

STOKES VALLEY ROTARY CLUB

EDUCATION AND ECONOMIC GROWTH

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Economic growth

I want to begin this talk with a discussion of economic growth. In particular, I will discuss developments in the theory of economic growth, the role that education plays in generating economic growth and the implications for education policy. This issue is extremely topical. New Zealand's long-term growth performance has been poor. Between 1960 and 1997, growth in real gross domestic product (GDP) per capita in New Zealand was less than half the average for all Organisation for Economic Cooperation and Development (OECD) countries. Although our growth performance improved for several years during the 1990s, policy slippage and reversals since that time have seen it become mediocre again. The upcoming Knowledge Wave conference will provide a forum for discussing ways of closing the gaps between New Zealand and more successful countries.

Economists since Adam Smith and David Ricardo have been interested in the issue of economic growth and its causes. It was not until the 1950s and 1960s, however, that the first theories of economic growth were formalised. These early models, known as the neoclassical approach to growth theory, had a number of weaknesses. One of the key ones was that they assumed that technological change (and hence productivity growth) was driven entirely by factors beyond our control. In economic jargon, technological change and productivity growth were assumed to be exogenously determined. The actions of consumers, firms and governments had no impact on the long-run growth rate of the economy.

Clearly these models did not provide a good representation of the real world. Beginning in the 1980s, a series of more sophisticated models appeared based on so-called New Growth theories. These models are not uniform. One strand emphasises the stock of human capital as an important determinant of economic growth. A second

strand places more emphasis on the incentives that firms have to generate new ideas. Without going into technical detail, a couple of points are worth noting up front:

- first, they specifically recognise that the growth rate of the economy is not driven solely by outside factors; and
- second, they show that government policies have an important role to play in determining the long-run growth rate of a country's economy.

These models are clearly more realistic in their portrayal of the economy with consumers, firms and governments all having an impact. They also provide a much more useful benchmark for thinking about the role of education in economic growth and the design of education policies.

In these recent models, unlike their earlier cousins, education is seen as contributing to economic growth in two ways:

- it directly affects economic growth by making individual workers more productive; and
- it indirectly affects economic growth by leading to the creation of knowledge, ideas and technological innovation – either through the process of acquiring education itself or because education is a key input into the development of a research sector that produces new knowledge and ideas.

It needs to be stressed that, under this approach, education is important not only because educated people engage in university research. The United States is a world leader in many fields of research yet only about a quarter of its labour force has a university degree. Education is also important because it generates new ideas in the private sector. Knowledge creation is not a monopoly of either the public or private sectors.

A number of studies have confirmed the importance of education in explaining growth. The consensus view on the direct effects of education is that the private rate of return to an individual from an additional year of schooling is anywhere from 5 to 15 percent. This must, to some extent, reflect the fact that employers see educated workers as more productive. Similarly, studies find that increases in educational attainment account for around 20 percent of growth in output per worker. Education also has indirect effects and studies have shown that higher levels of human capital are associated with significantly larger physical investments, higher rates of technology transfer and longer life expectancy. Much remains to be done in measuring the exact impact of education on economic growth. Nonetheless, the OECD noted recently that:

... the improvement in human capital seems to be a common factor behind growth in recent decades in all OECD countries, especially Greece, Ireland, Italy and Spain, where the increase in human capital accounted for more than half an extra percentage point of growth in the 1990s compared with the previous decade.¹

These New Growth models have a number of other policy implications. One of them is that the quality of education matters. Much of the focus in recent years in developed countries has been on improving access to secondary and tertiary education. But access to education – simply increasing school enrolments – is not enough. Labour force quality, as measured by the performance of students in international comparative tests, has been shown to have a strong impact on economic growth. This has significant implications for curriculum design, as well as teacher and school performance.

The quality of government spending also matters. We often hear calls for more spending on research and development (R & D). But economic growth depends on the quality of resources committed to R&D, not just on the dollars spent. Poor investments of public funding – whether badly targeted spending or tax breaks – that don't increase the quality and quantity of R&D activity will do nothing to increase economic growth.

