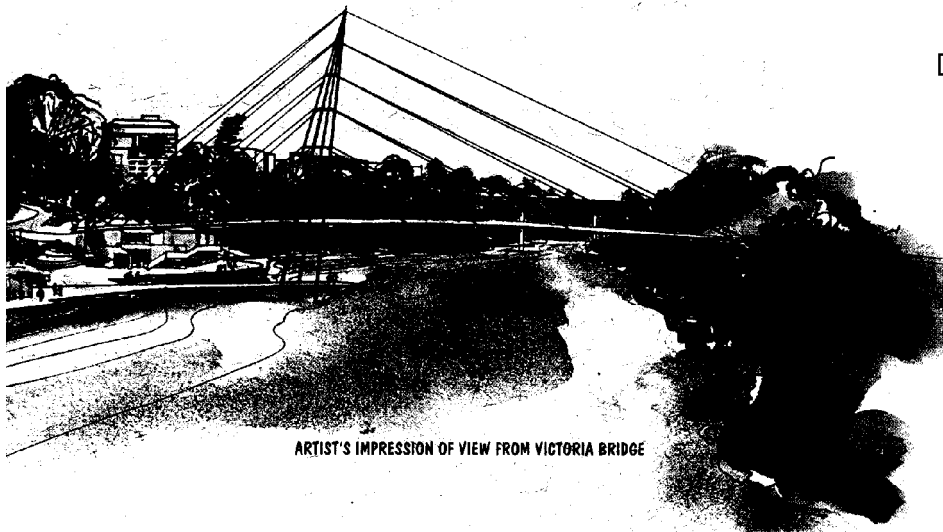


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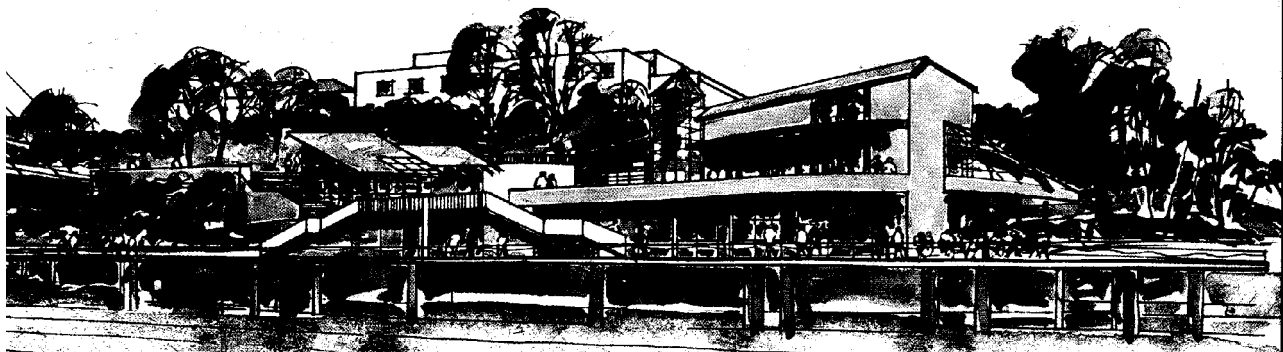
Bulletin

DECEMBER 1998



ARTIST'S IMPRESSION OF VIEW FROM VICTORIA BRIDGE

Hamilton Millennium Project



ARTIST'S IMPRESSION OF VIEW FROM PARANA PARK



The
University
of Waikato
*Te Whare Wānanga
o Waikato*

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Waikato Regional Economic Bulletin

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The near-term outlook for the regional economy is covered in the *Economic Statistics* section and the associated article *Regional Indicators and Forecasts*. Briefly, no significant upturn in regional economic activity is expected before the second half of 1999. Compounding the recent economic shocks such as occurred in the Asian economies is the increasing political uncertainty in NZ itself. It would be in the best interests of the country if the current government could see out its full term with a considered judgment rendered by the country at the next election. However, MMP has already shown it can engender unlikely scenarios. NZ is presently in uncharted territory.

The article on *The Hamilton Millennium Project* (featured on the cover of the current issue) outlines the economic impact this facility would have on the regional economy. When a genuine and worthy public good such as this is promoted, one can only despair at the lack of judgment and vision demonstrated by recently elected city officials who attempt to derail the project before any public consideration of the matter. Clearly this is not a great start by Hamilton's new City Council.

NZ's health sector is again reviewed in *The Funding of Health Care* and *The 1996 Maternity Funding Scheme: A Preliminary Analysis*. The first article considers the big picture of NZ health and the second considers one part of the current reforms. Health is a major political issue for all NZers, and it is clearly time for NZ politicians of all parties to agree on some basic policy directions for this sector. Something akin to the accord on superannuation policy is called for, but hopefully with a better long-term outcome in this case.

