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The International Economy and National Education Reform: a comparison of education reforms in the United States and Great Britain

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ABSTRACT *The new international economy is affecting more than business. It is also reshaping education in many industrialised nations. The need for a more highly educated work force is stimulating policy-makers to expand access to schooling and enhance its quality. Specific educational reforms enacted by a nation depend upon conditions such as historical developments, existing institutional arrangement, and current economic balances. However, despite continuing differences among the world's schooling systems, the emerging global economy virtually demands that nations now address similar educational issues. The result is an increasing international convergence of national education policies. This essay describes the emerging international economy, explores the educational challenges it poses, categorises policy alternatives available to decision-makers, and illustrates these global conditions with a comparison of recent education reforms in the United States and the United Kingdom.*

INTRODUCTION

Sovereign nations were once singularly responsible for their own economic development: building their own economic infra-structure, managing their own natural resources, generating their own capital, balancing their own budgets, and determining their own labour force capabilities. Such is no longer the case. Capital and ideas now flow across national boundaries with the speed of the electromagnetic spectrum. For practical purposes, people and products move almost as fast. International interdependence has replaced national autonomy as the prevailing global condition.

The European Community, North America, and the Pacific Rim are already strong economic blocs, and these giant geographic aggregates are themselves becoming over more tightly woven into a multinational, interdependent network economy. Moreover, the onset of a truly international economy is accelerating as Eastern Bloc nations dissolve restrictive political entanglements and begin to participate more actively as full-fledged trading partners with the Western world. Third world nations presently are far from full participants, but cultural internationalisation and global ecological problems will, in time, virtually compel their political inclusion.

Even if it were desirable to do so, it is unlikely that this global movement could be diverted or dispelled. A set of social and economic forces of awesome magnitude and virtually unstoppable momentum is being unleashed, and the world is likely never to be the same.

The following quotation from an article on economic development in the October

1989 *Atlantic* crystalises the complex, intertwined, and rapidly evolving nature of international manufacturing and service industries. As convoluted as the following explication is, it probably captures the economic future for the industrialised world.

> Ford, with one third of its sales from outside the United States, owns 25 percent of Mazda. Mazda makes cars in America for Ford; Ford will reciprocate by making trucks for Mazda; and the two companies trade parts. Each owns a piece of Korea's Kia Motors, which produces the Ford Festiva for export to the United States. Ford and Nissan, Japan's No.2, swap vehicles in Australia and are planning a joint minivan program in America. Ford and Volkswagen have merged into a single company in Latin America, which exports trucks to the United States.
>
> General Motors holds a 41.6 percent stake in Isuzu, which is starting a joint venture in America with Suburu, which is partly owned by Nissan. GM also owns half of Daewoo Motors, Hyundai's major competitor in Korea. Daewoo makes Nissan cars for Japan and Pontiacs for America; soon it will be selling cars that were primarily designed by GM-Europe to Isuzu in Japan. GM has also teamed with Japan's No.1, Toyota, to produce cars under both companies' labels in America and Australia...[2]

This emerging world economy could prove to be vastly beneficial. Under the most favourable scenarios, it could elevate standards of living, encourage peace, and enforce environmentally sound practices. The current transition period, however, is compelling nations to re-examine both their foreign and domestic policies. Decisions previously based almost exclusively on domestic political considerations must recognise that trade balances, monetary regulation, interest rates, capital flows, productivity enhancement, economic growth, employment levels, and living standards are now internationally linked [3]. One consequence is that nations increasingly are occupied with similar policy issues and select from similar sets of ideas in seeking solutions.

Intensified interdependence has its costs. Nations are presently tugged uncomfortably by the dual forces of economic co-operation and commericial competition. It is this latter dimension which is provoking most of the problems. National leaders believe that they must sustain or attain an internationally competitive economy. Not to do so risks loss of influence in the halls of world power and threatens domestic standards of living. Staying competitive, however, is a constant and expensive struggle, and the challenge is being waged on issue fronts, in institutions, and with ideologies with which many national policy makers have relatively little experience.

Failure to respond quickly to technological and organisational inventions can rapidly jeopardise a people's standard of living and a domestic government's political future. Even Eastern Bloc nations now find that they are no longer immune to, nor can they isolate themselves from, the rapid ebb and flow of international trade, monetary, technological, and financial developments. Ideological imperialism, military expansionism, and religious idealism have by no means exhausted their influence on international events. However, for industrialised nations, international economic competition is currently the most intense force propelling national policy.

CHALLENGES TO COMPETITION AND THE DEVELOPING 'HUMAN CAPITAL IMPERATIVE'

Throughout history, technological innovations have redistributed power, enabled a

tribe, a people, or a nation to vie for and gain dominance. Fire, ferrous metal, and farming are historic discoveries which transformed nations and transferred power. Modern examples include internal combustion engines, interchangeable parts, electrical energy, and electronic components.

This list is longer, but the point is the same. Significant technological revolutions formerly were founded upon sporadic scientific discoveries. Increasingly, such shifts are crucially dependent upon systematic inventions. Nations now compete to create such inventions and be the first to rush into the market with them. They believe that elevating or sustaining their standard of living depends crucially upon being competitive in this regard. At the same time, success in developing and introducing new technologies to the market may depend upon previously inconceivable modes of international cooperation.

Should, for example, the United States try to compete against the Japanese in developing high resolution television technology or co-operate with them in the hope of gaining an earlier competitive advantage *vis-à-vis* Europeans? Increasingly, international cooperation, whether it is in antomobiles, electronics, materials science, aerospace technology or financial and monetary policy is seen as an alternative strategy for enhancing an individual nation's economic competitiveness.

This rapidly changing world of international economic competition and commercial cooperation creates a new set of policy problems for most industrialised nations. These include enhancing economic productivity, inducing scientific inventions and technology transfer, increasing work force capability, overcoming bureaucratic inertia, changing public attitudes and habits, and balancing competing claims for national resources. Each of these is worthy of further discussion.

Enhancing Economic Productivity

The central economic problems facing policy makers in industrialised nations is how to increase productivity. If a nation can produce more with a given level of material, financial, and labour inputs than its competitors, then it can sell those products at a competitive price and enhance its citizens' standards of living. Productivity depends on many factors, which vary from industry to industry and over time. However, a major modern key to enhancing economic productivity is understanding the complicated adjustments required by the new economic order.

National economies are evolving in response to foreign competition, new technologies, and changing markets. Twentieth-century economies, dominated by low interest rates, limited competition, slow changing technology, relatively stable markets, and mass production processes operating in a sheltered economic environment are disappearing. In their place are economies dominated by high cost money, extensive internal and external competition, rapidly shifting markets, and new technologies which affect both the development of products and the processes by which they are produced and disseminated.

The new economics requires changes in government policies and patterns of resource allocation. Rapid technological change means that more attention must be given to research on technologies and technology transfer. Many of the new technologies cut across traditional boundaries of research which means a change in the organisation of and financial arrangements for supporting scientific inquiry. Foreign competition, foreign financing, and foreign markets increase the importance of understanding foreign cultures and foreign languages. Much of the employment growth and

new product development occurs in new and small firms rather than in large established companies. This requires new policies toward small business and increasing support for entrepreneurship.

Because of these changes, human capital is becoming a critical economic resource, rather than being a dispensable factor of production. Businesses will continue to seek inexpensive labour in third world settings. However, the employment growth most critical to a nation's economic standing is likely to occur, not in basic manufacturing, but in sectors such as advanced manufacturing, information, high technology, and specialised services. These businesses require decentralised management styles, effective use of new technologies, and a highly skilled, adaptable, and possibly creative work force. This work force will need high level skills in computer sciences, biotechnology, and engineering. Even more important, however, new workers will have to be motivated and capable of learning new skills over their entire working life.

The human resources requirements are particularly challenging given the declining student achivement levels in many Western settings and the slowing growth of the potential labour pool in industrial nations. At a time when many new jobs require higher communication, computing, and reasoning skills, national student assessment tests indicate that entrants to the work force frequently lack the requirements. When businesses have to teach basic reading, writing, and arithmetic, in addition to already expensive on-the-job training programs, production costs increase and competitiveness declines [4]. Nations and businesses have an interest, therefore, in reforming education programs so that students have a high level of general education qualifications and work motivation before entering the work force.

