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Preparing for the Challenge of a Global Workforce: A Study of Training and Enterprise Councils in Wales

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FOREWORD

The 1990's have been marked by a dramatic change in the structuring of industries and economies throughout the world. Policy makers have been struggling with the problems of how to attract and support new industries into their countries, regions, and cities. One of the important characteristics sought by investors is a workforce which is skilled and hard working. Although a high quality workforce alone is not a sufficient enticement for new investment, it is indeed an necessary pre-requisite for many industries particularly the high technology and high skilled service and manufacturing sectors.

This working paper reports the findings of two researchers who have identified one area of the world which has attempted to put together a package of training, retraining, and investment inducement policies to attract both inward and foreign investment into Wales. The Welsh experiment shows how the public and private sectors have joined together to attempt to provide the economic infrastructure for investment in this region of the United Kingdom. This working paper is the first of a series of papers looking at both the qualitative and quantitative data on the Welsh experiment. The first portion of this multi-part project focuses on the role of Training and Enterprise Councils in Wales and is based on visits to several of the Welsh TECs and their network of public and private partners.

Roy Bahl

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PREPARING FOR THE CHALLENGE OF A GLOBAL WORKFORCE:
A STUDY OF TRAINING AND ENTERPRISE COUNCILS IN WALES

Stanley J. Smits and Francis W. Rushing

EXECUTIVE SUMMARY

The Welsh economy has at last emerged from the setbacks caused by the collapse of its traditional coal and steel industries. Much of the resurgence has been led by investments from inward investment from England and from abroad. These investments have contributed to reshaping and broadening the scope of the Welsh economy. Notwithstanding impressive recent performances, the economy of Wales is still susceptible to outmigration of jobs and is far from being secure. In order to better position itself for the challenges of the future, Wales is relying in part on newly created Training and Enterprise Councils (TECs) to upgrade the skills of its population and meet the needs of the employers it attracts. TECs are best described as local, non-profit, corporations operating with a broad charter to invest in people, promote lifelong learning, and to develop a modern training support infrastructure-- all for the purpose of insuring the long-term economic prosperity of the community. The purpose of this study is (1) to get a better understanding of the TECs and their role within the complex array of institutions attempting to restructure work in Wales, and (2) to lay the groundwork for one or more empirical studies looking at the Welsh attempt to make the concept of a global workforce a reality. Data for this study were gathered from on-site visits.

It appears that TECs are still refining their roles and testing their programs. Nevertheless, everything the authors observed about the TECs and the related networks focusing on economic development was positive, albeit sometimes in the early stages of development. But there are

other points-of-view. Questions have been raised about the quality of the jobs produced, the cost of producing work sufficient to sustain present levels of employment and quality of life, and the resources being spent "training for stock," that is preparing people for work that has yet to be attracted to Wales. With these criticisms in mind, the future of the TECs is likely to be based upon two important factors: their actual performance and the expectations their strategic constituencies have regarding their performance. The TECs have many strategic constituencies due to the complex network of groups supporting economic development in Wales. Meeting their expectations in the short and long terms will be vital to the TECs' future.

I. INTRODUCTION

In West Virginia and other parts of Appalachia, a common, positive response to the social greeting "Hello, how are you?" is "Fine, working steady." But work, defined as gainful employment, is becoming more scarce in the decade of the 1990s. Work becomes scarce when industries decline or become obsolete and the jobs associated with them are lost; or when new industries emerge with job requirements different from the knowledge and skills of the people proximate to them. In a world made more accessible by advances in transportation, more interactive through the use of telecommunications, and better coordinated through the acceptance of international standards, work becomes less localized, more distributed. More than at any time in the past, employers are looking beyond their national boundaries for locations that produce the greatest competitive advantage for their enterprises.

A recent request for proposal (June, 1994) by the Society for Human Resource Management Foundation states:

New developments in technology, global economics, and the ever-intensifying pursuit of efficiency have forever altered our organizations, our careers, and our life-styles. Fewer full-time jobs, the end of lifelong careers, and the growth of knowledge as a commodity all demand that we rethink the fundamentals of work. . . . [T]he future focus will be not on a fixed bundle of tasks [jobs] but on constantly changing work.

The RFP goes on to describe some of the present symptoms of the changing nature of work including the fact that it is more often outsourced. When the outsourcing of work is global, people everywhere become potential contractors and the concept of a global workforce becomes reality.

People need work to meet their needs for income, health care, affiliation, status, and retirement security. But people no longer need to follow the centuries-old practice of migrating

to find employment; rather, they need to devise strategies to attract work from other parts of the world.

Wales, a country with a strong work ethic (Linden & Rees, 1992), suffered substantial losses in sources of employment when its traditional coal and steel industries collapsed in the face of foreign competition and conversions to oil and natural gas as sources of fuel. A country that had been the cradle of the industrial revolution found itself without enough work to employ its people and therefore set out to remedy the situation by restructuring its economy and attracting foreign investment. After decades of restructuring: "The economy of Wales is now leaner and fitter than at any time this century. The old dependence on traditional industries has all but gone and a sound economic base of modern manufacturing industry has been created" (Williams, 1993, p. 26). A recent part of the restructuring effort has been the creation of Training and Enterprise Councils (TECs)--the focus of this study.

Wales - A Country That Works

In December, 1992, *Forbes* (Linden & Rees, 1992) described the economic recovery in Wales in an article entitled "A Country that Works" noting that "In the business of attracting foreign investment, little Wales has compiled a brilliant record" (p. 279). Wales, variously described as "a land mass the size of Massachusetts" (Linden & Rees, 1992, p. 279) and "slightly larger than New Jersey" (Brigham Young University, 1992) is a mostly mountainous area of approximately 8,000 square miles bounded on three sides by water and bordering on England to the east. It has a population of 2.7 million people known for their friendliness and hospitality. Approximately 500 international companies have located in Wales, including 150 from North

America, 140 from Europe, and 47 from Japan. Why do they come? For various combinations of four basic reasons:

- Market access to Wales, the United Kingdom, and Europe,
- The strong Welsh work ethic,
- The availability of skilled workers, and
- The quality of life in Wales. (Thompson, 1994)

Increasingly, the availability of training is said to be an important variable in recruiting international companies.

The migration of jobs to Wales is consistent with the phenomenon O'Reilly (1992) labelled "your new global workforce":

A fundamental shift is under way in how and where the world's work gets done . . . The key to this change: the emergence of a truly global workforce, talented and capable of accomplishing just about anything, anywhere. . . . The move toward a global work force takes many forms and consists of far more than a stampede to backward low-wage countries. For example, American direct foreign investment still appears to be creating jobs at factories and operations in high-wage countries. . . . (p. 52)

The success of the economic restructuring efforts in Wales is described in a number of periodicals (Bruce, 1991; Linden & Rees, 1992; Moreton, 1994) but the gist of the situation is that the struggle for economic security is in its early stages, that Wales like everywhere else is vulnerable to the outward migration of jobs, and that the newest structural component in the Welsh effort to compete globally for jobs--the TEC--is still refining its role and testing its programs.