The article entitled *Mainframe Control=Farmer Control=Disaster* documents the inept management of the nation's largest single industry, dairying, over the past 30 years. Dairying accounts for about 20% of NZ's exports, second only to manufacturing, covering a range of diverse activities, at 25%. Meat processing at 15%, forestry at 12%, fruit and vegetables at 5% and fish at 5% are also major contributors to NZ's economic well being. Until profitability in these major primary producing sectors improves, NZ will continue to economically underperform Australia, the US and other countries we consider our peers. Furthermore, until we achieve increased profitability in these sectors, social services such as health, welfare etc. in NZ will always be substandard for a modern economy. The article above suggests some new strategies for NZ's dairying sectors.

Finally, the article titled *A New Event Centre for Hamilton* reviews decision making in the recent Stadium debate and documents some shortcomings of Council deliberations regarding this project. The questions raised over this issue are obviously pertinent in view of the forthcoming debate over the Hamilton Millennium Project.

The Hamilton Millennium Project

Warren Hughes

This report documents the economic impacts of both the construction and the ongoing operations of, the **Hamilton Millennium Project (HMP)**. The location of this project encompasses both sides of the Waikato river. From the Grantham Street rowing sheds up to (eventually) Alma Street on the west bank and across to Parana Park and Memorial Park on the east bank. The initial phase of the project will concentrate development off Marlborough Place towards the rowing sheds with terraces and walkways.

The methodology utilised in this report is based on an 87-sector model of the Waikato regional economy developed by the author for the 1997 calendar year. This is the latest possible year for such a comprehensive economic model. This model captures all economic activity within the area of the old Waikato Regional Council, now called Environment Waikato. The preliminary cost estimates for the HMP are outlined in Table 1.

TABLE 1: PRELIMINARY COST ESTIMATES FOR THE HMP

Construction Item	Estimated Cost \$	Sector Involved
Millennium Esplanade	5,600,000	Other Construction
River Terraces	3,900,000	Building
Marlborough Place	900,000	Other Construction
Millennium Bridge	3,700,000	Other Construction
Riverside Drive	440,000	Other Construction

The Building sector in the model comprises all residential and commercial construction of buildings. Other Construction includes non-building related construction such as earthworks, roads, bridges and this is a major part of this project. A third related construction sector is Ancillary Construction. This comprises all services related to construction such as paving, roofing, wiring, scaffolding, insulating etc. House extensions and maintenance lead to demands by consumers on this sector. Accordingly, significant economic growth leading to higher net household income will almost always involve major flow-on demand for Ancillary Construction as residents improve their living conditions by adding value to their homes with additional rooms, landscaping, pools etc.

The prime objective of the HMP is to provide a focal point in the centre of the Waikato region that all residents in the region can experience at no cost with ease of access and parking. An additional benefit for Hamilton City is the opportunity this affords to re-orientate the east side of Victoria Street towards the west bank of the Waikato river at a relatively low cost. Although no major buildings are involved in the project, the final result will be to provide a linking infrastructure from the Grantham Street rowing sheds to Alma Street and beyond. The HMP is expected to:

- Increase the value of all existing properties between the east side of Victoria Street and the Waikato river.
- Encourage the private redevelopment of individual properties building down towards the river and linking with the river walkways of the project.

- Provide an alternative focal point for Hamilton City apart from the Centreplace/K Mart complexes that are devoted more to retailing.
- Facilitate increased patronage by both residents and tourists of the immediately adjacent Waikato Museum of Art & History and the Exscite facility.

Although the project will be an obvious tourist draw for Hamilton, the main objective of the development is to enhance the river/city interface for Hamilton and Waikato residents. Ease of parking and access to Cobham Drive are pre-eminent design objectives for the project. The pedestrian link between Hamilton City and Hamilton East via Parana Park and Memorial Park should see all facilities in this area more fully utilised by residents. One can imagine visitors parking in Hamilton East, walking to Parana or Memorial Park and then visiting the Millennium Esplanade via the suspension bridge.

Four economic impacts of the HMP on the Waikato regional economy have been estimated. The first, Gross Output or Sales shows the total value of economic activity attributable to the project. However, some specialised goods and services may need to be imported from Auckland or other regions in order to complete construction. Netting out these values shows the Value Added impact for the region. This is the total value of goods and services produced within the Waikato region attributable to the project. The other impacts are net (after tax and savings) household income and total jobs attributable to the HMP. All impacts are summarised in Table 2.