Many industrial societies also face a shrinking labour pool. Part of the problem is that there simply are fewer young people available to enter the work force. It is also true that young people stay in school longer and modern retirees live longer. The result is that a shrinking proportion of a nation's population must work to support the expanding remainder.

There are two avenues for resolving this problem. One is to induce each worker to produce more, which in turn often requires additional education. The other is to recruit individuals into the workforce who in the past have not been employed or are employable. Particular attention will be given to new immigrants, women who have until recent years stayed at home, and older persons who may be persuaded to delay retirement. Labour shortages, in other words, will force policy makers to pay attention both to the quality of education and to providing educational programs for potential new groups of workforce participants.

The conventional approach to enhancing economic productivity is to introduce new technologies that enhance output per unit of labour input. The historic introduction of steam power, internal combustion engines, assembly line techniques, and microelectronic components vastly increased the productivity of workers. The potential of modern developments such as electrical superconductivity, ceramic and graphite materials, nuclear fusion, fibre optics, genetic engineering, and biotechnology are economically tantalising because they also could significantly increase productivity.

How government can best stimulate the development of new technologies and technology transfer is not completely understood. As mentioned earlier, modern science is now big business, requiring enormous amounts of money and institutional development. The superconducting supercollider being developed in the United States could cost $7 billion. On the other hand, a significant proportion of the new inventions

and technological applications come from individuals or small laboratories with little or no government help.

Experience suggests that new ideas are most likely from individuals who are broadly educated, familiar with several intersecting fields of study, relatively free to pursue their intellectual interests, and who have a financial incentive to succeed [5]. The superconductor may be necessary to identify and understand the smallest physical particle, but support is also needed for individuals and laboratories that can undertake the economic application of 'pure' science findings. Education is needed to prepare individuals for both the basic science and applications development roles. Educational institutions are needed to cooperate in research and development endeavours, as well.

Institutional Inertia

Even if a government recognises the appropriate changes required by the new economic order, if frequently faces serious obstacles in implementing them. Economic, social, and political institutions are created over long periods of time. Each has a history and many people's lives are bound to the continuation of current conditions. People become accustomed to existing ways of behaving and conventional ways of thinking. It is difficult to change well established and previously prevailing patterns of behaviour.

Change also may mean a redistribution of benefits. The sorting of 'winners' and 'losers' occurs at all levels of society. Nations and industries at the frontiers of science, high technology, and information will prosper while those with rigid bureaucracies and traditional manufacturing processes face decline. These changes affect areas within nations and institutions within governmental sectors. Areas or institutions that accommodate economic changes will more likely succeed; those that do not face uncertain futures.

The difficulty of governments in altering institutions to meet changing social and economic realities is described well in Machiavelli's time-honoured warning to new rulers:

> They should observe that there is nothing more difficult to plan or more uncertain of success or more dangerous to carry out than to introduce new institution, because the introducer has as his enemies all those who profit from old institutions, and has as lukewarm defenders all those who will profit from the new institutions. This lukewarmness results partly from fear of their opponents, who have the laws on their side, partly from the incredulity of men, who do not actually believe new things unless they see them yielding solid proof. Hence whenever those who are enemies have occasion to attack, they do it like partisans, and the others resist lukewarmly; thus lukewarm subjects and innovating prince are both in danger.

Public Attitudes and Personal Behaviour

Adapting to new economic pressures also threatens widely held public attitudes and individual habits. The need for a mobile and adaptive labour force may be resisted by links to localities, language, and families. Newspapers carry stories of troubles created by *perestroika* wherever it occurs. Civil servants from southern Italy face abuse and discrimination in more prosperous northern Italian towns. Lithuanians resent Russian

immigrants who threaten their national identity. Chinese workers are often riveted to a geographic locality by state controlled job assignments, family ties, housing availability, dietary preferences, and language dialects. Many Scots dislike the English. These biases and prejudices, while seemingly trivial, impede economic development by limiting the mobility of the labour force.

Socially ingrained personal prejudices can pose enormous public policy problems. For example, social and religious barriers to the education of women undercut governmental programmes to limit population growth. Ethnocentric obsessions and tribal hostilities impoverish nations that are overly concerned with protecting age-old social institutions rather than promoting balanced economic development.

In the past, there was ample time in a nation for these social and cultural barriers to evolve or slowly disintegrate. Today, the new worldwide economic competitive order exacts a high price for timid incremental economic change. Rapid communications make change easier. But even with television, nations need strategies for circumventing the barriers of entrenched selfish customs and individual outmoded habits. Sometimes a resurgence of national pride serves this purpose. But even nationalism, if too narrowly interpreted, can impede adaptation to the pressures of foreign competition, new technologies, and new markets.

Competing Claims for Resources

Even when nations develop sound economic development strategies and overcome inappropriate bureaucratic and social resistance to change, they face competing claims for available governmental resources. First, to be economically competitive, nations need to constrain the size of their public bureaucracy in order to reduce the drag of government regulations and expenditures on their economies. Secondly with the public resources remaining, more attention needs to be given to the development of human resources and research and development programmes. Finally, pressures to spend money on economic development occur at a time when there are other pressing needs for public expenditure. An aging population may require more social welfare and medical services. A large bill is coming due for all of civilisation in order to eradicate past and present environmental excesses. Maintaining and enhancing the current quality of life is expensive and can compete for resources needed to stimulate future economic development.

While there are many strategies for overcoming these policy problems, nations are looking to education as an essential component of most of them. What role can education play in meeting the challenges presented by the emerging new world economic order?

WHAT CAN EDUCATION CONTRIBUTE?

Up to this point it has been argued that changes in technology, international competition, and markets are forcing industrialised nations to adopt new policies to remain competitive. Failure to make adjustments can lead to political and economic instability as has been witnessed most vividly in contemporary Eastern Europe. The threat is just as real, however, in the United States and Europe where concern about Asian economic competition is creating a major review of public and private economic strategy.

Much of the blame for both America's and British's deteriorating economic position

has been placed on each nation's respective education system. Complaints about the progressive curriculum and the ideas of John Dewey were raised during the 1957 Sputnik crisis. The criticism of United States public schools again become vigorous with the publication is 1983 of the National Commission on Excellence in Education report, *A Nation At Risk*, with its well known warning:

> Our nation is at risk. Our once unchallenged pre-eminence in commerce, industry, science, and technological innovation is being overtaken by competitors throughout the world... If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war... We have, in effect, been committing an act of unthinking, unilateral educational disarmament. [6]

Business leaders, particularly in the United States, voiced the theme of education's culpability for the nation's economic problems. However, they went further to argue that the only way to avoid impending economic doom is to strengthen the educational system. Having caused the problem in the first place, education came to be seen as the principal solution. As Richard Morrow, CEO of Amoco Corporation stated:

> Most of our economic and social problems in this country stem from a lack of education. Education is the only long-term solution we have. [7]

A similar theme was raised in England by former British Prime Minister James Callaghan in his 1976 Ruskin College speech and more recently in Mrs. Thatcher's defence of the 1988 Education Reform Act:

> To compete successfully in tomorrow's world against Japan, Germany and the United States, we need well-educated, well-trained creative young people. But if education is backward today, national performance will be backward tomorrow.

The educational reform movements in the United States, British and many other industrialised nations suggest that most policy makers agree with this point of view. They have accepted the challenging goal of elevating national education performance; even if they do not always have complete agreement regarding means for doing so.

However, before examining the range of reform strategies available to policy makers to strengthen their national education systems, it is important to review the theoretical arguments and empirical findings which link education to economic performance.

HUMAN CAPITAL THEORY AND THE ECONOMY

The notion that world economic changes have created a need for more and better education has solid theorectical and empirical roots. Much of this thinking has been undertaken by economists and has come to be known as 'human capital theory'. Human capital is a stock of capabilities that can be acquired by individuals through education and training. Investment in education and training can enhance the stock of human capital in much the same way that investment in facilities increases a business's stock of physical capital. An investment in education has costs as well as benefits, however. The costs are the time and resources needed to acquire human capital and the loss of income for individuals or an organisation during the time spent in education and training programmes.

The benefits of education accrue to both individuals and organisations. Individuals benefit from additional education and training by receiving a larger future wage.