The Present Study

The qualitative research information reported here was gathered on site in Wales by the authors in March, 1994. The present study built upon information gathered during a Study Abroad program in Fall, 1992. At that time, the TECs were emerging from a successful startup phase and people were beginning to see them as key players in the future development of work in Wales. The purpose of the present study was twofold: First, to get a better understanding of the TECs and their role within the complex array of institutions attempting to restructure work in Wales, and secondly, to lay the groundwork for one or more empirical studies looking at the Welsh attempt to make the concept of a global workforce a reality.

II. HISTORICAL PERSPECTIVE

Tradition, culture, and local pride are strong in Wales. The Welsh regard themselves as a nation and a people distinct from the English and at the same time think of themselves as British. Historically, they have resisted attempts to eliminate the Welsh language. Today, Welsh, a Celtic language related to Breton, Irish, and Scottish Gaelic, is spoken by about 20 percent of the population. Many Welsh have emigrated to other parts of the United Kingdom and to other countries looking for work, and at the same time many English people have recently settled in Wales.

Williams (1993) contends that a historical perspective is necessary to understand the Welsh economy of the present: "The consequences of industrial decisions made more than 150 years ago still affect the economic considerations of today . . ." (p. 12). This section provides a brief overview of the Welsh economy and the culture that sustains and nurtures it.

Pre-WWII Welsh Economy

Pig iron peaked in Wales in 1871 when 1.046 million tons were produced. The coal industry took longer to mature reaching a record high of 60 million tons in 1913 and employing more than 250,000 miners in 1914. But the extraction of coal was not without a significant cost in human life: "the sixty-two years from 1853 to 1914 saw a total of 16,847 miners die, an average of 271 each year" (Williams, 1993, p. 12). Slate, concentrated in the northern part of Wales, reached its peak output of 500,000 tons and 26,970 workers by 1898. The impact of foreign competition hit Wales and the UK just before the turn of the century. By 1890, the United States outproduced the UK in the steel and pig iron industries and by 1905 Germany had done likewise. The United States also caught-up and surpassed the UK in coal production, mining twice the UK output by 1913. Signs of recession hit Wales by 1922 when it had a 7% unemployment rate, and ten years later in the midst of a global depression, it had reached catastrophic proportions at 36.8% with 227,000 workers unemployed (Williams, 1993).

Economic policy began to change in the UK with the Special Areas (Development and Improvement) Act in 1934. Prior to the Act, labor migration was encouraged from areas of high unemployment to more prosperous regions. After 1934, attempts were made to bring work to the workers. Coupled with diversification, the change in policy began the restructuring of the Welsh economy prior to WWII. Williams (1993, p. 15) quotes Professor Brinley Thomas' summation of the impact of WWII: "The war did three things which were to have an enduring effect on the Welsh Economy, it eliminated unemployment, the core of a potentially strong manufacturing sector was established and hitherto unknown employment opportunities for women became a reality."

Post-WWII Welsh Economy

The great strides in diversification and the creation of manufacturing jobs after WWII were offset by the downward spiral of the coal industry: "Between 1960 and 1973 coal output in south Wales dropped by more than 40 per cent from 19.4 million tons to 11 million tons. Some sixty-seven pits closed with the loss of 52,000 jobs" (Williams, 1993, p. 18). By 1980, only 36 pits remained open in Wales employing 27,000 people. But the steel industry stayed fairly consistent through the 1960s, only to experience a stunning decline from 1973-75 due to the recession following the oil embargo. Attempts to save the industry were "too little too late" and in the 1980s more than 50,000 jobs were lost. As can be seen in Table 1, by 1985-86, the Welsh economy experienced its worst recession since WWII hitting an unemployment rate of 13.8% and experienced shifts in employment structure from manufacturing to services. The only bright spot was the service sector where employment continued to increase.

The decade of the 1980s was a time of unparalleled transition for the Welsh economy even though it was the culmination of many decades of change (Williams, 1993). Table 2 (from Williams, 1993, p. 24) summarizes the status of the new Welsh economy relative to the rest of the UK at the beginning of the 1990s.

III. ENTER THE TECS

Wales began the decade of the 1990s having survived the loss of its traditional industries, global, regional, and local recessions, and a major restructuring of its economy. Experience teaches that times change, that past successes do not insure present standards of living, and that the world is a competitive place. But the immediate crises are over and Wales can face the future with a more-coherent, less-pressured, plan of economic development and job creation.

Table 1. Percentage Employees in Employment: 1971-1991

	1971	1975	1980	1985	1987	1991
Agriculture, forestry and fishing	3.6	2.6	2.3	2.5	2.4	2.1
Energy and water supply	7.7	6.6	5.0	5.5	3.8	2.5
Manufacturing	33.7	31.8	28.9	23.8	23.9	22.8
Construction	6.7	6.1	6.1	5.1	4.9	4.8
Services	49.1	52.8	56.8	63.2	65.0	67.8
TOTAL EMPLOYEES (000s)	962.0	998.0	1005.0	877.0	863.0	963.7
Male %	65.0	61.9	59.5	56.6	55.5	51.5
Female %	35.0	38.1	40.5	43.4	44.5	48.5
Unemployment ¹	4.7	4.1	6.9	13.8	12.5	9.0

¹Annual average seasonally adjusted

Sources: Digest of Welsh Statistics (1994), pp. 14, 15 and 17; Digest of Welsh Statistics (1989) as reported by Williams (1993, p. 20).

Table 2. The New Welsh Economy and Its Relative Performance

Unemployment Feb. 1990 (seasonally adjusted figures supplied by Department of Employment)	UK: 5.6%	Wales: 6.4%
Rate of growth of new companies registered 1987 (Jordans)	England & Wales: 16%	Wales: 53%
Percentage of work-force self-employed (<i>Regional Trends</i>)	UK: 11.6%	Wales: 14.6%
Business survival rate 1980-6 (DTI)	UK: 20%	Wales: 35%
Growth in net manufacturing output (Business Monitor PA1002)	UK: 24%	Wales: 35%
Growth in net output per employee in manufacturing 1983/6	UK: 29%	Wales: 37%

Challenges and Opportunities

Wales appears to have three present challenges: (a) to maintain the momentum of economic development, (b) to diversify its industries in order to avoid major job losses in the future, and (c) to upskill its population in preparation for the predicted global job market. As we were told, the first two challenges are undergoing a change in focus and strategy. The emphasis is no longer on the volume of jobs created, but rather has shifted to the quality of jobs. Similarly, there has been a shift away from recruiting heavy industry to securing light manufacturing jobs and jobs in the service sector, especially service jobs in the financial sector. The marketing strategy no longer employs relocation grants as it did in the 1980s, but rather now emphasizes the quality of life in Wales and the skills and work ethic of its workforce. The present strategy also emphasizes getting companies already in Wales to locate related functions (manufacturing, marketing, management, and R&D) and to make a long-term commitment, that is, a "grow the functions" strategy.