TABLE 2: REGIONAL ECONOMIC IMPACTS OF THE HMP

Sectors	Output in \$ m	Income in \$ m	Value Added in \$ m	Jobs in FTEs
Building & Construction	14.54	1.50	3.40	67
Remaining 85 Sectors	18.15	4.33	7.31	113
Total Regional Impact	32.69	5.83	10.71	180

Note that FTE means a full-time equivalent job. For the HMP, two construction sectors (Building and Other Construction) are the main initiating sectors in the 87-sector model of the Waikato regional economy. That is, the estimated cost of the HMP at \$14.54 million comprises the expenditure in these sectors as shown in Table 1 and for the initial Output impact above. However, over the construction period and for about 12 months thereafter, follow-on expenditure will be realised in the sectors supplying these two initiating sectors. Furthermore, employees on the project will spend their income on housing, entertainment and other goods and services and this follow-on expenditure would not occur in the absence of the HMP. After adding on all this additional expenditure (\$18.15 m), total regional output attributable to the HMP rises to \$32.69 million. Similarly, 67 full-time jobs (FTEs) will be created directly by employees working on the HMP. Again, another 113 full-time jobs will be created indirectly in other sectors of the regional economy in the same manner as for the Output impact. Thus, in total, an estimated 180 full-time jobs would be attributable to the HMP.

The net household income and value added impacts may be similarly interpreted. The value added at \$10.71 million comprises about 0.1% of the Waikato region's gross regional product (regional GDP) of about \$10 billion annually. Clearly, this project will be well within the region's productive capabilities and will not "crowd out" other construction activity in the region leading to price inflation in the building related sectors.

Although the primary motivation for the HMP is to expand the region’s attractions for its residents, with proper promotion, the project will undoubtedly be the must-see part of Hamilton City. The tourist impacts are calculated in the same manner as the construction impacts above. For Tourism, an assumed \$1 or million dollar expenditure in the Restaurants & Cafes (Food) and Accommodation sectors generates a total impact on the Waikato regional economy as summarised in the following table.

TABLE 3: TOURISM IMPACTS ATTRIBUTABLE TO THE HMP PER \$1 MILLION OF TOURIST EXPENDITURE

Sectors	Output in \$ m	Income in \$ m	Value Added in \$ m	Jobs in FTEs
Food & Accommodation	1.00	0.20	0.40	10
Remaining 85 Sectors	0.82	0.13	0.37	5
Total Regional Impact	1.82	0.33	0.77	15

The above table shows that every dollar spent by tourists in the Waikato engenders a further 82 cents in sectors such as Wholesale & Retail Trade, Meat Processing etc. For every million dollars in tourist expenditure, 10 people are employed per year directly in the Food and Accommodation sectors. Employees in these sectors then spend their income in the region and another 5 people are employed as a result. This means that one million dollars of tourist expenditure in the Waikato region provides, directly and indirectly, 15 jobs in total for Waikato residents.

The financial aspects of the above projections are insightful. The initial construction cost is \$14.54 million. The ongoing operational Value Added per year from tourism is estimated above at \$0.77 million per \$1 million of additional tourist expenditure engendered by the HMP. This represents a rate of return of 5.3% per year per \$1 million of additional tourist expenditure. Accordingly, if the HMP generates an additional \$10 million of tourist expenditure per year, the rate of return to the region for the project rises to 53%. It is reasonable to expect that a proportion of both domestic and international tourists visiting this facility will take a river trip, eat an extra meal, visit the Museum, even stay an extra night in Hamilton. Any such additional expenditure will be attributable to the HMP and would be lost to other regions (e.g. Rotorua) in the absence of the facility.

Currently about two thirds of tourists to the Waikato region are of domestic origin. The international tourists of around 300,000 annually spend 4 nights on average in the Waikato and spend around \$150 dollars per day. This is an annual expenditure of around \$200 million by international tourists. After adding in domestic tourism, this activity generates total expenditure of about \$350 million per year in the Waikato region.

For 1998, domestic tourism is up 20% while the international volume is down 4%. Korean tourism has dropped away to zero from very strong growth earlier in the decade. Tourists from Australia and the US are up slightly. As of November 1998, confidence is slowly returning to the Asia/Pacific region and NZ can expect a significant upturn in overseas tourism in future years. Expansion at Hamilton airport will see an increase in the number of international tourists making the Waikato region the first stop on their tour of NZ.

The Fieldays are nowadays a world class event. Rugby is an increasing drawcard. Hamilton as the home of the Super 12 Chiefs is achieving awareness worldwide as a place to visit. Rotorua and Waitomo are world-renowned attractions in the region for international tourism. However, the region's major city lacks a distinguishing feature that will remain in the memory of those who visit the Waikato.

Since the advent of the automobile, the Waikato region and Hamilton City have turned their backs on its greatest asset, the Waikato river. A visionary innovation such as the HMP is a chance to revitalise the region's largest city. This will give Waikato residents another reason to be proud of their region with a unique public good accessible to all at no cost. Saatchi and Saatchi's chief executive has stated that Hamilton is an underdeveloped asset and city leaders need to exploit the river as its best natural asset. The HMP is a unique chance to remedy the lack of a regional focal point and create, at a very reasonable cost, a noteworthy millennium landmark that can be enjoyed by all Waikato residents and visitors to the region.