Organisations benefit by receiving future receipts in excess of the higher cost of more highly trained labour. The value of an investment in education can be measured by the wage premium paid to the possessors of human capital. This wage premium is possible because human capital enables a worker to be more productive. Increased productivity makes a business more competitive which, in turn, contributes to economic growth.

Economists have conducted empirical research on investments in human capital and their contributions to economic performance [8]. This research remains controversal because it is difficult to disentangle the previously acquired genetic and social attributes of individuals from the consequences of schooling itself. It is difficult to know whether the previously shaped capabilites of individuals who attend school or the education they receive in school or college explains the higher wages paid to post-secondary graduates.

Despite these analytic problems, however, there is convincing evidence that additional investment in education results in returns in term of productivity and economic growth. The most important finding is that additional education increases an individual's lifetime earnings. In the 1980s, the wage differential between those with a high school education and a college degree rose sharply indicating that the demand for college graduates remained strong. Additional education makes it easier to find a job, makes a person less likely to be unemployed, reduces time between jobs, and increases opportunities for additional training.

What is the relationship between the acquisition of human capital, productivity, and economic growth? Productivity increases are brought about by technological change. Human capital acts as the conduit which enables technical changes to be translated into added productivity. An educated work force can deal more effectively with changing technology.

This conclusion has several reciprocal and self-reinforcing consequences. First, technical change seems to result in an increased use of highly educated labour. Secondly, additional education is itself a source of technical change which, when employed, expedites the introduction of change into the economy. Thirdly, because educated labour can deal more effectively with a changing environment, it reduces employee displacement rates in rapidly evolving sectors and among workers in those sectors. This finding the technological change tends to increase jobs in high technology areas runs counter to long-standing popular fears of technological unemployment.

In summary, economists believe that educational investment increases the stock of human capital which is itself a source of new technology and a means by which new technologies can be assimilated. Increased use of technology enhances productivity, rendering the firm more competitive. Competitiveness leads to economic growth and a higher standard of living. *Hence, the challenge to policy makers. How can a nation best deploy its resources to enhance human capital?*

The answers to this question are complicated and do not lend themselves to simple solutions. Monetary and fiscal policies, international trade relations, budget priorities, historical perspectives, and political ambitions all play critical roles. However, these emerging economic challenges share a heavy common theme. Their solution in substantial, though not exclusive, measure is contingent on effective systems of education. *But, what kind of educational reforms make the most sense?*

WHAT EDUCATION STRATEGIES ARE AVAILABLE TO NATIONS?

Modern economics are not simply boosting or gently nudging an already initiated notion that education systems should enhance a nation's human capital resources.

Rather, competitive economic forces are rapidly and intensely reshaping the forms of schooling across national boundaries. This globalisation of education reform is already occurring as nations seek to enhance their competitive position [9].

To promote education reform, decision makers have a variety of policies from which to select. These encompass a matrix of *educational* (instructional content, instructional enhancement, and institutional choices) and *governmental* (locus of control, financing, and implementation incentive) arrangements.

As will be evident from subsequent discussions of British and United States education reforms, the specific options are not mutually exclusive. Decision makers can, and do, select combinations from among them. Their specific choices are likely to flow from the kaleidoscopic interaction of a nation's demographics, economic and social circumstances, historical events, and political pressures that are too complicated to describe here [10]. However, the matrix from which they can select policy choices contains educational and governmental components described below.

Educational Considerations

Instructional content. What knowledge is of most worth? Or what knowledge is of most worth for national economic development? This is not a new question. It has been posed at least since Socrates. However long-lived and stable the question, the answers do change. The current 'Human Capital Imperative' strongly emphasises the utilitarian side of education. Modern industrial, or post-industrial, economies are rooted in science and technology. These are the courses of study which have been receiving added emphasis throughout education systems, elementary school through post-secondary.

Recent added attention has also been given by policy makers to the importance of life skills which are thought to be connected with enhanced worker productivity: good communications, critical thinking, a work ethic, and the ability to co-operate with others in the work-place environment. To some degree modern industry also depends upon foreign language and sophisticated business knowledge. Thus, these two have received added attention in the reforms of higher and lower education. Other educational orientations such as artistic, liberal, civic, religious, and classical studies have generally succumbed or been subordinated to contemporary policy pressures for schooling to be highly applied in nature and production oriented [11].

Questions must be answered regarding the degree to which science and technology are stressed and the extent to which other subjects are to be included in the curriculum. The means by which modern nations answer the query 'What is to be taught?' are complicated, and almost invariably there are competing forces which must be balanced politically. This is not the place to undertake an extended discussion of the 'politics of curriculum policy' [12]. The point here is that 'human capital' can be defined differently over time and within various cultural contexts. Education systems are not totally hollow vessels; they are expected to content driven, and the human capital imperative dictates that the nature of the 'content' increasingly is a political, rather than a professional or parental, decision.

Instructional enhancement. Decision-makers can select and mix components from among five fundamental tactics intended to enhance the instructional productivity of educational institutions. There are intensification, information, professionalisation, capitalisation, and privatisation (consumer choice).

Intensification. The basic assumption undergirding this possible policy tactic is that

conventional means of schooling and instruction are fundamentally sound pedagogically and all that is necessary in order to enhance educational productivity is to rachet up the intensity. This approach encompasses actions such as extending the time of instruction—longer school days and years, more homework, more frequent and more rigorous testing, more academically oriented textbooks, expanding graduation requirements, stiffer college entrance and graduation requirements, and tougher school discipline policies.

Information. The fundamental assumption involved in this strategy is that 'schooling' of 'instruction' is a black box, the internal operation of which is little understood scientifically but which responds to positive and negative sanctions. It follows that systematically measuring the performance output of the 'black box' and appropriately utilising the appraisal results can induce higher performance. This may be accomplished through subtle mechanisms, such as subjecting student performance results to the glare of public information and citizen scrutiny. A more rigorous tactic is to use performance results as a basis for positively rewarding schools, such as in so-called merit schools, pay-for-result plans. The negative end of the rigor spectrum authorises punitive sanctions for poorly performing schools. This can involve various forms of educational insolvency such as used in the United States by New Jersey with state agency take-over of local school districts and replacement of local education officials.

Professionalisation. This reform strategy assumes that, almost regardless of whatever else is undertaken, the successful instruction of students eventually depends upon the personal efforts of teachers. Consequently, enhancing the quality of those who are attracted to teaching and the professional performance of instructors are thought to be potentially effective techniques for raising instructional productivity. Expanding the professional discretion of teachers, and groups of teachers, attempting to render teaching more attractive as an occupation, elevating the importance of teaching on college campuses, and providing in-service education opportunities for teachers, are all among the tactics involved with the strategy.

Capitalisation. Advocates of this strategy lament the labour-intensive nature of conventional classroom instruction and contend that education can only become more effective, and particularly cost effective, if to a greater degree capital is substituted for labour. Wider use of technologies such as computer-assisted instruction, interactive computers, television, and distance learning are among the tactics suggested.

Privatisation (Consumer Choice). This strategy rests upon a variant of the instruction as black box assumption. It also depends on the assumption that service organisation with guaranteed clienteles risk becoming self-satisfied and self-serving. The solution to these problems is to inject into schooling a greater measure of customer choice. If parents and pupils can exercise options to attend a wider range of schools, so the argument goes, then educators will strive more forcefully to satisfy client expectations and enhance instructional productivity in the process. Lower education is admonished to become more like higher education in permitting consumers a choice. This outlook, when developed to its fullest in lower education, leads to unregulated voucher plans [13]. More restrained versions involve open enrolment plans, magnet schools, and efforts to expand choice but to restrict the boundaries to the public sector.

Institutional choice. A remaining educational consideration to be undertaken to policy makers in meeting the human capital imperative involves decisions along an age and institutional gradient. This continuum runs from pre-school and day-care activities for

young children, through elementary and secondary schools and vocational training for adolescents and young adults, to employer training programmes, colleges, further education, and postgraduate preparation programmes for mature students.

Where to intervene and how much of the institutional spectrum to select are important questions loaded with political and budgetary implications. The answers, in part, will depend upon the complexity and sophistication of the present set of institutional and employer-based educational and technical training arrangements, an appraisal, no matter how informal, of the effectiveness of present practices, and the likely cost consequences of institutional expansion.