While education can play a role in fostering economic growth, we have to be realistic about its potential. Education should not be seen as a silver bullet that will cure all

¹ OECD (2001), *Education at a Glance*, OECD Indicators, 2001 edition, Paris, p 49.

economic ills. The former Soviet Union was strong on education, particularly of scientists and engineers, yet we now know it was a basket-case economy. As Stephen Parente of the University of Illinois commented recently, "education spending can't explain economic miracles. Japan didn't double its schooling capital when it doubled its income".²

The wider policy and investment environment is equally critical for sustained economic growth. New Zealand's policy framework must provide good incentives for the generation of ideas and knowledge and the diffusion of technology. This includes the need for:

² Stephen L Parente, quoted in Virginia Postrel, 'Economic Scene: Wealth Depends on How Open Nations are to Trade', *New York Times*, May 17 2001, <http://www.nytimes.com>

- strong intellectual property rights that encourage the generation, creation and implementation of ideas and innovations;
- an immigration policy focused on attracting skilled and enterprising workers; and
- outwardly oriented trade and investment policies that facilitate the transfer of knowledge and capital across international boundaries. The OECD estimates that trade liberalisation alone added up to two-thirds of a percentage point to annual growth during the 1990s – more than the contribution from education.

We need only look at fast-growing countries such as Ireland and Finland to see that a pro-growth investment climate is crucial to creating a knowledge economy. The success of Ireland's economy since the mid-1990s has been attributed to a convergence of many factors. Fundamentally, Ireland has pursued a programme of market-based reforms and has moved from being an interventionist economy to one that is among the freest in the world. Critical success factors include a large fall in the ratio of government spending to GDP, low taxes (especially on capital income), the outward orientation of trade and investment policies, an active programme of deregulation, privatisation of government enterprises, a business-friendly environment, rising labour force growth and an increasingly skilled workforce. Education alone has not transformed the Irish economy. In the case of Finland, the IMF noted that "sound macroeconomic policies and growing economic openness have been at the root of Finland's remarkable recovery from the recession of the early 1990s".³ Both Finland and Ireland are ranked well ahead of New Zealand in the 2001 World Competitiveness Survey – third and seventh respectively versus New Zealand's twenty-first ranking.

We also need to be realistic about the time required for education policy change to deliver gains. While education can influence growth, it won't do so quickly. Policy changes aimed at increasing the generation of knowledge and ideas may take years to

³ International Monetary Fund, Finland-2001 Article IV Consultation, June 7-18 2001, <http://www.imf.org/external/np/ms/2001/061801.htm>

show a dividend. It is therefore important that governments adopt a long-term focus to policy making.

Does more spending improve education outcomes?

The education-growth relationship is a two-way street. While education matters for growth, the reverse is also true. If New Zealanders want more resourcing – both public and private – of education, we need a growing economy to pay for it. It is idle for commentators to bemoan the 'low' levels of resourcing of schools and tertiary institutions in New Zealand relative to countries such as Australia, Canada or the United States. They spend more on education because they can afford to spend more. It is not a question of New Zealand governments being frugal in the area of education spending. Indeed, the opposite is true. A recent OECD report showed that New Zealand's public expenditure on education relative to GDP was above the OECD average and indeed fifth highest among 28 countries.⁴ It also pointed out that between 1995 and 1998:

- expenditure on educational institutions as a percentage of GDP rose from 4.9 percent to 6.1 percent in New Zealand;
- expenditure on education at all levels grew at a rate that was six times faster than the growth in GDP. New Zealand was one of only six OECD countries where education spending increased faster than GDP; and
- much of this increase was (rightly) concentrated on the primary and secondary education sectors.⁵

But have we been getting value for money for this additional spending? On its own, more spending will not necessarily deliver better educational achievement. There is a growing literature on the issue of school resourcing and education achievement. Eric Hanushek of the University of Rochester has conducted a number of studies in the United States and has found that there is little or no relationship between higher spending and educational achievement. In a 1999 report commissioned by the US Department of Education, the National Research Council concluded that:

⁴ OECD (2001), *op cit*, p71

... additional funding for education will not automatically and necessarily generate student achievement and in the past has not, in fact, generally led to higher achievement.⁶

There is no better illustration of this than the experience of Kansas City. To improve education for black students and encourage desegregation, the Kansas City School District undertook a 'cost-is-no-object' educational reform. The school district spent up to \$US11,700 per student – more money per student, adjusted for the cost of living, than any other of the 280 largest school districts in the country. The money bought, among other things, higher teachers' salaries, new schools and a student: teacher ratio of 12 or 13 to 1, the lowest of any major school district in the country. In a 1998 article, Paul Ciotti discussed the results of this initiative:

The results were dismal. Test scores did not rise; the black-white gap did not diminish; and there was less, not greater, integration. The Kansas City experiment suggests that, indeed, educational problems can't be solved by throwing money at them, that the structural problems of our current educational system are far more important than a lack of material resources, and that the focus on desegregation diverted attention from the real problem, low achievement.⁷

Clearly, there is more to creating a successful education system than more money. We need to debate wider issues, rather than focusing simply on the issue of funding.