The Funding of Health Care

John Ward

Introduction.

The health system in New Zealand has been in a state of flux throughout this decade. Major changes in organisation and financing were introduced in 1991 and have been subjected to modification since then. A further major reorganisation was introduced in this year's budget. It has proved to be a long transition period which is still far from complete.

Before 1990 public hospital services were run by thirty territorial boards, locally elected and financed directly from the Ministry of Health. In 1990 these local boards were grouped into fourteen Area Health Boards. These were composed of local elected members with others appointed by the Minister of Health.

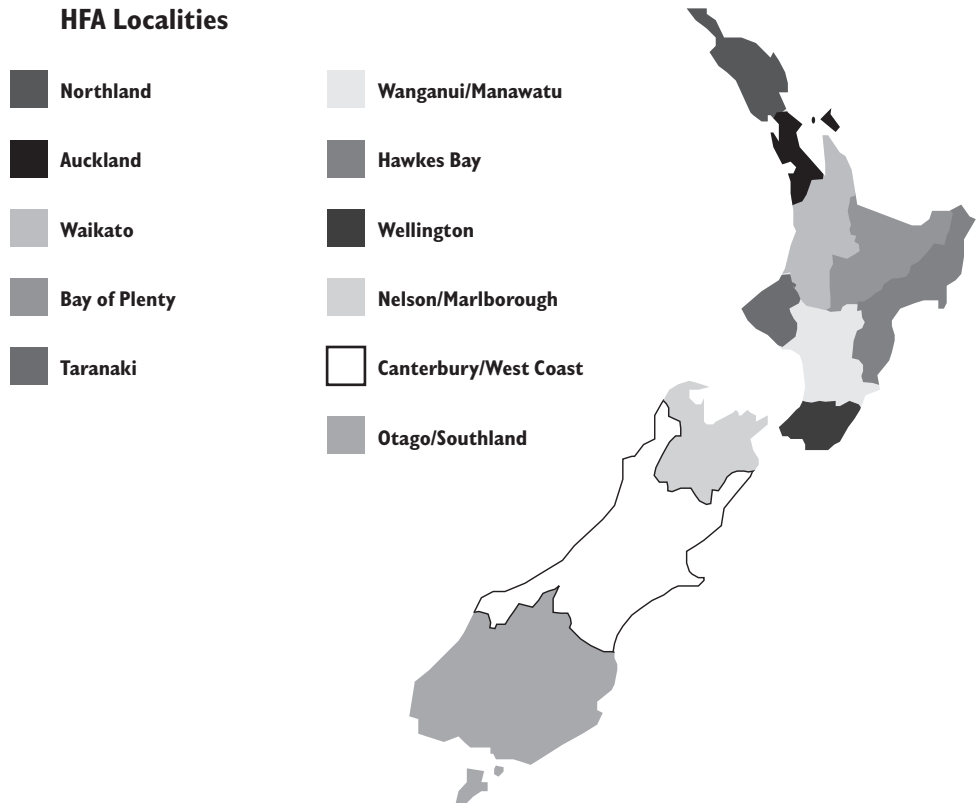
The new AHB's, which were the result of numerous earlier reports and many years consultation, were not given time to establish themselves. Half way through their transitional phase of three years they were summarily dismissed and replaced by four Regional Health Authorities organised on a geographical basis. The RHA's directors were appointed solely by the Minister of Health. They were selected on their proven business and administrative experience.

A dominant feature of the new system was the split between funder and provider. Unlike the earlier Hospital Boards and AHB's, the RHA's were funders but not providers of health services. They received grants from the Government and allocated these to purchase health services on a contractual basis from providers such as public and private hospitals, doctors, voluntary organisations and so on. Soon after their establishment the RHA's were also given responsibility for funding disability services. The RHA's structure was horizontal, that is each Authority (Northland, Midland, Central and Southern) covered a region of the country and was responsible for purchasing health and disability services within its own region.

The New Health Funding Authority.

In the budget of 1998 the Treasurer announced that the RHA's would be disestablished and replaced by a Health Funding Authority (HFA) and we are now in a transitional state. The HFA will receive funds through the Ministry of Health and use them to purchase health and disability services from public and private sources as did the RHA's. The new structure, however, is vertical in form. The HFA will be run by a Board of Directors, a Chief Executive and a Senior Management team in Wellington. It is structured as a national organisation with eleven localities as shown in Map 1.