Nations which have long emphasised egalitarian education systems may already operate along a wider spectrum of institutions and school a larger segment of the population than those which have historically relied upon elite systems. Substantial attention may be paid to elevating academic achievement standards in the former, and more attention to institutional expansion in the latter. Similarly, nations which have already evolved mass systems of post-secondary education may pay less attention to institutional expansion than those which have relatively undeveloped college and university arrangements.

Similarly, the availability of resources may determine how a nation invests in education. Resource scarcity may cause a policy to concentrate its educational efforts where the greatest probability of pay-off resides, e.g. with a highly selective, university-oriented segment. Conversely, resource availability may permit wider popular involvement and the formation of 'second chance' policies.

This policy dimension also includes decision-maker choice regarding institutional *scope*. The success of a polity's education effort may depend upon conditions, such as children's nutrition, which are outside of the conventional ambit of schooling to influence. Thus, decision makers may choose to coordinate other social services, such as heath, mental health, criminal justice and welfare with educational programmes as part of their human capital strategy. The level of income heterogeneity and social composition of a policy's population are probably the largest predictors of this policy choice.

Governmental Considerations

Locus of control. Where are decisions to reside? Who gets to decide what about educational matters? How much should be the prerogative of those at the 'centre' and how much should be left to the 'periphery' of organisations to decide? Should the curriculum be decided by central government or by professional educators, and possibly parents, at each school? Where should budgetary allocations be made? From the centre by a high level government ministry, intermediately by local education authorities, or at operational levels, schools?

Who decides on personnel matters? For example, who selects teachers? National, intermediate level, or school authorities? Similarly, who decides which students can attend specific schools? Or who decides on textbooks, transportation routes, evaluation schemes, purchasing of supplies, school dress codes and discipline policies, and operational procedures such as the times that schools open and close during the day? A decision list could be made even more extensive. The point would remain the same. There is much to determine regarding the operation of education, and where on a centralised to decentralised continuum should particular decisions reside?

Financial responsibility. Policy makers are faced with a fundamental decision about the

financing of education reforms. Who should bear the costs, the general public, private individuals (students), employers and other immediate benefactors, or some combination of all of these?

The decision depends in substantial measure upon assumptions regarding the distribution of benefits. If the benefits of education extend beyond the immediate student involved, then there may be a justification for spreading the costs among the wider field of beneficiaries including the general public. There is another version of this position. If the public's welfare depends upon a minimal level of learning and there is a risk that individuals or households left to their own discretion will underinvest, then public subsidy or compulsory participation may be in order.

An opposite way of looking at the same issue is to assert that when the benefits of schooling remain primarily with the individual student, then he or she, or the household involved, should pay the costs. If a polity wishes to encourage larger numbers of individuals to seek higher levels of schooling, then it is possible to subsidise costs or advance the necessary resources, subject to later repayment. In instances, such as in the preparation of scientists, technicians, and engineers, where education benefits flow jointly to private individuals, employers, and the general public, it is possible to design resource reimbursements schemes which involve all three parties.

In most industrialised nations, children must attend school until they are at least 16 years of age. Schooling is compulsory because 10 to 12 years of education is considered the minimum necessary for a person to participate successfully in society and at the same time contribute to the economy. Some also argue that schooling is compulsory in order to raise wages by withholding young people from the labour force. Whatever the reason, this minimal level of schooling is regarded as essential and is therefore provided by government relatively free of charge to the students.

Post-secondary education, on the other hand, is often financed by a combination of public and private payments. Requiring students to pay for a part of their higher education has three principal advantages. It identifies education as an investment which can have future economic benefits for the student as well as the society. It provides an incentive for students to obtain the most from the educational opportunity afforded them. And, it provides additional funds, assuming tuition is in addition to rather than a substitute for public funds, which enable institutions to expand student access and to maintain the quality of staffing and facilities.

Incentives and control. Another set of governmental decisions pertains to reform implementation and enforcement. How strict should government be? Should education reform implementation be mandated through central government legislation or regulations, encouraged through high level admonitions and efforts at moral suasion, induced through financial incentives, left to professional discretion, or enforced by empowering clients and consumers?

Similarly, how should nations appraise education reform outcomes? Should there be greater reliance upon standardised testing? If so, what groups or agencies should be authorised to undertake the appraisals? Should polities establish or continue to rely upon 'Inspectorates' to ensure quality and reform implementation? This decision dimension stretches from unusually *laissez-faire* approaches to intensely centralised, top down tactics. Policy makers must decide.

Summary

The emerging human capital imperative raises new issues about the financing of post-

secondary education. To the extent that global economic changes are increasing the significance of schooling, one could argue that education is increasingly central to the national interest and, therefore, should be the responsibility of the entire society and funded publicly.

On the other hand, because the returns to education are seen as being increasingly economic rather than civic, one could contend that the costs of education should be distributed according to their private and public benefits. This view would support proposals of government to have students repay a part of the costs of higher education.

NATIONAL REFORM STRATEGIES COMPARED [14]

The United States and Great Britain offer an unusual opportunity to compare contemporary educational reform in two advanced industrial societies. Each has responded to the above-described international economic challenges by attempting to reform its education system. Each has adopted changes that appear to be similar in content but different in approach. Each had made its changes within existing, unique national educational and political frameworks. Great Britain, where education policy is subject to relatively high central government control, has enacted a uniform and encompassing set of education reform policies. The United States, with a far more decentralised set of governmental arrangements for education, has proceeded in a crazy-quilt, *ad hoc*, state-by-state manner. Nevertheless, significant points of comparison prevail.

British Education Reform in the 1980s

Educational reform in Great Britain and the United States spring from the same pressures to become economically more competitive. The response in the United States to the human capital imperative has been to invest more in education in order to enhance educational *standards*. The response in Britain to growing international economic competition has been to reform the *structure and curricular content* of British schooling as a means of restructuring the British economy. Though couched in Conservative (Tory Party) rhetoric, Prime Minister Thatcher's education programme, in its totality, is a departure from prior Conservative and Labour Party education policy [15].

The Thatcher 'Revolution'. When Margaret Thatcher came to power in 1979, the problem was not so much that Britain's education system was viewed as failing, for it retained many admirable characteristics. Progress, however slow to develop, had been made in expanding educational opportunity and improving educational quality. Rather, the problem was that many politicians and a significant segment of the English electorate had lost confidence in the welfare state and the role of education in it [16]. The left wing of British politics desired that education contribute more to social justice in British society. The right wing wanted education to play a stronger role in economic development.

After 35 years of effort, schooling reforms initiated with the 1944 Education Act had been unsuccessful in achieving either social justice or economic growth. Mrs Thatcher and the Conservative government saw little possibility of overcoming Britain's economic and social problems under the existing educational policy framework. She intended, therefore, to do no less than fundamentally restructure British education and society, or at least those components of each which were tightly tied to the economy.

The Educational Reform Act (ERA) of 1988 is part of a larger attempt at social revolution in Britain [17]. The underlying themes of the Thatcher government are self-reliance, strength, and freedom. The Conservative Party (or at least Mrs Thatcher's branch of the Conservative Party) asserts that the welfare state breeds dependence on government, individual and corporate economic weakness, and a loss of individual freedom. The Thatcher government therefore proposed to reduce the size of the government, stimulate competition in the public as well as the private sector, and 'liberate' individuals from government and social control. Under more than a decade of Thatcher rule, direct taxes have been reduced, public housing and public corporations have been sold to private owners, and many facets of British economic life have been deregulated.

The Education Reform Act of 1988. The Education Reform Act of 1988 (ERA), the most extensive educational legislation enacted in Britain since 1944, incorporates elements found in other Thatcher reforms intended to transform Britain into a modern capitalist society. The ERA seeks to introduce initiative and enterprise into schooling while, some think paradoxically, at the same time increasing national control over the scope and content of the educational system.

A free market economy is the dominant metaphor or paradigm underlying many of the Act's provisions. The ERA's educational market is a carefully regulated one, however. It is a market designed not simply to grant greater consumer choice in education, but also to achieve a spectrum of national social and economic objectives.