Recent education policy directions

For at least 10 years, New Zealand education policy was generally on the right track. From the time of *Tomorrow's Schools* and *Learning for Life* in the late 1980s, progress was being made on a number of key policy fronts:

- schools and tertiary institutions were becoming more self-managing;

⁵ OECD (2001), *op cit*, pp 73-75.

⁶ Helen F Ladd and Janet S Hansen, eds (1999) *Making Money Matter: Financing America's Schools*, National Academy Press, Washington DC, <http://www.nap.edu/books/0309065283/html>

⁷ Ciotti, Paul (1998) *Money and School Performance: Lessons from the Kansas City Desegregation Experiment*, Cato Policy Analysis, No 298, Washington DC, March 16.

- choice was increasing and education funding policies were becoming more demand-driven,
- funding and regulatory policies were generally becoming more neutral – with public and private providers treated in a more even-handed way; and
- government resources were being targeted more effectively toward lower levels of education and toward those for whom socio-economic status represented a

barrier to educational access and full participation in society.

Some of the policies introduced by successive governments were very much in line with international thinking – the student loan scheme, deregulation of tuition fees, bulk-funding of schools, Targeted Funding for Educational Achievement, the Targeted Individual Entitlement (TIE) scheme and self-management in state schools, to name only a few. Many of us would like to have seen the reform process move further and faster – much more needs to be done to break down the public education monopoly and to refocus on core subjects and rigour in the curriculum. Regrettably, the period since late 1999 has seen policy backsliding. For example:

- bulk-funding was eliminated, although more flexibility has been introduced for all schools;
- the Targeted Individual Entitlement (TIE) Scheme was cut;
- a version of zoning was reintroduced;
- private school funding was capped; and
- the student loans scheme was made more concessional, increasing its regressive nature.

It is important to point out that the changes since 1999 were not made in response to identified shortcomings in policies. Quite the opposite – what research exists on the TIE scheme, bulk-funding and student loans is positive. More importantly, these programmes seemed to working well on the ground. Recent reforms, by and large, seem to have been politically motivated.

One prominent issue over the past year has been the 'closing the gaps' policy. Progress on improving education achievement among Maori is urgently required. However, it is ironic that the government has implemented policies such as the reintroduction of zoning and the abolition of the TIE scheme that will deny educational opportunities to the disadvantaged. At the same time there has been a marked change in the

government's spending strategy. Whereas previous governments have focused discretionary spending on the school sector, the recent focus has been on the tertiary sector – through increased subsidies to tertiary institutions and changes to the student loans scheme. The case for government funding is much stronger for the earlier stages of education than for the tertiary level. In recent years public spending on tertiary education in Australia and Canada has been significantly cut back, and there have also been actual reductions in Britain, Germany and Denmark. Requiring higher private contributions to tertiary education – mostly in the form of student fees – has been the OECD norm.

Choice and competition in the education sector

The general direction of education policy in New Zealand now places less emphasis on choice and competition between public and private institutions. At the school level, this is reflected in the zoning changes and the capping of private school funding. At the tertiary level, the second TEAC report is openly hostile to the notion of choice and competition as a means of allocating resources. What was once seen as choice is now seen as duplication. What was once seen as diversity is now seen as fragmentation. Competition has been replaced by cooperation as a guiding principle.

This change in direction comes despite considerable evidence of the benefits of competition – in education as well as in other sectors. For example, there is a growing body of evidence that highlights the gains from competition in education at both the school and tertiary education levels. According to a number of studies, competition leads to:

- increased educational achievement per dollar spent (ie more productive spending);
- increased educational attainment, graduation rates, test scores and graduate wages;

- increased teacher quality, particularly for schools serving predominantly lower income students; and
- enhanced student test scores.