MAP 1: HFA LOCALITIES



The HFA has five (regional) locality offices in Auckland, Hamilton, Wellington, Christchurch and Dunedin. The relationship of them to the other localities is summarised in Map 2 . The regional grouping of localities and offices shows a strong geographical similarity to the former RHA's. However, the chain of command is national instead of regional.

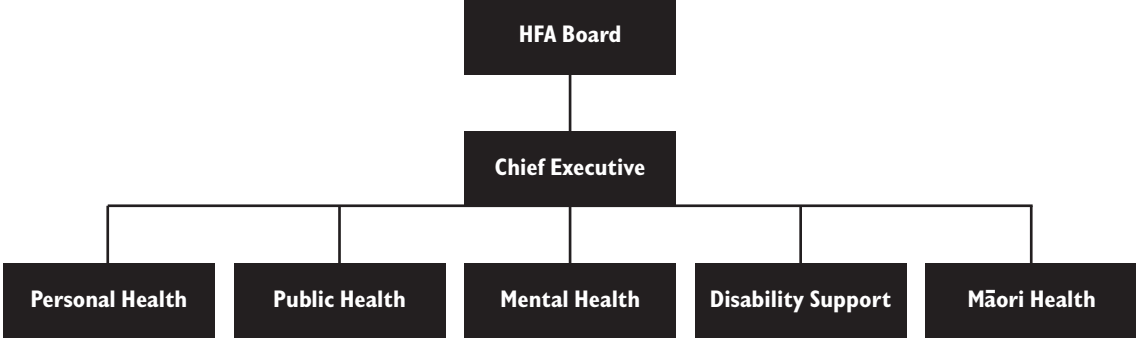
MAP 2: HFA REGIONAL LOCALITY OFFICE TERRITORIES

LOCALITIES	OFFICES
Northland, Auckland	Auckland
Waikato, Bay of Plenty Taranaki	Hamilton
Wellington/Wairarapa Manawatu/Wanganui Tairāwhiti/Hawkes Bay	Wellington
Nelson/Marlborough Canterbury/West Coast	Christchurch
Otago/Southland	Dunedin



The health and disability services funded by the HFA are grouped into five nationally operating groups, each under a general manager, who is responsible to the Chief Executive of the Authority. These groups are : Personal Health, Public Health, Mental Health, Disability Support and Maori Health. They are supported nationally by other functional services, finance, communications, information management etc.

FIGURE 1: HFA ORGANISATIONAL STRUCTURE



Personal Health includes two sub groups: Primary, and Medical and Surgical.

Primary care covers GPs services, Maternity , Child and Youth Health, Lab services, Blood and Ambulance services, Pharmaceuticals. The total expenditure of this group on these services is given for 1997/8 at \$1.7 billion.

Medical and Surgical operates mainly within hospitals. It covers Acute and Emergency Services, Secondary and Tertiary (Hospital) Services. Expenditure \$1.6 billion.

Public Health Covers Prevention, environmental and food testing safety, health awareness and education programmes. Expenditure \$82 million.

Mental Health covers Psychiatric care ,Alcohol and Drug abuse. Expenditure \$0.5 billion.

Disability Support covers Age Related disabilities, Residential Care, Carer Support, Physical and Intellectual disabilities. Expenditure \$1 billion.

Maori Health - Health services tailored specifically to the needs of Maori, and culturally appropriate mainstream services. Expenditure \$31 million.

The HFA has a general manager for each of these five groups .There are also senior locality managers for each of them in the (regional) offices and locality managers in the remaining localities. This new staffing structure, which will replace the former RHA structure, was to be operational by November this year but not all appointments have yet been made. The change involves a drastic reduction in the numbers of staff at the former RHAs. The pending changes have had an unsettling effect upon the RHAs and staff turnover has been high.

As under the RHA's, the providers of services include public and private hospitals, rest homes, labs, GPs, midwives, charitable organisations, Maori providers etc. Each is required to contract with the HFA to provide the services required.

The establishment of the Health Funding Authority represents the culmination of moving control of health expenditure successively from the Local Hospital Boards to the Area Health Boards, then the Regional Health Authorities and finally to the Health Funding Authority. It will be interesting

to see how relationships develop between the centralised system and the providers and clients in the localities.

The HFA, like the RHA it replaces, will continue the system of contracts to buy the services it requires rather than funding providers direct. The rationale for this is to ensure contestability amongst providers of services, in a sense creating an internal market for these services. This is, however, not always attainable, particularly in the case of higher tech hospital services where major hospitals are frequently the dominant and sometimes the only provider in their area.

The costs of the contracting system have been high. First in the establishment of large bureaucracies at the Regional Centres. Secondly in the transaction costs of the contract system which involve a widespread use of consultant managers, lawyers and accountants.