While the TECs play a role in the first two challenges, especially in helping with the human resource component of the new business recruitment strategy by conducting training needs assessments and preparing detailed plans to meet them, their principal role is with the third challenge--upskilling the population so it is ready to meet the challenges posed by a global workforce.

Role of the TEC

TECs respond to local needs through catalyst and partnership activities designed to provide a variety of customized services. TECs are best described as local, non-profit, corporations operating with a broad charter to invest in people, promote lifelong learning, and to develop a modern training support infrastructure--all for the purpose of insuring the long-term

economic prosperity of the community. While the TECs' CEOs report to boards-of-directors, their funding is largely public and within the jurisdiction of the Secretary of State for Wales. Therefore the ten guiding statements issued by the Secretary of State for Welsh TECs represents more than a mere statement of philosophy. As shown in Table 3, these statements set forth the objectives, strategies, and processes relevant to the operation of TECs in Wales.

As we observed them, the roles of the TEC may be classified under three major headings: stimulation, coordination, and investment. These roles are discharged within the larger context of public policy and a complex network of public agencies and private corporations with overlapping charters, expectations, and mandates. We attempted to discern the power structure of these community networks but in the end concluded that they operate much like self-managed work teams with shared leadership and followership held together by shared visions and a common culture. A TEC CEO described it ratherly aptly when he said "We let it blossom in a chaotic sort of way."

Stimulation. Each community has a different mix of assets and liabilities when it comes to upskilling its people and attracting work. Therefore, each TEC seems to approach the task of stimulating training somewhat differently. In the end, however, each performs a leadership role (in the sense many current leadership theorists describe that role) in that they create a vision and align people with it. In the coal mining valleys where women have traditionally limited their roles to being homemakers, it may be the creation of a "Women into Business" program; in an urban setting where exporting is emphasized, it may involve getting the universities to teach languages through programs that are accessible to more people; or in an area with a school dropout problem, it may take the form of a TEC realignment of a business-education partnership program to make it more attractive to at-risk students on a voluntary basis. An important part

Table 3. Strategic Guidance from the Secretary of State

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| <ol style="list-style-type: none">1. The skills and enterprise of her people are the foundation for Wales' prosperity.2. Promoting effective training in the workplace is central to the work of TECs.3. TECs also have a major role to play in stimulating and supporting change in education and the Secretary of State wants to see TECs develop their partnership with education as a matter of priority.4. The Secretary of State is therefore charging officials to discuss with TECs and others on how they can best play a role in Further and Higher Education both locally and in promoting coherent development across Wales, and what the priorities for actions should be.5. The Secretary of State is therefore inviting Welsh TECs to work in partnership with the WDA and DBRW in consultation with government, proposals for a Wales Management Campaign focused on managers and supervisors in small and medium sized firms. | <ol style="list-style-type: none">6. The Secretary of State therefore invites Welsh TECs working with the WDA and DBRW to develop proposals for a coherent framework of services on skills that the development agencies can market to Inward Investors.7. TECs are therefore invited to describe in their plans how their activities will support local economic development in areas that need particular help complementing the work of the development agencies, Local Authorities and others.8. Welsh TECs are encouraged to review their services against the Principles of the (Citizens) Charter and to consider publishing their own local Charter setting out what the public can expect from them.9. TECs will want to consider the service they should offer to customers whose preferred language is Welsh.10. Advancing Equal Opportunities is an intrinsic part of a TEC's remit to help local people realize their potential. |
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of the TEC's mission seems to be to serve as a roving ambassador for training and to create, or intensify, a sense of urgency about getting on with it.

Coordination. There are many players in the public-private effort to train people and create jobs. Some are relatively recent, like the TECs; others have more traditional roles:

- Welsh Development Agency (WDA) and its specialized unit Welsh Development International (WDI) provide overall coordination for development efforts on a national basis.
- County Councils--political bodies that own the land and many of the rehabilitated factories available for use by inward and foreign investors.
- Training Consortia--public and private community organizations that have pooled their resources to meet specific community training needs.
- Enterprise Agencies/Centres--similar to SBDCs in the USA, they are public/private cooperative efforts that focus on helping small business startups and the provision of technical assistance as they grow to mid-size.
- Option Centres--meet the needs of special populations such as school dropouts and persons with physical disabilities.
- Education-Business Partnerships--coordinate and implement a number of programs designed to keep students enrolled in school until age 18 and to assist with the transition from school to employment. COMPACT and COMPACT PLUS programs for at-risk students are speciality areas within this larger partnership.
- Training Partners--typically a multiple partnership arrangement involving a training entity and a private corporation brokered by the TEC to provide in-company training that meets standards set by external bodies such as the National Council for Vocational Qualifications and ISO 9000.

Many of these organizations are much larger than the TECs and have completely independent roles to play in the development effort. The TECs engage in coordination efforts by helping to define training needs at the community level and providing plans to meet them. In brief, they coordinate through information rather than authority.

Investment. The TECs receive funds, largely from the Welsh Office, which they invest in a variety of programs to stimulate, coordinate, and implement training at the community level. The investment-in-people part of their mission is accomplished through networks of organization from both the public and private sectors. The TECs provide little or no direct training, rather they contract for its provision with approved providers. The ability to provide funding to

community groups is a principal factor in their ability to stimulate and coordinate training and enterprise activities.

IV. FINDINGS TO DATE

Our interviews in Wales in March, 1994, allowed us to observe and discuss many of the components of the Welsh initiatives to upskill its workforce and attract work for its people. The organizations and programs are presented here in the order in which we experienced them. To some degree, they will appear to the reader, as they did to us, as unique entities. Later in this paper, we will attempt to integrate them and suggest follow-up activities.

We conducted formal interviews (sit downs/take notes) with 33 people either individually or in small groups and had substantial informal interviews with eight others while touring various facilities. Our tours of various facilities also enabled us to engage in brief informal interviews with approximately 100 trainers/trainees, managers, and employees. Our many hours of driving through Wales gave us ample time to discuss our observations and refine our questions. Visits later in our itinerary produced more indepth information which we suspect was largely due to the learning curve resulting from earlier inputs. We also acquired an extensive array of annual reports, business plans, project summaries, research reports, and public information documents, which we have used here to augment our direct observations and interview data.

County Clwyd

Our first formal interview was with the Principal Development Executive of the Clwyd County Council. We asked him to give us an overview of what had been happening in Wales prior to the establishment of the TECs, and then to explain how the TECs fit into the present strategy. Highlights of his inputs are summarized here:

- Economic Decline: Massive job losses in a short period resulted in a dramatic change in what had been a very good standard of living. Clwyd entered the 1980s with a 28% unemployment rate.
- Regeneration: Funds available from the European Community (EC) for economic regeneration were used in Clwyd to buy up unused factories and land and to build roads and develop needed components of the infrastructure rather than to subsidize people.
- Early Development Structure: The county councils had the land and vacant factories, the Welsh Office had the money, and the Welsh Development Agency did the marketing. There were no TECs in the early 1980s so training was a less focused activity involving colleges, skill centres, and government training services.
- Evolving Strategy: The strategy has evolved from (a) the volume of jobs to the quality of jobs, (b) from recruiting heavy industry to light manufacturing and service jobs--especially in the financial services industry, and (c) from marketing based upon relocation grants to emphasizing the quality of life in Wales.
- Role of the TECs: With regard to attracting new jobs to Wales, the TECs help formulate the recruitment strategy, define the skill needs, and arrange for the needed training programs.