The purpose of the Education Reform Act of 1988 are frequently contrasted with those of the 1944 Educational Act:

> The Education Reform Bill, by contrast (to the 1944 Education Act), has as its most profound motivating force nothing so grand as the need to expand educational opportunity, or the belief that education could help construct a fair and just society. It seems instead to be dedicated to the spirit of consumerism, individual entrepreneurism, and competitiveness...[18]

Mrs Thatcher would probably argue that such a conclusion confuses means with ends. The means shift from bureaucratic to market strategies, but, for ERA proponents, the ends of the two bills are much the same. Both acts attempt to use education to revitalise a society destroyed or threatened from the outside. In 1944, Britain's institutions and economy had been decimated by war and left vulnerable to radical political and economic changes sweeping across Europe. The 1944 Act attempted to assist economic reconstruction by expanding educational opportunity. In 1988, Britain was losing its industries and markets to foreign competitors. The ERA purports to restore Britain's economic competitiveness by improving the quality and availability of appropriate education. The Conservative government believes that a modern capitalist economy, fuelled by a more highly and broadly educated work force will be, by definition, more prosperous and democratic.

Primary and secondary school reforms. The ERA contains provisions affecting education in England and Wales from kindergarten through to university [19]. At the schooling level, the Act redefines the relationships among the central government, local education authorities, schools, and parents. The central government assumes added authority for a national curriculum and the assessment of student performance. Other provisions, however, are designed "to increase the autonomy of (individual) schools and their responsiveness to parental wishes." The winners, in the reshuffling of responsibilities are officials in the national government, Department of Education and

Science and parents; the losers are Local Education Authority (LEA) officials and, to some extent, teachers.

National Curriculum. At the centre of the ERA is a national curriculum that is required for all students in state-supported primary and secondary institutions. A national curriculum includes 'core' subjects of mathematics, English, and science, along with seven other 'foundation' subjects: history, geography, a modern foreign language, technology, art, music, and physical education. These subjects will constitute seventy percent of the curriculum and a national body is preparing guidelines in each subject. National performance standards are being established for each subject and pupils will be tested at ages 7, 11, 14, and 16 to determine their performance in relation to the specified national standards for their age.

The national curriculum reflects a broad political consensus that there is a common set of educational experiences that all young people should have in order to participate successfully in the larger social and economic community [20]. A common curriculum is expected in most continental European nations and the ERA begins to bring Britain into line with its European Community neighbours.

The national curriculum and its accompanying assessment programme are intended to raise standards by ensuring that all students study a carefully developed, broad and balanced curriculum with clear objectives and measurable performance standards. The common curriculum is also intended to ensure that students can move from one school to another with minimal disruption and that teachers and schools will be more accountable for the education they offer.

Local management of schools. The ERA contains provisions which increase the local autonomy of individual schools and parental choice. Primary responsibility for the management of schools is shifted from local authorities to school level boards of governors and the administrative staff at the school site. Local Management of Schools (LMS), as this initiative is known, consists of five integrated changes which are designed to increase the accountability of schools to parents and the local community.

First, the ERA expands the policy introduced in the 1980 Education Act which gives parents the right to select their child's school. The *open enrolment* policy shifts responsibility for admissions from the local authority to the school. A school can accept students up to its physical capacity and can admit students from outside its geographic neighbourhood. The supposition is that well regarded schools will attract more students and poorly perceived schools will lose students. Since an individual school's budget will be based primarily on the number of students in attendance, this open enrolment policy presumably will reward success and provide an incentive for improved quality.

Secondly the ERA requires local education authorities to use an approved *formula* for allocating resources to the schools in its district. Seventy-five percent of the funds distributed under the formula must be based upon school enrolment so that schools have an incentive to attract and retain students. The remaining 25% can be distributed for other factors which might include the higher cost of operating small schools, of mainstaining old school buildings, and of educating economically deprived or handicapped children. The formula must be approved by the Department of Education and Science and LEAs are required to consult with local governing bodies of schools before deciding on formula elements. Formula funding provides substance to open enrolment by giving parents, as the clients of schools, greater influence over the financing of schools.

The third feature of LMS is that the formula-derived budget will be managed at the

school level. *Local financial management* permits school governors and the staff to establish spending priorities and transfer funds to highly desired activities. Student recruitment, staff development, and instructional technologies could receive more funds if they were approved by school governors. This policy will be warmly received by schools with growing enrolments and with historically below-average budgets because they will have extra money to spend. Schools with declining enrolments and with above-average costs will be forced to reduce staff and services and will see little benefit from the devolution of management responsibilities.

Fourthly, the Act also authorizes boards of governors *to appoint, suspend, and dismiss* staff and teachers of their schools. The local education authority is still the employer of teachers and staff in their areas, but its authority is much limited by the act.

The final feature of LMS is the requirement that the local education authorities provide their communities with *information on the performance of schools* in their district. LEAs are required to provide both financal and academic performance data for every school, unadjusted by student characteristics. Information on individual students will remain private, but school information is considered essential so that parents can make an informal choice about the school their child will attend.

Grant maintained schools. The Education Reform Act contains another provision which dilutes the historic influence of local education authorities. Boards of governors of secondary schools and large primary schools can seek permission from the Secretary of State for Education and Science to secede from a local authority and receive financial support directly from central government. This procedure permits a grant maintained school to compete with state-supported local authority schools (county and voluntary schools) and the private, independent schools. This new category of schools is seen by the Conservative government as adding:

> a new and powerful dimension to the ability of parents to exercise choice within the publicly provided sector of education. The greater diversity of provision which will result should enhance the prospect of improving education standards in all schools. Parents and local communities would have new opportunities to secure the development of their schools in ways appropriate to the needs of their children and in accordance with their wishes, within the legal framework of a national curriculum. [21]

The possibility, or threat, of schools 'opting out' is presumed to make local authorities more careful about the manner in which they respond to the concerns of school boards of governors and parents. Many educators are concerned, however, that this provision will create a new category of selective schools or will be used to thwart local authorities' efforts to eliminate failing or shrinking schools. The final decision on whether a school can 'opt out' rests with the Secretary of State.

City technology colleges (CTC). Another experiment with providing more self-government in education is the proposed establishment of up to twenty city technology colleges (actually high-tech secondary schools) to provide specialised technology education to selected children in 'urban' areas. The original concept, which was eventually codified in the ERA, was for private industry to provide most of the financing to build the new colleges with the central government assuming the recurring costs of operation. This programme has been slow to develop. The private sector has not provided the expected level of funding, leaving most of the costs to be borne by central government. The few CTCs that have been established have been unusually

costly, depriving other state-supported schools of needed resources. The CTCs are managed by an independent board of governors and are authorised to establish innovative programmes, free of many of the regulatory requirements imposed on other schools.

In summary, the elementary and secondary school reforms contained in the Education Reform Act combine increased centralisation of the curriculum and increased decentralisation of school governance. They combine greater central government control over the content and assessment of public schooling and the introduction of local market mechanisms to increase the accountability and responsiveness of schools to parents and the community.

School improvement is supposed to result because the goals and objectives of education will be clearer, through the adoption of a national curriculum, and because 'local management' will assure that schools meet the needs of local constituents. The increased importance of parental choice and involvement is intended to improve public attitudes towards schools, resulting eventually in better political and economic support for education. Parents and the community are encouraged to provide additional financial support for enrichment activities at the school level.

The ERA is an elaborately designed educational restructuring in Britain which is intended not only to change public schooling in the nation but also to revitalise and reinforce the values of initiative, self-reliance, and entrepreneurship throughout the society.

Higher Education Reforms. The Education Reform Act's higher education provisions have less to do with structure and more to do with the Conservative government's long-range strategy of shifting higher education costs to the private sector. In 1979 Margaret Thatcher was elected on a platform promising to reduce the costs of public services and to achieve more 'value for money spent'. In 1981, government subsidies for universities were reduced by 15%. These reductions were continued, or made even more intense, in subsequent years. The budget conflict between the Thatcher government and higher education continues still. The ERA is another chapter in this struggle over the financing and accountability of higher education institutions.

The Education Reform Act of 1988 removes polytechnics and colleges of further education from the control of local education authorities. It also establishes the Polytechnic and Colleges Funding Council (PCFC) under the Department of Education and Science which was given responsibility for allocating DES funds to the polytechnics and colleges of further education. The PCFC decided that the polytechnics and colleges must compete for new programmes on the basis of the cost and quality of proposals submitted and upon the level of student demand for courses.

The ERA also establishes a new University Funding Council (UFC) to replace the existing University Grants Committee. (In the past this agency acted as a buffer between national government and the universities.) The new UFC, which is now appointed by the national government, has more representatives from business and industry and fewer academics than its predecessor. The Act gave the UFC a stronger role in the planning of higher education programmes and the UFC is also expected to introduce a degree of competition, similar to that adopted by the PCFC, for the awarding of contracts for new programmes and courses.