The RHAs operated with several thousand service contracts and there was much duplication of effort and expenditure. For example, national charitable organisations such as IHC, with branches throughout the country, had to negotiate separate contracts with the four regional authorities. It is anticipated that the establishment of a single Authority will reduce some of these costs, although the HFA has already indicated that it will be operating some 4600 contracts for health and disability services.

The critical question, which has not been sufficiently debated, is whether the efficiencies achieved by the funder/provider split exceed the establishment and transaction costs involved.

Reference

Health Funding Authority : The Health Funding Authority : A Directory, Wellington October 1998.

The 1996 Maternity Funding Scheme: A Preliminary Analysis

Bridget Daldy

Introduction

On July 1 1996, a new funding scheme was introduced for pregnancy and childbirth care in New Zealand. The new scheme replaced the previous fee-for-service method of financing with a capped budget for various modules of the pregnancy. This new scheme has not met with universal acceptance. Various providers of maternity care suddenly found that the previous incentives to cooperate had been replaced with a more competitive emphasis. Providers now have to balance the risks, both financially and medically, of providing maternity care, and learn how to provide the care in a more competitive environment. Evidence from the Midland region of New Zealand will be presented to illustrate the changes and how these have affected the choice of maternity provider for pregnant women. Midland was one of the original four Regional Health Authorities, based in Hamilton. The Midland region has an estimated population of 725,500 about 20 percent of the NZ total.

Background

Since the turn of the century, New Zealand women have been eligible to receive free pregnancy and childbirth care, funded from public funds and provided by a combination of general practitioners (with obstetric training), independent midwives, public hospital based midwives, or specialist obstetricians. The role of the various providers has changed over this period, as has the medicalisation of the childbirth process. The Midwives Act 1904 provided for midwives who registered under the Act to take responsibility for delivering babies without the supervision of a medical practitioner. The Nurses Act 1971 altered this and prevented midwives from working without medical supervision. In 1990, the Nurses Amendment Act restored autonomy to midwives.

Considerable debate had been generated on who should provide maternity services, where these births should occur, e.g. hospital or home, and the impact on the health expenditure budget. All New Zealand women were eligible for free maternity care and the providers were paid on a fee-for-service basis, with some limits on maximum amounts that could be charged. The cost issue became more significant after the 1990 Nurses Amendment Act. This Act enabled midwives to claim the maternity benefit fee independently of a medical practitioner. It also enabled them to claim for the whole time they attended and oversaw the entire labour process. The open ended nature of this maternity expenditure put pressure on the already stretched overall health budget, especially at a time when the government was trying to constrain growth in public expenditure. The growth in maternity fees after the 1990 Act is shown in Table 1, although this growth appears to have dissipated after the fee restructuring in 1993. It has also been suggested that there has been some substitution between the services provided by different providers who may have contributed to the reduced growth in fees.

**TABLE 1: EXPENDITURE ON PREGNANCY AND
CHILDBIRTH SERVICES IN NEW ZEALAND 1991-97**

Fiscal Year	\$m	Live births	\$ per birth
1990-91	59	60,219	980
1991-92	67	60,441	1,109
1992-93	82	58,566	1,400
1993-94	292.2	58,050	5,034
1994-95	304.9	58,028	5,254
1995-96	299.4	56,908	5,261
1996-97	316.6	57,180	5,536

Note: Maternity benefits only for 1990-93 (excludes hospital expenditure)

Nationally, total expenditure on pregnancy and childbirth services has increased by 8.3% since 1993/94 and by 10% for each live birth. The medical benefits component of expenditure has stabilised nationally at around \$1500 per live birth, although areas of New Zealand have experienced significant growth in the number of live births. The Midland region, for example, has experienced annual growth of 12.2% since 1993/94.

The 1996 Funding Scheme

The concerns about the increasing amount of public funds being spent on maternity care, and the large differences in what could be claimed by either the independent midwives or GP's, prompted the Ministry of Health (in consultation with GP's, midwives and RHAs) to introduce new funding arrangements in July 1996. The new contractual arrangements were also designed to improve continuity of care, to avoid duplication of services and to contain the costs of maternity care. Under these new arrangements each woman chooses a Lead Maternity Carer (LMC). The LMC has control of a capped budget for each pregnancy and has the responsibility for assessing the women's needs, planning her care and the care of her baby or babies. It was expected that the lead maternity carer would ensure good co-ordination and continuity of care and referral to support groups, community agencies and other health care services as appropriate.