Clwyd's industrial recruitment information packet emphasizes its sound industrial relations ("trouble-free working"), superb communications (roads, rail lines, proximity to airports), strategic location, access to markets, wide choice of sites, skilled labor force, research and training geared to business needs, education, and health care. It describes in detail the quality of its educational system and summarizes the role of its TEC by saying: "TECs and numerous providers tailor training to needs of industry and commerce" (Clwyd County Council, 1993).

County Clwyd first focused on developing the economic infrastructure as a prerequisite for attracting investment. In partnership with the Welsh Development Agency, investors in the South of England were attracted to Wales because of infrastructure, location, transportation and lower labor costs. A second source of investment became foreign companies.

North East Wales TEC

The North East Wales Training and Enterprise Council, Limited, "offers resources to companies and individuals to support the balanced economic growth of North East Wales" (North East Wales TEC, 1993, p. 2). Its income for the year ending March 28, 1993, was £10,657,766 (approximately \$17,052,425). Its largest expenditure in 1993 was for skills training (£8,056,000).

The highlights of its accomplishments for 1993 are further summarized here:

- In the past year, around 9,000 people have benefitted directly from T&E activities:
 - 2,003 adults have trained to national standards
 - 2,140 young people have received training to NVQ levels
 - 4,980 people have had professional career counseling
 - 244 specific training courses have been provided
- 3,600 business consultancy visits
- 835 business start-up seminars, 121 new business starts

The annual report sets forth the TEC philosophy and strategy in one concise statement: "It's a virtuous circle. A better trained workforce - to do the jobs that a better trained workforce helps to create."

Our meeting with the Chief Executive and four managers produced, among other things, the following description of TEC roles:

- To manage the process of getting people trained on-the-job,
- To adapt systems to meet local business needs, that is, to meet in-company skill needs by linking them with the training infrastructure available in the community, and
- To involve local businesses in skill development by getting companies to formalize their induction and training processes and getting them to follow through.

The North East Wales case readily admitted that the TEC concept was derived in part from the experience of Private Industry Councils (PICs) in the U.S.A., with the city of Philadelphia serving as the principal model. This TEC, like those we visited in the South, did not train the workers themselves but helped local governments and business firms set up training for workers or prospective workers. The funds typically flowed from the TECs to the business enterprise which either conducted the training themselves or hired training organizations to provide the training. One objective was to stimulate new investments so as to draw employees from the ranks of the unemployed. In fact, the new firms locating in the county attracted already employed (and skilled) workers which set up a chain of hirings by the firm which lost employees. In any case, the new economic activity normally would eventually reduce unemployment in the region.

Clwyd Education-Business Partnership. One of the programs recently impacted by the TEC's planning and funding efforts was one of the Clwyd COMPACT programs at a local school. These programs have been around for some time with their origins traced to a program in Boston (Jobs for American Graduates). With an infusion of resources, the TEC was attempting to revitalize the program we visited.

The COMPACT identifies "at-risk" students, i.e., those with low motivation, poor time management skills, poor study habits, and/or a lack of self confidence, solicits their involvement on a voluntary basis and organizes them in groups of 15 to work on leadership skills, career preparation, community awareness, and social awareness in order to overcome problems linked to drugs and alcohol, "localism," and unstable home environments. The goal is to break the cycle of school dropouts that is now multigenerational. The COMPACT involves a network of local

businesses (one per student) that serve as mentors and sponsors for various activities. Success is measured in three ways:

- Process: feedback from teachers and administrators
- Statistical comparisons regarding attendance, punctuality, and retention pre vs. post initiation of the COMPACTS
- Statistical comparison with schools that do not have COMPACTS

The involvement by the North East Wales TEC in the compact program further exemplifies the function of TECs to mobilize local resources (private and public) to upgrade the work force. The drop-out cycle is a threat to the broad mission of TECs. A modern workforce requires the UK equivalent of a minimum of high school education, and dropouts tend to only swell the ranks of the unemployed and unemployable. To reduce the "at risk" population is consistent with the strategy of attracting high skill/high paying light manufacturing jobs.

Welsh Development International

Upon our arrival in Cardiff, we were given a formal briefing regarding economic development in Wales, much of which has been presented in the introductory portion of this paper. WDI is the international development unit of the Welsh Development Agency. It currently operates offices in the USA (Chicago and Boston) and in several other countries. WDI served as the host for our visit and arranged several data collection activities which are described briefly here.

TRICO, Ltd. We were briefed by TRICO's personnel director and its personnel manager regarding the nature of its business, its relocation to Wales from SE England, and the role of the TEC in its relocation, startup, and present and future operations. TRICO is a world-wide producer/marketer of automotive wiper blades. It recently moved its wiper-blade plant to

Pontypool Gwent bringing only 15 key people with it and hiring/training 390 new full-time employees and approximately 100 part-time employees. It was our best case example of the relocation of a firm from South England to Wales.

WDA helped them locate the site for their new plant and the TEC helped recruit, select, and train its employees. The TEC's "Investment in People" program, ISO 9000 standards, the program to generate NVQs formed the background for their initial training efforts. Their current training involvement with the TEC is a substantial expansion of their previous contract. In part, the additional effort relates to the Management Charter Initiative of the National Council for Vocational Qualifications. It coincides with TRICO's change from a production-line operation to production cells--a team approach that is said to have increased involvement and job satisfaction, produced a sense of ownership, and created healthy internal competition. Production cells members (5-7) are cross-trained for multiple roles making former job descriptions obsolete and requiring new team performance and evaluation and reward processes. The production cell model is said to fit the culture of Wales (family/neighbor groupings in the workplace). Team bonding is seen as a natural by-product of the culture and the new processes employed. We toured the plant and had an opportunity to speak with the members of a production cell.

The partnership between TRICO and the TEC became part of the expansion of the newly evolving National Vocational and Qualifications Program for the United Kingdom. The TECs performance guidelines incorporated requirements for TECs to support training which resulted in the trainee receiving NVQ certification.

Engineering Center for Wales. WDI arranged for us to attend the dedication of the Engineering Centre for Wales (ECW). The program included presentations by H.R.H. The Duke of Kent, President of the Engineering Council and the Rt. Hon John Redwood, M.P., Secretary

of State for Wales. ECW is designed to bring together the full spectrum of engineering interests in Wales. Its mission is "to support Welsh Industry's drive to improve international competitiveness through enhancing the quality and performance of the engineering industry and the engineering profession in Wales. Its sponsors include the Welsh Office, the Engineering Council, the Royal Academy of Engineering, and the Welsh Development Agency. It provides a focal point for the advancement of engineering education and practice in Wales. Like other components of the development structures in Wales, it is linked with numerous other entities including business and industry, the scientific community, the educational community, and the network of agencies involved in development efforts.

