29/07/97).

Participation in the RTP, however, did not simply produce cognitive insights. Many organisations have already begun to act on these new understandings, translating them into new forms of organisational activities and behaviour. This can be seen in the way that RTP encouraged the Welsh Office and WDA to frame new strategy documents. The WDA, for example, have used the six priorities of the RTP as a guide for its business development programmes for the period 1998 to 2001. This is likely to ensure that future WDA initiatives are designed with RTP priorities in mind.

Yet while it seems clear that the RTP has helped to raise awareness and understanding of the innovation process amongst innovation and technology support intermediaries in Wales, a key question yet to be resolved is whether the ideas contained within the RTP have actually been diffused sufficiently

beyond the individuals and organisations represented at the Steering Group level. To answer this question fully will require further research; but if nothing else, the RTP does appear to have forced many key regional actors to reconsider their operational priorities in the light of the issues raised during the process. Whether this learning process ultimately brings about a business support system more in tune with the 'real' needs of firms, though, will be a product of the ability of Steering Group members and other regional actors to bring more depth to the process by communicating it further. In this respect the proposal, contained within the RTP 2000 workplan, to develop a strategy for communicating the benefits of innovation to SMEs represents a potentially important step in the evolution and continued relevance of the RTP in Wales.

The second main impact anticipated by the European Commission relates to the extent to which new interactions and relationships between regional organisations have been created. Here, RTP Wales made specific efforts to ensure a regional consensus by encouraging dialogue between a wide cross-section of firms and intermediaries. Particularly important was the role of the Steering Group, which provided a 'seedbed' in which many organisations were able to foster such linkages and utilise them in other areas of their work. In this sense the RTP Steering Group and other interactive events represented fora for setting precedents and building confidence between regional actors. An interesting example of relationship-building and learning between support

intermediaries occurred during an RTP seminar held between the region's higher education industrial liaison officers (ILOs) (WDA, 1995). This two-day event represented the first occasion that ILOs from all areas of Wales had been brought together. As such it was widely recognised by participants as a constructive and valuable exercise in terms of learning about each other and helping to encourage stronger bonds within the sector (interviews, various). In particular, the event succeeded in producing a remarkably objective and open discussion about both individual institution and collective weaknesses in innovation support.

More recently the RTP has begun to implement a range of networking programmes (set out in the 1996 Action Plan) designed to stimulate innovation. It is perhaps here, then, that the exercise has the greatest potential for generating new interactions amongst firms, and between firms and support intermediaries.

Alongside these positive examples of interactive learning, however, it is clear that the inclusive dialogue generated by the RTP in Wales has, to a certain extent, been driven by a need to ensure a wide base of support amongst regional state and intermediaries. This has produced a process which, in some respects, has limited serious discussion about the reform of established support structures. A good example of this was the innovation and technology support

infrastructure survey undertaken in 1995. Here, rather than critically evaluate existing support activities, the Steering Group chose to produce a review that simply outlined the main actors and services available. The 'bounded' nature of the RTP process in Wales was further ensured, in the early part of the process, by the Welsh Office's desire to ensure (as Chair of the first Steering Group) that the RTP did not produce findings that were against national government policy (see Henderson and Thomas, 1999, for more details).

The third domain in which the Wales RTP has impacted on learning processes has been its role in embedding more inclusive regional policy routines. Indeed, amongst many interviewees there was widespread agreement that the RTP represents an important break from the past in terms of strategy-making exercises. Perhaps the most prominent example of this has been the way it has shaped the revision of the most recent EU regional development programme for 'Industrial South Wales'. This marked an important change because it allowed the programme, for the first time, to be developed on the basis of a systematic assessment of needs and consensus. Such was the perceived strength of this process, that the regional Monitoring Committee felt sufficiently confident to increase the amount of funding for the element of the 1997-1999 programme devoted to innovation measures.

Outside the region's EU development programme the impact of the RTP process has also been felt in other strategy-making exercises in the region. Notable, here, has been the 'spill-over' effect on the Wales Information Society programme launched in July 1997. This has adopted a similar inclusive and interactive learning approach to strategy-building (Osmond, no date). It has also incorporated several individuals from the RTP's Management Unit and Steering Group in an attempt to transfer some of the skills and capabilities acquired during the process. Elsewhere the RTP 98 consultation exercise also revealed the desire, on the part of organisations in Mid- and North-West Wales, to explore the possibility of establishing sub-regional strategy exercises to complement the all-Wales RTP. These developments have been acknowledged in RTP 1998, which includes a further pledge to work with local authorities, the private sector, Training and Enterprise Councils, the WDA, higher and further education and others 'to relate the RTP to local needs and circumstances' (WDA, 1998).

It is difficult to say, yet, whether these experiences represent a shift towards the new, inclusive 'culture of strategic decision making' anticipated by the European Commission. Indeed, the recent work of Phelps *et al.*, 1998, suggests that in the area of inward investment promotion there is just cause for caution, not least because of the hierarchical and selective nature of strategic collaboration evidenced in the attraction of the LG plant to Wales, the largest

inward investment project in Europe. In the context of innovation and technology strategy, however, the Wales RTP undoubtedly represents a small, but significant departure in the policy process.