Impact of Scheme

The LMC can be a midwife (either independent or employed by a hospital), general practitioner or specialist obstetrician. The care can be shared between two or more providers, but each woman is expected to have one LMC. This person shares the capped amount with each provider. For example, if the LMC was a GP, the GP would pay for a midwife, and primary hospital's care if required. If specialist referral is required then there are separate payments for these services. The LMC could expect to earn between \$1800 and \$2500 for a single birth depending on whether it was a home birth and how much travel was involved. Early indications suggest that shared care is not as common as it was prior to the new scheme. In particular, shared care between GP's and independent midwives. The funding incentive is to keep the capped budget to oneself. The LMC's permission needs to be obtained before a woman seeks advice from any other provider. Reimbursements to this other provider are from the LMC's capped budget for each module of care. Secondary obstetric services are fully funded by the state when required. Women could choose a private specialist, but they would have to pay for this themselves.

Considerable dissatisfaction with the new funding arrangements were expressed by GP's and midwives even before it was introduced. GP's, in particular, are still unhappy. Many have stopped offering maternity care citing:

- cuts in public health funding
- the need to share the money with midwives who are more available to offer the continuity of care especially during the birth
- being excluded from a significant event in a family's life
- pressure on woman to select one provider and hence reduce a women's ability to divide her care between a doctor and a midwife

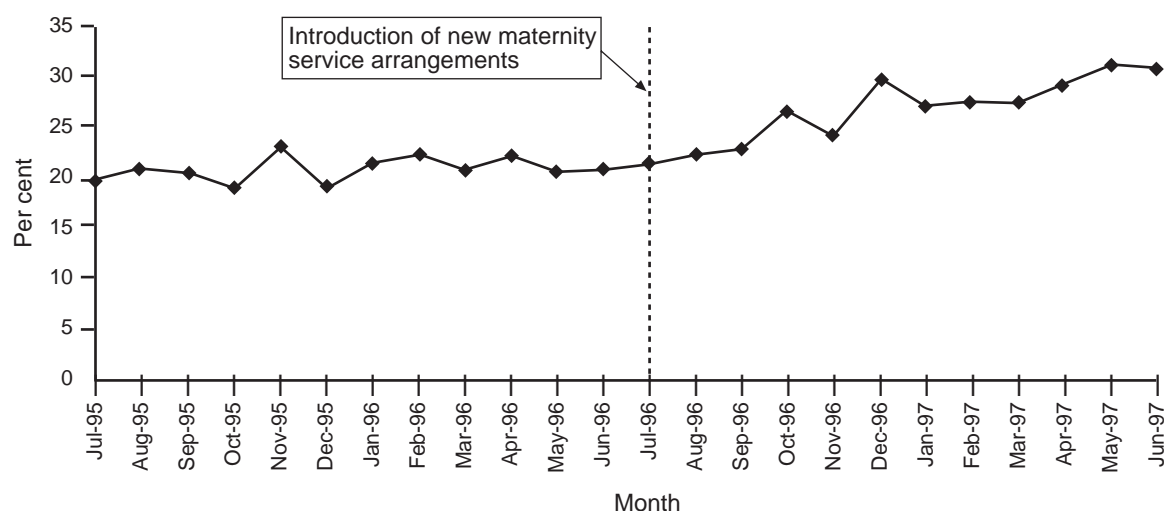
Instead of providing more choice for women, many GP's and midwives believe the new funding scheme has actually reduced a woman's options.

Independent midwives were initially more in favour of the new arrangements than GP's. They have since expressed concern about carrying the financial and professional risk and the pressure by hospitals to discharge mothers early, thereby putting more pressure on the postnatal home visits by midwives. Many mothers now have difficulty in finding a lead carer due to the lack of GP's doing maternity care and the heavy workload of independent midwives. Some mothers expecting their first baby are having more trouble than others due to higher risks and more uncertainty associated with first births. Frictions have developed between the independent midwives and the hospital-based midwives when women deliver in a hospital. All non-hospital based LMC's need to have an access agreement to use the birthing facilities at the local hospital. The hospital will then receive some funding for their facilities but not for providing primary maternity services.

Midland Evidence

A recent report on pregnancy and childbirth in the Midland region found that for the year ended July 1997, 78 percent of Midland claims for new registrations as the lead maternity carer were for midwives. This group only accounted for around 30 percent of all claims in April to June 1997 (see Figure 1). These outcomes may be compared with GP's claims amounting to 79 percent of all antenatal visits and 61 percent of delivery claims. Midwives provided 14% and 27%, and specialists 7% and 11% respectively in 1992.

FIGURE 1: MIDWIVES' MATERNITY CLAIMS AS A PROPORTION OF ALL MATERNITY CLAIMS: MIDLAND REGION, 1995-97



A survey in February 1997 in Hamilton, the largest city within the Midland region and location of Waikato Women's Hospital, showed that there had been a reduction over two years from 35 to 15 GP's offering maternity services. Generally women found it very difficult to find a GP who was willing to be a LMC or able to offer shared care with a midwife. Recently six of the remaining GPs based in Hamilton, who are still prepared to offer obstetric services, have decided to market themselves as the "Baby Doctors" to share skills, negotiate with midwives and to find ways to work with the maternity system. The problem was even more acute in rural areas leading to special contracts in some areas. In response to the withdrawal of all GP obstetric services in Tokoroa, the Health Funding Authority entered into a special contract with Tokoroa GPs. In addition to the care provided by lead maternity carers travelling into the region (only 1 independent midwife lived in Tokoroa), GPs in Tokoroa are subsidised for emergency care, when required, and a limited number of routine consultations.