Finally, the governing bodies of colleges of higher education and further education colleges that remain under local authorities are reorganised and given more authority over the plans and finances of their institutions. The reform parellels the local management of schools reforms for British lower education.

The principal purpose of recent British higher education reforms is to reduce the role of local government as a provider and increase the responsibility of individuals to purchase educational services from higher education institutions. Initially, the role of the central government will be increased through its appointments to the UFC and PCFC. Ultimately, the introduction of increased student loans and private financing is intended to limit central government involvement in higher education. Significant tuition increases have been proposed, and despite government assertions that post-secondary education enrolments need to be doubled by the year 2010, new government resources have not yet been identified to accomplish the task.

The United States and 1980s Education Reform

During the 1980s, the United States altered its education system in a far less comprehensive manner than the United Kingdom. By virtue of a complicated set of historical and constitutional arrangements, education in the United States is a state rather than a national government responsibility. Thus, even though many national influences came to bear upon US education reform, actual statutory and regulatory changes had to proceed on a state-by-state basis. Consequently, the following description of necessity contains generalisations which, while characterising the United States nationally, may not portray any particular state with complete accuracy.

In 1983, a prestigious, federal government-sponsored, *ad hoc* policy panel, the National Commission on Educational Excellence, issued a widely publicised and highly visible report entitled *A Nation At Risk*. The National Commission, chaired by University of California President David P. Gardner, issued a document which was slender in terms of pages, and even thinner in terms of empirical evidence. Nonetheless, it was packed with persuasive prose attesting to the decline of American schooling. Within weeks, it had triggered a torrent of educational reform dicussion across the United States [22].

President Reagan, accurately sensing public sentiment about education, rapidly associated his administration with the report and its recommendations [23]. A wave of reform interest spread rapidly and hundreds of national, state, and local level commissions, task forces, study groups, committees, hearings, and legislative reports were formed or issued. Public officials and political aspirants were quick to board the education reform bandwagon. From every facet of the political spectrum, reform suggestions, proposals, and policy propositions were put forward. Seldom had the nation seen such an enormous outpouring of policy solutions in search of practical problems.

Because the 50 individual states have substantial government autonomy over education matters, the kinds of schooling reforms enacted and the rates at which they were adopted varied greatly. Also, once having passed reform packages, states were not precluded from revisiting the topic on subsequent occasions. Some states experienced what came to be known as 'waves' of reform. The tendency was for states initially to accept proposals which were politically the easiest to adopt and financially the easiest to fund. Subsequent reform rounds involved more complicated and politically more volatile issues.

In no case, however, were state reforms as systematic or elegant as those contained in Britain's Education Reform Act. Instead, most followed an intensification strategy with only minor forays into the uncharted waters of structural reform.

Initial State-Level Reform Responses. States initially proceeded in an incremental

manner. Policies were widely enacted which extended the school day and school year. (This was done in response to an almost endless stream of comparative information about education in other nations. For example, Americans were duly impressed with the fact that Japanese children attended school as much as two months longer each year than their US counterparts.)

Textbooks were also a frequent early reform target. Publishers as much as admitted publicly that, in order to appeal to broad national markets across state boundaries, they homogenised content, removed controversial issues, and reduced vocabulary complexity to achieve the lowest acceptable interstate denominator. States such as California, Texas, and Florida, which bought large numbers of textbooks, responded by insisting on greater intellectual rigour.

State officials and reform proponents admonished schools and teachers to assign, and systematically correct, more homework. The elementary school curriculum was subjected to scrutiny and frequently found wanting. Greater attention and time, thus, were to be devoted to fundamental schooling endeavours such as reading and mathematics, and science was added to the curriculum in many elementary schools. Secondary school graduation requirements were often elevated. The vast forest of elective courses, that had been permitted to flower in the 1960s and 70s, was pruned substantially as students were required to complete more years of English, mathematics, science, foreign languages and other 'solid' subjects in order to graduate. Enrolments in less-valued elective courses decreased as a consequence.

More frequent, and more rigorous, testing of student performance was often mandated by states. Entrance standards for public colleges and universities were elevated. Generally, this meant increased attention to science, mathematics, and foreign language study. The majority of states increased their requirements to be a public school teacher. However, this had little impact because policy makers seldom eliminated the host of loopholes whereby teaching job candidates could circumvent qualification specifications. The growing demand for teachers meant that hard pressed local school authorities were often eager to cooperate with job candidates in fabricating the appropriate justification, however superficial, for a credential requirement exception.

Intensification best describes the early state reform activities. Most critics of American schools believed academic standards were too low. Strategies were pursued to increase educational standards by revising curriculum, tightening teacher certification rules, increasing testing, lengthening the school day, and elevating graduation requirements.

Subsequent State-Level Reform Efforts. After adopting what was relatively simple, some states subsequently addressed more difficult reform proposals. This latter category involved matters such as the fundamental content of courses to be taught in schools, the structure of school-level decision-making—the balance of authority between teachers, administrators, and parents, and positive and negative sanctions intended to enhance the performance of schools and school districts. This round, or 'second wave', of reforms was less universal than the above-listed changes. The pattern of state adoptions has been less complete and the degree to which an enacting state accepted a programme was itself varied. Illustrations follow [24].

California exemplified state-directed efforts to restructure the school curriculum. In mathematics, the sciences, history, and English, California education authorities recruited nationally acclaimed academic specialists and solicited their views regarding what should be taught. This resulted in the development of state promulgated 'curriculum

frameworks', which not only shape what classroom instructors teach, but also influence the content of textbooks and the nature of state-administered, pupil performance tests. Also, the in-service training opportunities made available to teachers were strongly geared to these alterations in curriculum content. California's huge education system, containing 12% of all the elementary and secondary, K-12, students in the United States, has undertaken an heroic effort to render what was taught more coherent, cohesive, and intense.

New Jersey illustrates yet another reform approach. Selected urban school districts repeatedly were unable to escape charges of petty corruption, nepotism, and mismanagement. Consequently, state policy makers enacted an 'educational bankruptcy' plan whereby the state, after sufficient advance notice and systematic efforts to buttress local authorities, can take over a local district, appoint new school board members and administrators, and begin to operate schools in a different direction.

Florida exemplifies yet another 'second wave' effort. In addition to an unusually extensive statewide examination system, Florida pioneered a number of school site reform innovations. Among these was the devolution of financial accounting to the school level, the requirement that each school annually produce a report intended for its 'customers', parents, and the establishment of 'merit' schools wherein there were state financial rewards for an entire school, if its performance exceeded state specified goals. Florida also led the way in having the first large United States school district, Miami, utilise school-site decision-making, permitting school officials and teachers to determine the manner in which they wanted to allocate their budgeted revenues.

Minnesota pioneered yet another kind of reform, parent choice among schools. A controversial open enrolment plan whereby students can attend public schools other than in the local district and attendance area in which they reside was proposed and enacted. It continues to be controversial, and its operational consequences are far from clear. Nevertheless, given the politically inflammatory nature of the idea, the wonder is it was enacted at all.

National Level Reform Responses (and Proposals). A variety of philanthropic, business, and governmental organisations issued reports proposing 'national', though not necessarily federal government, reform activities. These are sufficient in number, and legitimacy, to warrent illustration.

In 1966 Congress authorised formation of the National Assessment of Educational Progress (NAEP). This nationwide achievement testing activity was funded by the federal government, but operated under contract by a bidder agency. The proviso at the time of enactment was that testing, while involving a national sample of students, should not be undertaken in a manner which would permit comparison of academic achievement among states or among school districts within states. In short, student performance could not be assessed in a manner which would permit results to be linked to operating educational agencies. Over time, political views regarding the wisdom of this prohibition changed. In 1988 Congress reauthorised the NAEP, with a new provision permitting states, voluntarily, to participate in state-by-state NAEP. The results of this action could be generalised to a state and thus permit the comparison of student achievement in one state with that of another.