One American analyst, who has written widely on school competition issues, has summarised the evidence on competition as follows:

Most of the work on government responses to competition has focused on the market for education, and here the literature is strikingly consistent – competition improves public schools ...⁸

New Zealand's experience with competition at the school level, though often criticised, has been favourable. The broadly 'market-based' New Zealand reforms have led to increased diversity of supply and choice for parents and children, especially those from low socio-economic groups, Maori and Pacific Peoples. This has included the development of Kura Kaupapa Maori, new forms of education such as Alternative Education and the development of Special Character schools.

International policy directions

In moving away from choice and competition, New Zealand is swimming against an international tide. The trend toward choice, competition and private education – in all their guises – continues unabated in other jurisdictions:

- School choice in the United States continues to gather pace, despite the voucher setbacks in last year's election ballot initiatives and the failure to include a voucher initiative in the Bush education bill;
- Private management of public schools is expanding rapidly. Edison Schools, one of the leading school management firms, now has 113 schools in 45 cities with 57,000 students. The Business Roundtable is bringing the chief executive of

⁸ Taylor, Lori L (2000) 'The Evidence on Government Competition', *Economic and Financial Review*, Second Quarter 2000, Federal Reserve Bank of Dallas, Dallas, p 7.

Edison Schools, Benno Schmidt, to New Zealand later this year to deliver the annual Sir Ronald Trotter Lecture;

- Indiana has become the thirty-eighth US state to pass legislation allowing charter schools. There are now more than 2,000 charter schools in the United States serving over 500,000 students;
- Increasing use is being made of tax credits as a means of financing private education. Tuition tax credit bills have been introduced in 10 states;
- Robert Reich, a former Labor Secretary in the Clinton cabinet who was brought to New Zealand by the Labour Party in 1998, has proposed a progressive voucher scheme pegged to family income;
- the New Democrats, who represent the Clinton wing of the Democratic Party, have come out in support of charter districts – where education boards contract out management of whole school districts; and
- Florida has vastly expanded educational opportunities for students with disabilities, with 340,000 students now able to obtain a voucher to attend any public, private or parochial school.

The trend towards choice, competition and public/private partnerships is not limited to the United States. In the United Kingdom, the Labour government under Tony Blair has contracted out management of individual schools and Local Education Authorities to private firms. Its recent election manifesto promised more of the same. In addition, the Private Finance Initiative in Britain is providing access to capital to upgrade schools, tertiary institutions and hospitals. In Australia, the New South Wales Labor government is reportedly looking at options for increasing private participation in the construction and financing of public schools. In Ontario, the government of premier Mike Harris has foreshadowed the removal of the province's strict school zoning laws and introduced a tax credit for parents with children in private schools.

These changes have nothing to do with ideology. Indeed, they come from governments of varying political stripes. They are simply a pragmatic and practical response to identified policy problems. There is no reason why those involved in the education sector – whether teachers, principals or support staff – should resist such moves. By the time the bulk-funding experience had ended, more than 40 percent of teachers were in bulk-funded schools. By and large, principals and teachers supported the greater freedoms and better environment afforded by bulk-funding and greater self-management generally. Schools were using additional resourcing and flexibility to make life better for teachers and students – whether through the employment of additional teachers, additional teaching support staff to free up teachers to focus on curriculum issues, or an increase in teacher professional development budgets. Teachers have everything to gain from moves away from a government monopoly system with the rigid and unrewarding pay scales, bureaucratic paperwork and educational fads and fashions associated with it.

Conclusion

I have perhaps come at my topic in a sideways fashion – by talking about education's role in generating economic growth and the implications for government education policy. This was intentional. The education system today has a big job to do. And it is not an easy one. Schools, students and families face a myriad of pressures – social, demographic, economic and technological. As the minister of education said recently in a speech to the School Trustees Association Conference:

Today's children need to be far better prepared than our own generations: with creative, critical thinking and problem solving skills; with strong literacy and numeracy skills that allow them to be effective users and creators of information; with competence in technology; and with a desire to continue lifelong learning.⁹

⁹ Mallard, Trevor (2001), Speech to School Trustees Association Conference, Invercargill, 6 July.

Good education and labour market outcomes will depend as much on the wider policy framework as on the education policy framework we design. The Knowledge Wave conference could provide us with a rallying point for bringing together disparate views on education policy design. In designing education policy, the issue is not government or no government, right wing or left wing, centralisation or decentralisation. The issue is which mix of policies best advances the country's economic and social goals. Systematically approaching policy development from that angle would serve us well as a nation and benefit all New Zealanders.