The linkages which the Engineering Center for Wales will build support the objective of increasing the flow of young persons into science, math and engineering, their utilization in research and development and engineering in private and public organizations.

Taff Ely Ogwr Partnership Trust (OPT). OPT is one of more than 300 Enterprise Agencies in Wales. There are 10,000 or so small companies in the region (Mid Glamorgan) with 600-700 startups each year. Sixty percent of OPT's work effort is focused on startups and 40% on growing existing small companies. OPT is run by a Board of Directors composed mostly of senior people from a variety of local companies. It is very private-sector oriented and highly networked. It earns revenue through services (consultation, technical assistance, and training) and space rental. All earnings are re-invested in its programs.

One of its special projects is called "Women Into Business." The program is designed to encourage women to enter, or re-enter, the workplace. This may be in the form of starting one's own business or entering into employment. Five training programs have been offered to date: "Starting Your Own Business," "Women Returning to the Workforce," "Confidence

Building," "Developing Business Skills," and "Developing Management Skills." The popularity of these programs has created unexpected demand resulting in waiting lists for women to gain access to the programs. This special project, in turn, is linked with local businesswomen's networks (Chwarae Teg and Opportunity 2000).

OPT fills an important segment of training--helping new business start-ups. This training is, of course, different from employee training in the nature and level of knowledge and skills imparted. It is also important to help new start-ups survive and grow so that new jobs will be created.

Imperial House/Imperial Science Park

The 50 acre Imperial Park is part of the 150 Celtic Lakes fourth generation science park for research and development. Imperial Park is a pioneering effort jointly undertaken by the Imperial College of Science, Technology, and Medicine (London), WDA, the Newport Borough Council, and local banks. Its purpose is "to promote technological innovation and offer a competitive advantage to industry. Its principal advantages for the R&D components of high tech industries are: unique access to the specialized facilities and expertise at Imperial College, location with easy access by motorway or rail to Heathrow Airport, and the opportunities for synergy and shared resources among the tenants. Imperial House is a 25,000 sq. ft., two-story facility in the heart of Imperial Park that is a joint venture of Imperial College, WDA, and local banks. [It appears to be similar to the Advanced Technology Development Center at Georgia Tech.]

Our half-day, formal briefing at Imperial House provided an overview of high tech recruitment and development efforts in Wales. We also had an opportunity to discuss the linkage with Imperial College through an interesting technology transfer corporation (ICON - discussed

later) and to meet with Johnson & Johnson's Director of R&D for the circulatory diagnostic equipment laboratory located at Imperial House.

Imperial Science Park is engaged in a long-term, three-phased project to create a "research triangle." Phase 1 will link the Imperial Science Park with Cardiff University, the University of Wales, and Imperial College; Phase 2 will link other UK universities with the research triangle via COMPUSERVE; and Phase 3 will link the already-linked Wales/UK components internationally with outstanding science and technology institutions in the USA (MIT, GA TECH, the Research Triangle, etc.) and the EC. It is an ambitious project, but one that could help attract R&D components from major corporations globally to locate in Wales.

ICON (Imperial College Consultants, Ltd). We spent the better part of a day, formally and informally, with the Chief Executive of ICON, a separately incorporated entity operated in cooperation with Imperial College. ICON's "Company Profile" includes the following:

ICON is a multi-disciplinary consultancy company providing inventive technology-related services for industry through a network of highly specialized academic experts with direct access to some of the best research facilities and analytical equipment in Europe. ICON applies hand-picked teams of scientists and engineers, capable of understanding and defining complex systems, to give practical advice and technical support in key technology areas for all market sectors. We have the commercial skills and flexibility to manage projects of any size.

ICON's scientific and engineering accomplishments to date are impressive. Its recent growth has been in the area of management services for large, complex projects. However, its current initiative is technology diffusion targeting small and medium sized firms.

The Imperial House/Imperial Science Park and Imperial College Consultants, Ltd. (ICON) represent the upper end of the training and support network in Wales to encourage and support business activities. The linkage between business and universities (particularly universities with

research expertise) is an attempt to attract and to expand high tech production and services in Wales.

South Glamorgan TEC

We had a brief presentation by the Chief Executive of the South Glamorgan TEC and later an extensive tour of its major project--the Cardiff Bay Barrage and the development related to it.

South Glamorgan TEC serves the capital city of Wales--Cardiff--a one-county, urban area with approximately 400,000 people. Its total funding for 1993 was £12,647,670 (approximately \$20,236,272). It partners with local authorities, enterprise agencies, the Chamber of Commerce, and the Welsh Office to provide quality training for unemployed adults and young people and to support the business development needs of organizations within the county. According to its Chief Executive, this TEC is focusing on:

- Training people for sales and marketing positions with an emphasis on exporting,
- Providing consultation help to businesses to improve quality,
- Advocating/stimulating in-company training needs assessment and implementation of training programs--especially management training,
- Subsidizing local universities to teach foreign languages, and
- Conducting labor market studies.

An important TEC objective is to get companies in Cardiff to strive for world-class standards for employee training. Another important objective is for youth training in conjunction with the UK's competency-based NVQs.

A major training initiative provides incentives to employers to upskill their employees to NVQ Level 2 (£200), 3 (£300), and 4 (£400), and to train the company's trainers and assessors

to NVQ standards (up to £5000). Funding incentives for employers are also provided for the recruitment, training, and retention of unemployed persons.

Cardiff Bay Regeneration Project. Approval has been given for an ambitious civil engineering project to build a barrage across the mouth of Cardiff Bay thereby creating a 500-acre inner, fresh water, lake. At present, mud flats dominate the Bay for 19 hours per day due to an unusually large high vs. low tide difference of 34 feet. In the past, the Bay served as a site for docks used primarily to export coal. As a result, the area around the Bay is much in need of urban renewal.

As the barrage is built and the area is restored to become a site for tourism, private homes, shops, and offices, numerous employment opportunities are being created in the construction industry. To the extent possible, these new jobs will be filled by Cardiff's unemployed citizens. The strategy being followed is to continuously upskill the unemployed urban poor in the Bay area first to prepare them for entry-level construction jobs, and later for service jobs. The task of multiple skilling over decades of work demands careful planning, the development of a flexible training infrastructure, and coordination among the various groups involved in the planning and execution of the total regeneration project--an effort expected to take 20 years or more for completion. We were exposed to several elements of the training infrastructure, namely two construction trades training sites where we had the opportunity to see NVQ testing for entry-level construction skills in operation. Our "hard-hat" tour also gave us an opportunity to discuss the long-term strategy with the Manager of the Cardiff Bay Community Development and Training Group. Training needs assessment is never easy, but forecasting the needs over several job changes for 20 years or more is a real challenge.

Mid-Glamorgan TEC

One of the hardest hit areas due to the collapse of the coal industry was the mining valleys just north of Cardiff. This is the area served by the Mid-Glamorgan TEC. This TEC's funding for 1993 was somewhat higher than the two other TECs described earlier in this report--£20,463,140 (approximately \$32,741,024)--and its programs reflect both the larger challenge and the larger budget. Included in the TEC's funding is over £350,000 from the EC for projects such as "Multi-Skilling for Redundant Managers" and "Computer-Based Distance Learning."