Efforts to enhance teacher professionalism also are nationwide in scope. Following yet another persuasive commission report, the National Teacher Professional Standards Board was established [25]. This organisation is charged with the construction and administration of assessment procedures for granting national certification to those teachers who, voluntarily, seek to be so recognised. This operation is not scheduled to

take effect fully until the early 1990s, and thus cannot yet be appraised. However, the unusual spectrum of interest group cooperation necessary to form the Board is itself a milestone in American educational politics.

A substantial number of teacher training institutions have formed a national consortium pledged to the elevation of teacher preparation. This organisation, called the 'Holmes Group', is also fledgling and it is not without its detractors. For example, it advocates elimination of education as an undergraduate degree and favours a fifth year of graduate level preparation for becoming a teacher. These ideas are threatening indeed to institutions whose historic and personnel commitment, not to mention budgetary dependence, is to undergraduate teacher education.

Models for a national curriculum have been proposed, but adoption of such an idea has never previously been given serious consideration. However, in a virtually unprecedented Governors 'Summit' meeting in September of 1989, President Bush first raised the idea of 'national standards' or 'national goals' for American schools. In his January 1990 State of the Union address, Bush proceeded further by specifying seven national educational goals. Presumably, if the idea of national goals and nationwide standards reaches fruition, then states would be under considerable political pressure to adopt them as goals for their own schools.

It is too early to predict the extent to which these goals will attract public attention or ignite educator action, let alone to estimate their effects. However, proposals for nationwide action, which would have been virtually unthinkable and would have been branded as a dangerous and subversive plot even as recently as the early 1980s, are now broadly supported in Washington DC and widely discussed throughout the remainder of the United States.

These ideas emerging at the national level are generated in clear response to what is perceived as an economic challenge by Japan, Germany, and other highly productive industrialised nations. In early February of 1990, The prestigious *Wall Street Journal* contained an extended special supplement devoted entirely to education and the need for reform. The opening statement read:

> Jobs are becoming more demanding, more complex. But our school don't seem up to the task. They are producing students who lack the skills that business so desperately needs to compete in today's global economy. And in doing so, they are condemning students to a life devoid of meaningful employment.
>
> Better corporate retraining may serve as stopgap. But ultimately the burden of change rests with our schools. While debate rages about how change should come, almost everyone agrees that something has to be done. And quickly. [26]

The pressure for educational change persists.

Higher Education. This is a dimension where reform contrast with the Britain may be the greatest. The United States has had a system, albeit organised on state-by-state lines, of mass higher education for almost a quarter of a century. Almost no-one regards this system as perfect. Yet it has not come under the same intense scrutiny and heavy critcism as US lower education. Thus, most reform attention in the United States has been directed at enhancing the quality of lower, K-12, schooling.

Where post-secondary education has received the attention of policy makers, it has generally been in regard to the increased costs of programmes. Rising tuition and fees are widely criticised and are changing the pattern of college attendance. Students are

having to delay entrance to college while they work to save money. Many students are employed while in college, lengthening the time required to complete a degree. And, many students and their families now accumulate substantial debts to cover the costs of a college education.

Frustration over rising costs is growing not only among students but also among institutional trustees and government policy makers. They are becoming increasingly suspicious of higher education's claim that all improvements require more money. This growing frustration is epitomised by the outburst of the Secretary of Education in the Reagan administration, William Bennett, who proclaimed in a speech that "I have never seen a greater interest in money—money, cash, bucks—among anybody" [27].

Concern about rising costs of higher education has produced demands for increased productivity of higher education institutions. Most higher education systems and institutions in the United States are still groping to understand the meaning of educational productivity in the current economic environment. On the one hand, policy makers argue that the human capital imperative—the need for more and higher levels of popular educational achievement—requires elevated levels of investment in higher education programmes. Levels of expenditure in higher education have increased in the last decade with much of the political support for the increases coming from the business community. On the other hand, policy makers are motivated to identify new ways of obtaining funds or squeezing more 'quality' out of existing financial resources.

The debate takes many forms. For some it is how to make universities act more like businesses. Others seek to increase private funding of public higher education. Regardless of the proposal, higher education institutional resistance to change is substantial.

Efforts to increase access and quality and at the same time constrain or reduce costs have forced states and institutions to systematise educational offerings, eliminate redundant and costly programmes, expand the use of instructional technology to reduce the unit cost of education, and introduce numerous management reforms to encourage cost-consciousness in the provision of instructional, research, and public service programmes.

Policy makers are also attempting to increase the effectiveness of post-secondary transitional institutions such as community colleges and vocational preparation programmes. Also, critics of higher education comment on the fragmented nature of the undergraduate curriculum and degree requirements.

In sum, higher education faces the same pressures for efficiency that international competition imposes on all public and private institutions in modern industrialised nations. However, most Americans are satisfied with their highly diverse and accessible mass higher education systems. Thus, reform efforts consist of intensifying current practices, improving linkages between lower and higher education and between higher education and the employers of post-secondary graduates, and finding new methods of providing more instruction, research, and service at the same lower costs. There is little reform which fundamentally challenges the current diverse structure of America's higher education system.

Related Issues. By the end of the 1980s, policy analysts and children's advocates were proffering the view that education reform would fail unless added attention was paid to ameliorating social conditions impeding the school success of a large number of impoverished children. This item has not moved squarely on to the national policy agenda, but increasingly questions are being raised regarding whether or not the range

of institutions involved in enhancing human capital should not be expanded beyond schools alone.

CONCLUSION

Great Britain and the United States are currently engaged in extensive efforts to reform their education systems from pre-school through to graduate school. This is being done in response to forceful economic changes which are international in nature.

Paradoxically, each nation seeks a similar policy objective—enlarging the highly educated proportion of its population able to contribute productively to enonomic competitiveness and growth. However, each nation is relying upon a different mix of reform tactics to achieve this goal. The United States is unevenly pursuing a low risk, incremental pattern of reform proposals. Britain is engaged in a far more sweeping reform programme and concomitanly attempting to alter deep-seated and widespread social attitudes regarding schooling in the process.

Each policy system has designed reforms which may eventually prove appropriate, given the respective prior circumstances. The United States—pre-reform—already had an encompassing education structure which encourages large proportions of the population to acquire post-secondary schooling. However, the widely perceived difficultly is that the United States system tolerates far lower academic achievement standards, at almost every rung of the schooling ladder, than will suffice to enable the nation to remain economically competitive. Thus, in the United States the central educational reform challenge is to raise standards.

Britain has long been renowned for the high standards of its education system. The deep-seated difficulty is that the secondary and higher education programmes have been unabashedly elitist, catering to a small proportion of the population who were sufficiently motivated, academically prepared, and financially able to attend college. Britain's challege is to expand the structure of this system and to make secondary and post-secondary schools much more flexible, so as to enable an enlarged proportion of the population to attain higher levels of education.

Britain's challenge, however, is more daunting than that facing the United States. Not only is it altering the curriculum and the management structure of its primary and secondary schools, it is also attempting to expand its post-secondary system. Both of these efforts would seem to require substantial increases in public resources. So far the government has been unwilling to provide significantly more resources, thus threatening the goals of the Education Reform Act.

Ironically, some believe that money is not the major problem facing education reformers in either the United States or Britain. The United States spends a relatively high proportion of its gross national product on education (approximately 6%) [28]. It is also the case, that since the beginning of the latest reform movement in 1983, the nation's investment in education at all levels has increased relative to inflation. In lower education, much of the recent reform has been in the direction of professionalising teaching. In higher education, reform in the United States increasingly focuses on increasing educational productivity, that is obtaining more 'value for money spent'.

In a similar vein, many in Britain believe that changes must occur in the attitudes of the public and the educational service about the role of schooling in society before additional educational investment is made. Many students from working and middle-class families in Britain do not see education as a vehicle for improving their life opportunities. British business officials have generally ignored the importance of

investing in human capital, which has led to a national underinvestment in education and training. The importance of general education for all students and vocational education is still undervalued by many public officials and educationists.

A fundamental question is whether higher education in Britain is underutilised because it is popularly undervalued or is it undervalued and underutilised because it is underfunded.

There is an additional irony, in comparing the United States and Great Britain reform efforts. Not only is the Thatcher government expecting to accomplish educational changes with precious little by way of additional financial resources; it is also attempting to accomplish these radical goals without much professional assistance. Given the low levels of additional resources, the long-run success of the Thatcher agenda in education will depend crucially upon the co-operation of professional educators. However, little has been done systematically at a policy level to curry their favour or induce their cooperation. Conflict between the national government and teachers has increased, and Thatcher critics, and some teacher representatives, assert that they have been asked to bear the blame for the failings of the English education system.