(A) Conclusions

In summary, the activities established under the aegis of the Wales RTP resemble, in many respects, the regional experimentalism processes outlined by Sabel, 1996 and others. That is, the exercise set out to produce a sustainable form of learning amongst regional firms, state and intermediaries which was geared towards delivering collective, rather than purely individual learning outcomes. The Wales RTP did not, however, aim to achieve this through the lure of immediate access to funding. Instead, it sought to encourage institutional participation by offering opportunities to acquire knowledge which could, potentially, help to make better use of existing resources and improve capacities for delivering policy and programmes attuned to the real needs of firms. This interactive learning process placed a high premium on stimulating inclusive processes of talk as the basis for precedent setting and confidence building amongst regional institutions (Storper, 1997). It was further complemented and supported by the facilitative role played by the WDA in terms of administering the network of actors

involved and providing important resources for implementation and monitoring activities[5] in an experimental manner.

The results from this research clearly provide some support for regional experimentalism's claims that discursive network mechanisms can help to engender learning processes amongst firms, state and intermediaries. This was most evident in the outcomes achieved in helping actors to promote a better understanding of the innovation process, support needs of firms and institutional responses; as well as providing one of the first fora in Wales for firms, state and intermediaries to collectively consider the role of innovation and technological development in the region. These outcomes were therefore primarily intangible in nature - knowledge acquisition and relational assets (Storper, 1997) - rather than the traditional indicators of economic development policy (e.g. jobs). In this respect the RTP represents a process of institutional capacity building for Wales, rather than a strategy of employment creation *per se*. This is, perhaps, not unexpected given the relatively modest resources devoted to the programme. Indeed it suggests that initiatives like the RTP may well need to be implemented within a much broader framework which gives attention to other important social, economic and environmental priorities.

Despite being held up as a best practice RTP/RIS region by the European Commission, 1998, the results discussed here suggest a number of weaknesses

in the Wales RTP planning process which may limit its ability to respond to future strategic challenges. These were most evident in the way that emphasis was given to working with existing resources and institutions to understand the needs of firms, while relatively little attention was given to restructuring or terminating poorly performing structures. This can be explained by the presence of pre-existing policy routines in Wales, and the widespread need for the RTP to build inclusive support for the exercise. This is in contrast to the Japanese antecedents of learning-by-monitoring system discussed by Sabel – a system which 'makes no fixed assumption about the responsibilities of its constituent units, the boundaries between them, or their relation to outside collaborators' (1996; p. 31). In this respect the experiences of the Wales RTP suggest that the regional experimentalism agenda may well underestimate the difficulties of recreating these disciplines in policy environments characterised by more entrenched interests and responsibilities.

The circumscribed nature of many of the discussions taking place within the Wales RTP raise clear questions as to whether the programme represents the truly 'path breaking' form of strategic re-assessment anticipated in the theoretical literature. Whether these limitations represent a danger to the region's future economic prospects will be a question for history to judge. Likewise the issue of the extent to which the experiences of Wales have been mirrored in the other RTP and RIS regions is an area which will require further

investigation. The research discussed here provides a small contribution to this emerging research agenda.

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Notes

[1] Article 10 actions accounted for some 400 Million Euros during the 1995-1999 period. This represented less than 0.6 per cent of the total ERDF budget of 70 billion Euros for this period. Unlike typical ERDF funding, which is delivered through operational programmes, Article 10 actions are selected by the European Commission, who are responsible for their implementation (Landabaso and REID, 1999).

[2] These arguments bear strong similarities to the distinction made in the organisational learning literature between 'single loop' (cumulative) and 'double loop' (radical) learning (see, for example, Argyris and Schön, 1978).

[3] As one of the eight pilot regions Wales has continued to us the RTP 'brand name'.

[4] RIS + was launched in 1999 as a mechanism for the Commission to provide additional financial support for the implementation of 'good quality' RIS (and RITTS) pilot projects in selected regions. Funded through Article 10, RIS+ provides up to 500,000 Euros to successful applicants over a further 18 month period.

[5] Including formal mechanisms such as the RTP 1998 process and the 'RTP 2000' Innovation Survey, as well as continuous informal consultation activities.

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Table 1 Priorities and Flagship Projects for the Wales RTP

- **A culture of innovation is vital for personal and economic success**

The Welsh Innovation Challenge: a project to integrate existing innovation award competitions, providing a national profile with improved promotion, publicity and assistance with commercialisation.

- **Wales must profit from global innovation and technology**

The Welsh Optoelectronics Forum: a project to help expand the international networking activities of the region's optoelectronics group.

- **Companies learn best from each other, therefore supply chains and networks are crucial**

Innovative Teaching Company Schemes: an extension of the successful Teaching Company Scheme (technology transfer from the university sector to industry via a two-year graduate placement) to enable companies in particular supply chains address a common innovation need.

- **Finance for innovation must be readily available in Wales**

Technology Implementation Funding Programme: a project to identify technology and innovation needs in SMEs and provide part-funding for the acquisition of new technology and consultancy for technical problem-solving.

- **High quality business and innovation support is essential for Welsh companies**

Support Centres for Information Technology and Multimedia: establishment of centres to provide demonstrations of and access to information technology.

- **Education and training for innovation and technology are vital for the Welsh economy**

Bargaining for Skills: a project to assist employers and trade unions in working towards training goals.

Source: WDA (1996a)