Selected statistics for the year ending March 31, 1993, are presented in Table 4. By way of explanation, the TAPS inquiries refers to the use of a database containing 13,000 training opportunities within South East Wales. We saw a demonstration of the database when we visited the Cynon Valley Technology Training Centre.

While all the TECs engage in a complex set of community relationships, networking seems to be the core element of this TEC's strategy. For example, the TEC has 53 public and private sector training partners, a variety of training consortium arrangements, and even brings providers of training and companies in need of training together through an initiative called "Training Health Checks" (617 companies were advised through this initiative last year). We were introduced to these consortium and partnership arrangements during visits to the Tydfil Training Consortium, Merthyr College, and the Cynon Valley Technology Training Centre.

Tydfil Training Consortium, Ltd. This consortium is both a limited corporation and a registered charity (not-for-profit) that contracts with the Mid Glamorgan TEC, the Department of Employment, Merthyr College, Option Centres, etc. The TTC operates like a mini-TEC. It provides most of its training in the workplace and conducts NVQ assessments on the shop floor.

Table 4. Summary of Activities and Outcomes for the
Mid Glamorgan TEC for the Year Ending March 31, 1993

		1992/1993
Research and Information	No. of projects supported	12
	TAPS enquiries	27,249
	LMI enquiries	447
Training Health Checks		617
Investors in People	No. of companies achieving recognition	1
	No. of commitments	26
tec Members		190
Number of Working Groups		14
tec Information Centre	No. of visitors	5,331
tec Awareness	No. of Press mentions	176
	No. of Exhibitions/Displays	60
Skills Training (Youth)	Starts	3,505
	Training Weeks	150,500
Skills Training (Adults)	Starts	4,947
	Training Weeks	98,576
NVQs Achieved		2,043
Enterprise Support	New Businesses	368
Enterprise Awareness/Training Events	(No. of people)	1,177
Business Training	Business Support Training (No. of people)	987
	Projects	134
	Business Development Initiatives (No. of companies)	134
Small Firms Service	No. of enquiries	2,047
	Counseling sessions	2,633
Trainers Trained		1,330

Source: Mid Glamorgan Training and Enterprise Council, Ltd., Annual Report 1992-1993, p. 11.

It maintains close working relationships with employers through a very active employer network. Merthyr Valley has more jobs than it can fill. The problem here focuses on qualifications "especially numeracy, literacy, and communication."

Both the Mid Glamorgan TEC and TTC are proud of their BS 5750 certification. BS 5750 indicates a commitment to quality in all aspects of one's operations. British Standard (BS) 5750 is the equivalent of International Standard (ISO) 9000 and European Standard (EN) 29000. TTC links training facilities meeting a wide spectrum of needs ranging from Option Centres that offer 13 weeks of diagnosis/readiness testing for people with special needs (school dropouts lacking basic qualifications, persons with disabilities needing customized assessments) to Merthyr College which offers a wide range of technical/specialized vocational programs.

TTC focuses on training within companies and has about 100 company partners. Training seems to be more effective when it is provided in a "real" work setting. Sometimes there is a conflict between the workers' needs and the training (NVQ based) for which the TEC can compensate TTC. It appears TEC's performance is increasingly related to the NVQs awarded through the training they finance.

Cynon Valley Technology Training Centre. A research project completed in 1991, which included a skills audit of people in Cynon Valley, articulated the need for training in new technologies and recommended establishing a training center for careers in technology and computing. Backed by the Welsh Office and the Mid Glamorgan TEC, the center opened in 1993. Its charge is "to provide up to 200 training places a year . . . with training up to NVQ level 3 in Information Technology, Business Administration and Electronics." The formal briefing we received from the Skills Training Manager and our tour of the facility and

discussions with teachers exposed us once again to the driving force of NVQs in the training programs of TECs in Wales.

National Council for Vocational Qualifications (London)

Prior to leaving Wales, we requested an interview at the NCVQ and the arrangements were made for us by the Mid Glamorgan TEC. We met with the Director of Communications who gave us an excellent overview briefing, 14 monographs and research reports, and a 90-minute video explaining the impact of the Education Reform Act. The information gathered at NCVQ could form the basis for a separate working paper. Only a few key points are presented here:

- The NCVQ was formed "as an engine for change" in 1986 as part of the Education Reform Act.
- Culture in the UK relegates vocational education to much less status than academic programs. NVQs are supposed to change that by preparing people for 21st century jobs and by initiating a culture change that creates cooperation between education and business.
- The core of the NVQ strategy is twofold: First, to upskill the entire workforce, and second, to promote lifelong learning so the workforce can cope with the continuous changes facing the workplace.
- The TEC's role with NVQs is to: (a) take NVQ concepts to the heart of the community, (b) make training competitive to meet the needs of the 21st century workplace, (c) coordinate BEPs (Business-Education Partnerships) and NETTS (National Education Training Targets) in an attempt to marry education and industry, and (d) to fund colleges, training providers, and companies to provide NVQs.

The National Council for Vocational Qualifications is at the forefront of a major educational/vocational reform in the United Kingdom. The NVQs represent the beginning of a comprehensive standardized system of certification of training outcomes for both worker and manager skills and is now being woven into the comprehensive revision of the education forms. Vocational training is to become a viable educational alternative for some of the UK's youths.

V. DISCUSSION

Everything we observed about the TECs and the related networks focusing on economic development was positive, albeit sometimes in the early stages of development. But there is another point of view. Questions have been raised about the quality of the jobs produced, the cost of producing work sufficient to sustain present levels of employment and quality of life, and the resources being spent "training for stock," that is preparing people for work that has yet to be attracted to Wales. In many ways, the issues can be subsumed under the notions of "cost containment vs. investment" and "short-term vs. long-term strategies."

When economic times are difficult, one can "economize," that is spend less and wait for better times, or one can "invest," that is expend more resources than one can afford betting on the probability that the investment will produce better times. Well managed companies and countries vary in their approaches to the problem of economic decline some choosing to conserve their remaining resources ("ride it out") and others choosing to gamble on the future ("make something happen"). The problem with most public sector strategies is the mix of popular opinions supporting both points-of-view, which, in turn weakens the resolve needed to pursue either to its desired endpoint.

The various development agencies in Wales responded to the emergency created by the sudden loss of its two major industries with a short-term strategy that sometimes seemed to be creating jobs of any quality at any cost. While they have clearly moved to a long-term perspective as evidenced by the strategy of "investing in people," the legacy of some of their initial efforts supplies their critics with the ammunition needed to undermine their present credibility.

Given these observations, perhaps the greatest challenge facing Wales as it attempts to invest in people as a long-term strategy for competing as a member of the global workforce is the capacity to hold the course. The future of the TECs is likely to be based upon two important factors: their actual performance and the expectations their strategic constituencies have regarding their performance. All organizations must perform reasonably well to sustain their *raison d'etre* in dynamic and competitive environments where alternatives exist that are capable of carrying out their core functions. Even more important, all organizations have certain constituencies that they must please in order to maintain their support. The TECs have many strategic constituencies due to the complex network of groups supporting economic development in Wales. Meeting their expectations in the short and long terms will be vital to the TECs' future.