If the ERA is eventually found wanting, if it is unable to meet the human capital imperative, unwillingness to seek the productive cooperation of teachers may be the single most important dimension to which future critics will ascribe its failure.

Conditions in the United States on the dimension of co-operation have been quite different. In the United States, where reform is widespread but far less fundamental in nature, business officials and civic leaders have repeatedly solicited the reform cooperation of professional educators. Many of the proposed 'second wave' of US reforms are deliberately aimed at enhancing the professional status of teachers [29].

THE EMERGING INTERNATIONAL MODEL

There are many differences between purposes and approaches to educational reform in the United States and Great Britain. Underlying these differences, however, is a common need to create an educational system that will provide each nation with the human resources required in a modern, competitive economy.

Because the external pressures of reform are the same, there is evolving in the United States and Britain, as well as in other industrialised nations, a similar model of modern public education. The features of the model are still general in character but include a nationally established curriculum that gives more weight to mathematics, science and foreign languages; a devolution of operational decision-making authority to the school site; a greater use of performance tests for accountability purposes; an emphasis on teacher training and teacher professionalism; and, for higher education programmes, an expansion of access and incentives for life-long learning.

In any particular nation, specific reforms are determined by a balance of economic, social and political considerations. Each government evolves it solutions and hopes that the adopted educational framework will lead to the desired objectives. There is always uncertainty and many reforms will fail because they are poorly conceived or poorly implemented. Others succeed because there is a will to make education work even when the practical manifestations of reform policies may actually inhibit progress.

The international nature of national economic problems has stimulated public officials to take action to improve their nation's human resources. These pressures will

continue and reforms will continue to be made until a nation's competitive position is assured. Failure to have an educational system that provides a highly educated and adapatable work force will lead to economic decline and a lower living standard, conditions most nations attempt to avoid. The outlook for reform, therefore, is encouraging. Whether the specific approaches being followed in the United States and Great Britain will succeed in the short run are less certain.

NOTES

[1] The authors wish to express their appreciation to the participants in the Policy Seminars on Education Reform what were held at Oxford Polytechnic in the autumn of 1989. Particular thanks are due to Clive Booth and Harold Silver for their constructive criticisms of the original draft of the paper.

[2] MORRIS C.R. (October 1989) The coming global boom, *Atlantic*, 264 (4) pp. 53–54. And, if he had been writing one month later, the author could have mentioned that Ford purchased England's number one luxury car producer, Jaguar.

[3] Ironically, multinational businesses frequently understand this intense interdependence and complexity better than do national policy makers. A 14 December *Wall Street Journal* advertisement for an international financial conglomerate began by stating "An interest rate fluctuation in Tokyo kills a real estate deal in Des Moines. Bond swings in London spell the difference between the success and failure of a public offering in New York": *Wall Street Journal*, p. B12

[4] KEARNS, D.T. & DOYLE, D.P. (1988) *Winning the Brain Race: a bold plan to make our schools competitive* (San Francisco, Institute for Contemporary Studies ICS Press).

[5] THUROW, L.C. (1970), *Investment in Human Capital.* (Belmont, Calif., Wadsworth Publishing); THUROW, L.C. (1985) *The Zero-sum solution: building a world class American economy* (New York, Simon & Schuster).

[6] NATIONAL COMMISSION ON EDUCATIONAL EXCELLENCE (1983) *A Nation At Risk* (Washington DC, United States Superintendent of Documents).

[7] MERROW, R. (1989) The educational imperative, *Black Collegian* 19, pp. 36–38, 88–91

[8] For a review of current research on human capital see JACOB MINCER (1989) Human capital and the labour market, a review of current research, *Educational Research*, May, pp. 27–34.

[9] For details regarding the nature of international education reform tactics see GUTHRIE, James W. The industrialized World's Evolving Political Economy and The Emerging Globalization of Schooling (forthcoming).

[10] A theoretical explanation for policy maker action regarding education is provided by James W. Guthrie and Julia E. Koppich in: Ready, AIM, Reform: building a model of education reform and 'High Politics', a chapter in a forthcoming book edited by Hedley Beare & William L. Boyd *An International Perspective on the Movement to Transform the Control and Performance of Schools.*

[11] Somewhat paradoxically, however, many US reform proponents, while certainly stressing the utilitarian view of education for the sake of economic development, have argued that the most useful kind of education in this regard has many liberal arts components.

[12] KIRST, M.W. & WALKER, D. (1972) An analysis of curriculum policy making, *Review of Educational Research*, 41, p. 5.

[13] The arguments for privatisation and description of alternative privatisation proposals are contained in LIEBERMAN, M. (1989) *Privatisation and Educational Choice* (New York, St Martin's Press).

[14] The following descriptions of British and United States reforms are presented here to facilitate comparison. A reader desirous of greater detail regarding the reform efforts in these two nations should refer to publications such as Centre for Policy Research in Education (1989) *State Education Reform in the 1980s* (Rutgers, State University of New Jersey Michigan State University Stanford University University of Wisconsin-Madison).

[15] Several components of the Thatcher reforms, especially the national curriculum and local management of schools, had been discussed by the Labour government between 1976 and 1979 but not put into effect.

[16] Despite its tradition of free public school and free higher education, Britain remained a socially stratified society. A majority of students dropped out of school without obtaining academic qualifications to continue their education beyond age 16 or vocational qualifications needed to enter the skilled sector of the labour force. Although participation in post-secondary education almost doubled during the 1960s and 1970s, it still remained substantially below the participation rates in Western Europe and the United States. Critics asserted that the British economy stagnated under the enormous financial burdens of the welfare state and an antiquated system of education and training for its workforce.

[17] See CHITTY, C. (1989) *Toward a New Education System: victory of the new right* (London, Falmer Press) and JONES, K. (1989) *Right Turn* (London Radius Books).

[18] TOMLINSON, J. (1989) The education reform bill—44 years of progress? *Education Policy*, 4, p. 276.

[19] Technically, Britain is composed of England, Scotland, and Wales. The Educational Reform Act of 1988 applies to the educational systems of England and Wales. Scotland and Northern Ireland have separate educational systems. In the past major reforms enacted in England and Wales have generally been subsequently adopted in Scotland and Northern Ireland.

[20] See 1987 election manifestos for all three major parties. See also THOMAS, H. & RANSON, S. Education Reform is Britain, p. 2 unpublished paper from the Centre for Education Management and Policy Studies, University of Birmingham.

[21] Department of Education and Science (1987) *Grant Maintained Schools. Consultation Paper.*

[22] *A Nation At Risk* (1983) (National Commission on Educational Excellence, Washington DC, United States Superintendent of Documents).

[23] This struck those closely associated with the report as ironic since the President had earlier dissociated himself from the formation of the group and refused from the outset the prospect of it being a 'Presidential Commission'. The then Secretary of Education, Terrel Bell had, nevertheless, proceeded on his own authority to form a National Commission.

[24] A recent study of educational reform in the United States reports only modest progress in achieving the goals set forth in the 1983 publication of *A Nation at Risk.* See *The Progress of Reform* (New Brunswick, NJ Centre for Policy Research in Education, Eagleton Institute of Politics Rutgers, State University of New Jersey.

[25] Carnegie Task Force on Teaching as a Profession (1986) *A Nation Prepared: teachers for the 21st Century.* (New York, Carnegie Forum on Education and the Economy).

[26] *Wall Street Journal Reports,* Education: the knowledge gap, Friday, 9 February, 1990, p. R1.

[27] BENNETT, W.J. (1986) Text of Secretary Bennet's Address Last Week on an Anniversary of Harvard. *Chronicle of Higher Education,* 33, pp. 27–30.

[28] RASELL, M.E. & MISHEL L. (1990) *Short-changing Education: how U.S. spending on grades K–12 lags behind other industrialized nations.* (Washington DC, Economic Policy Institute) and HOOD, J. (1990) Education: money isn't everything, *Wall Street Journal,* 122(29), Friday 9 February, p. A10.

[29] See unpublished paper by JULIA E. KOPPICH, (January 1990) Restructuring schools, reforming a profession: prospects and possibilities, (Berkeley, CA, Policy Analysis for California Education (PACE), University of California).

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