VI. SUMMARY AND CONCLUSIONS

When faced with the loss of traditional industries, economic recovery is a complex, time-consuming, demanding task requiring cooperation and coordination from top-to-bottom and bottom-to-top of the infrastructure. In Wales this network reaches from the EC to the UK, from the UK to the Welsh Office, and eventually to the local level where TECs and a myriad of other public and private training and development infrastructure components work together to implement change. But in Wales it is not just a top-down mandate. Rather, the local level seems to take responsibility for its problems and programs and has the authority to "localize" the recovery effort.

Recovery efforts must be sensitive to national, community, and workplace cultures. In Wales, we observed healthy debates regarding alternative strategies and processes, but they were

accompanied by a cultural consensus regarding long-term objectives. The sense of community, the "family" atmosphere in the workplace, and the acknowledged friendliness of the Welsh people--all products of centuries of cultural development--facilitate the recovery effort and help formulate the relationships among the key players in that effort.

TECs are relatively new players at the community level and their roles and areas of expertise are still being developed, refined, and tested. As they join a community of public and private organizations preparing for the workplace of the future, they seem neither to lead or follow, rather they participate. Our quest to identify a power structure, a group or organization in-charge, was fruitless. What we observed were networks of organizations at the community level operating like self-managed work teams with common objectives, diverse skills, and shared responsibilities.

Recommended Research

The qualitative research presented earlier in this paper stimulated five potential follow-up studies. An overview of the five studies, in order of implementation priority, is presented in Appendix A. The first study, "TEC Operations in Wales: An Assessment of Strategic Constituencies and Best Practices," was designed in April-May and operationalized in terms of permission and instrumentation in June. The follow-up survey forms were mailed in mid-July. An overview of the purpose and design of Follow-Up Study #1 is presented in Appendix B.

Follow-Up Study #2, "Lessons Learned: A Comparison of Economic Recovery Efforts in West Virginia and Wales," requiring a search of public documents and selected comparisons between Wales and the State of West Virginia, is underway at this time. The remaining follow-up studies (3-5) are under consideration and will be initiated if and when time and resources permit.

VII. ACKNOWLEDGEMENTS

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APPENDIX A

FOLLOW-UP STUDIES GENERATED BY THE QUALITATIVE ASSESSMENT

SYNOPSIS OF FOLLOW-UP OPTIONS - WALES

Study #1: "TEC Operations in Wales: An Assessment of Strategic Constituencies and Best Practices"

This survey research study focuses on the seven TECs in Wales as operating systems that convert inputs (public investments/mandates, training expertise, community goodwill, etc.) into outputs (workforce skills, job creation, school retention, etc.) via a "brokered," networked transformation process (training partners, option centres, enterprise centres, etc.). The study focuses on (a) the strategic constituencies whose expectations the TECs must meet in order to survive and prosper as organizations, (b) their successes to date, and (c) the best practices that have led to those successes.

Study #2: "Lessons Learned: A Comparison of Economic Recovery Efforts in West Virginia and Wales"

This study contrasts the economic recovery efforts of two geographic areas impacted adversely by losses in the coal mining industry, the state of West Virginia and the country of Wales. The study will contrast the two regions statistically wherever meaningful comparisons can be made from public records: Demographic characteristics (population density, levels of education), economic characteristics (per capita income, employment rates), workplace characteristics (industrial diversity, skill requirements), public investments related to employment (education, welfare, job creation, infrastructure), and so forth. The dependent variables will be the rate of recovery as measured by the number/level/types of new jobs, changes in unemployment rates, changes in per capita income adjusted for inflation, etc. The statistical analyses would be augmented by a qualitative assessment (interviews/observation) in an attempt to develop recommendations based upon differences in approach/success in the two areas. The objective would be to learn from the "best practices" in West Virginia and Wales.

Study #3: "Key Determinants for Locating in Wales: A Comparison of Corporate Experiences in North America, Europe, and Asia"

This survey research would employ two brief questionnaires directed at key decision makers in corporations locating in Wales in an attempt to pinpoint the variables impacting the decision and subsequent satisfaction regarding them. The first survey would target recent (1993-94) companies locating in Wales from North America, Europe and Asia and ask them to indicate (check lists, rating scales, ranking) the reasons underlying their decision. The second survey would target companies from the same regions that located in Wales during 1990-91 asking how satisfied they are with conditions represented by the same key variables used in the first survey. When compared, the results would indicate the degree to which expectations are

realized. It is hypothesized that differences will be found in both surveys by country of origin, industry, and size.

Study #4: "Economic Recovery in Wales: Could It Serve as A Prototype for Eastern Europe?"

A serendipitous comment during our visit to Wales that "The economic recovery problems in Eastern Europe are similar to what ours were but a hundred times greater" served as the stimulus for this study. If there are lessons to be learned from the Wales experience, we would expect to find them in a country like Poland. Our comparison would be Poland in the 1990s in contrast to Wales in the 1970s. While the cultural, historical, and governmental and monetary policy differences are enormous, our quest would be for specific projects/approaches that worked in Wales that could be modified for experimental use in Poland and elsewhere in Eastern Europe. This would be a large undertaking requiring one or more on-site data collection efforts and a series of follow-up activities. It would undoubtedly required substantial external funding.

Study #5: "The Continuing Process of Economic Transformation in Georgia and Wales"

While their historical economic systems are quite different, Georgia and Wales have both entered into advance stages of economic development. Georgia transformed its rural economy of the early 1900s into an economy characterized by diversity, high technology, financial services, etc. More recently, Wales emerged from its dependence on coal mining and steel manufacturing to its present level of economic recovery with characteristics similar to some of the smaller urban areas and rural sections of Georgia (Savannah/Cardiff, Columbus/Wrexham, North Georgia/Mid Glamorgan, etc.). This study would compare their present strategies for job creation via small business startups, upscaling the educational level of the population via educational reforms, outreach programs to attract selected international businesses, etc.

APPENDIX B

OVERVIEW OF FOLLOW-UP STUDY #1

OVERVIEW

TEC OPERATIONS IN WALES: AN ASSESSMENT OF STRATEGIC CONSTITUENCIES AND BEST PRACTICES

**Stanley J. Smits
Francis W. Rushing**

**Policy Research Center
College of Business Administration
Georgia State University**

This study combines two methods for assessing the effectiveness of an organization: (a) The strategic-constituencies approach proposes that an effective organization is one that satisfies the demands of those constituencies in its environment from whom it requires support for its continued existence; and (b) The best-practices approach which attempts to isolate the principal factors contributing to the organization's successes. Analogous to the methods used to design expert systems, it debriefs successes looking for practices that contribute to organizational effectiveness.

The Training and Enterprise Councils (TECs) in Wales appear to serve a broad array of constituencies. A conceptual model describing possible TEC constituencies is presented in Figure 1. A TEC's strategic constituencies are hypothesized to be more concentrated at the community level but to include national and international entities. Theory suggests that value differences among constituencies translate into different expectations for the organization. To be effective, an organization must identify its most important strategic constituencies and satisfy their expectations. Given its potentially divergent constituencies, a TEC could be seen as highly effective by some and ineffective by others.

TECs are relatively new organizations in Wales. Therefore, it is premature to attempt to assess their cost-effectiveness. However, it is possible to investigate their successes to date and to learn from their best practices.

PURPOSE

The purpose of this study is threefold. First, to identify the perceived importance of the various strategic constituencies served by TECs in Wales; second, to ascertain the expectations the principal strategic constituencies have of the TECs; and third, to assess programmatic successes to date and the practices used to produce them. The ultimate objective is to identify the best practices used by the various TECs to satisfy their strategic constituencies.

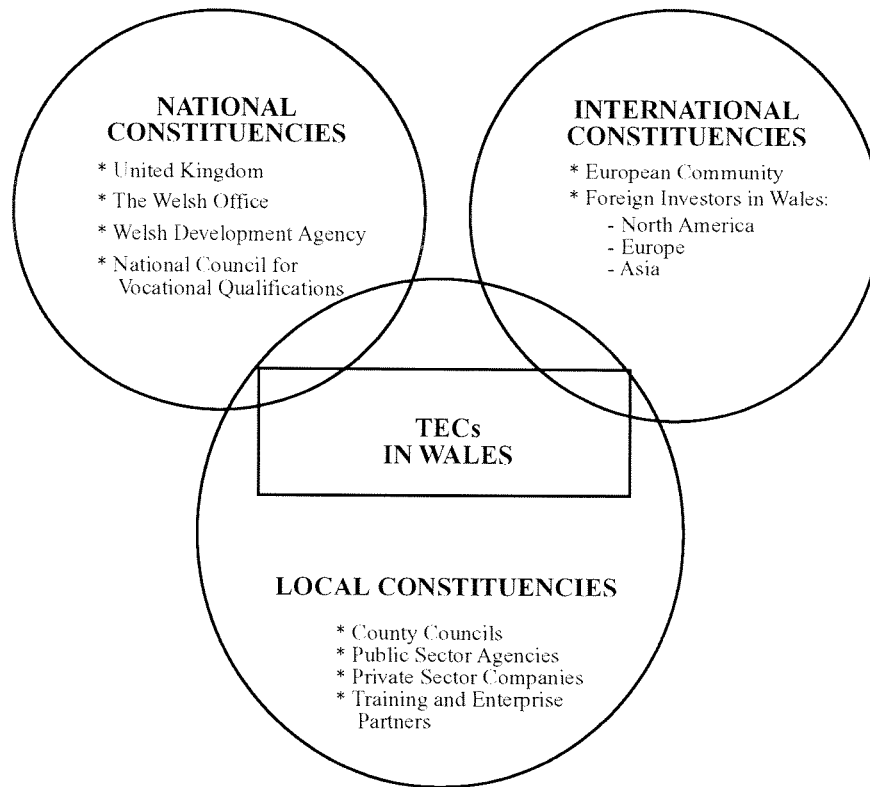


Figure 1: Overview of Strategic-Constituencies Influencing TEC Operations in Wales

DESIGN OF THE STUDY

Figure 2 describes the overall design of the study. Two survey forms are employed to collect the information needed to address research questions relevant to the statement of purpose. The study is being implemented through the seven TECs presently serving Wales. Each TEC is asked to describe itself by responding to our first survey form and to distribute the second survey form to its principal strategic constituencies.

Survey #1

Each TEC in Wales is requested to complete this survey form profiling its mission, objectives, organizational structure, staffing pattern, strategic constituencies, resources, programs and services, successes to date, and the practices used to produce the successes. Then, each TEC is asked to distribute the second survey form to 15-20 strategic constituencies. And finally, the TEC is asked to share its most recent annual report and any public documents that would help us understand its principal strategic constituencies, major successes, and best practices.

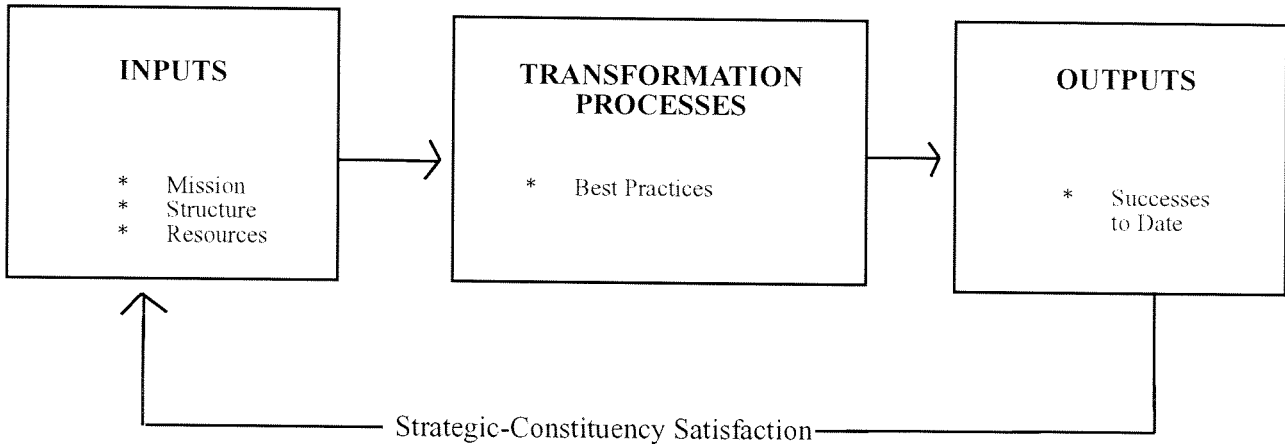


Figure 2: Overview of the Research Model

Survey #2

This survey asks each constituency to assess the relevance and importance of the TEC's mission and objectives, its satisfaction with TEC operations to date, and the value of TEC successes and best practices from the perspective of the responding constituency. Constituencies are also asked to identify their preferences for future TEC operations. This study assumes that each constituency has a unique set of values and therefore that it is unlikely that assessments and preferences will be in agreement. Preferences are operationalized as expectations against which future outcomes are evaluated. Expectations by various constituencies (sometimes compatible, sometimes incompatible) become the standards for judging future TEC effectiveness.

Schedule

Packets of survey forms are being distributed to TECs in June, 1994. Completed survey forms from TECs and their strategic constituencies will be analyzed during July-August, and the results will be reported in October, 1994.

EXPECTED BENEFITS

When combined with the qualitative data collected on site in Wales during March, 1994, the data from this study should produce a comprehensive assessment of TEC effectiveness in a "best practices" format. It is also expected to clarify the expectations and standards against which TEC effectiveness will be judged in the future. A confidential profile of results will be given to each participating TEC and a synthesized report will be issued for public use. The authors expect to benefit by producing one or more scholarly publications. c:\papers\reschpap.47

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