TABLE 2: RATIO OF INDEPENDENT MIDWIVES, MIDLAND SUB-REGIONS AND MIDLAND REGION, 1997.

Region	Number of independent midwives per 10,000 women aged 15 - 44 yrs	Number of live births per independent midwife
Thames Valley & Peninsula	13	54
Central & Northern Waikato	11	63
Hamilton City	25	25
South & Eastern Waikato	7	124
Western Bay of Plenty	14	51
Lakes	13	64
Eastern Bay of Plenty	19	44
King Country	12	69
Tairāwhiti	10	81
Taranaki	8	77
MIDLAND	14	51

In 1997 there were about 225 independent midwife claimants in the Midland region (a 10% increase from 202 in 1995), which equated to 14 independent midwives per 10,000 women aged 15 - 44 years. The ratio varied from 25 in Hamilton City to 7 in South and Eastern Waikato. A more appropriate measure is the number of live births to each independent midwife, thus taking into account any regional variation in childbearing patterns between women of the same age. Table 2 shows the ratio of independent midwives by sub-regions of Midland in 1997.

Hamilton City has the highest number of independent midwives, but many also see women resident in surrounding areas, in particular, Central and Northern Waikato. Combining these areas still shows the highest ratio of midwives, 20 per 10,000 and a below average number of live births per independent midwives of 33 in 1997.

Options for Midwives

In 1998, the average caseload for independent midwives has increased from 50 to closer to 60 with some as high as 90. Many of the previously independent midwives have either given up practising or have returned to work in the local hospital. The reasons often cited for changing status are related to the increased risks placed on the LMC, in both professional and financial terms, and the need to be available seven days a week, 24 hours a day. Those who have remained have many ways of coping with the increased workload while still maintaining a normal family life. Many now work closely with other midwives so that they can provide backup for each other and to enable them to schedule some days off. Women, then, can still have continuity of carer. If they need the backup midwife, they would at least have been introduced prior to the beginning of labour. Hospital-based midwives have responded to this desire for continuity of carer by setting up team birthing units with someone from the team present throughout the labour.

Another way of coping with the increased workload has been to reduce the number of hours a midwife would attend during labour. Prolonged attendance had been partly to blame for the high payments that some midwives earned prior to the new scheme. Many were used to providing a comforting role, not just a professional caring role. Early indications are that the number of antenatal and postnatal visits has also been reduced, partly as result of a capped budget and partly in order to manage a feasible caseload.

Some independent midwives have set up facilities for mothers to visit the midwife for antenatal and postnatal check ups, rather than travel to each woman's home. This is mirroring how GPs and specialists cope with high caseloads. With the decline in the number of maternity hospitals in the smaller towns within the region, there has been a trend towards birthing units that are operated by midwives, and regarded as suitable for any uncomplicated births. River Ridge in Hamilton is an example of one of these private-birthing units. Women can use this facility instead of birthing at home or in Waikato Women's Hospital so long as their midwife belongs to the co-operative that manages the birthing unit. Many women have found this to be a very satisfactory option, especially if they are not having their first birth and don't want to have a home birth. The facilities are very modern and woman can have an individual room post birth. If any complications arise before the birth, or during labour, women must be transferred to Waikato Women's, but could return for postnatal care if well enough. Many woman choose to birth at the hospital and then transfer within a few hours to the more relaxed environment at River Ridge. Other private birthing units also exist in Huntly, Matamata and Waihi. Waikato hospital responded to this increased competition from private birthing units by up grading (at a cost of \$2.1 million) its birthing rooms to "provide women with all the comforts of life - and less of the sounds of them". This demonstrates that competition does improve facilities. It is yet to be shown whether it has improved efficiency as staffing levels are higher in public hospitals compared to the private birthing units.

Managing the pregnancy and labour also requires the LMC to know when to seek further advice from another health professional. If this decision is delayed, perhaps for financial considerations, then this could lead to poor birth outcomes for the baby and maybe even an increase in the perinatal death rate. This is more likely to occur if a midwife, who is a strong supporter of the non-medicalisation of childbirth, prefers to handle the birth herself or with another midwife. There has already been one midwife convicted of negligence and struck off the College of Midwives register. She was found to have delayed arranging specialist referral amid other omissions. There are concerns that more deaths may result due the fragmenting of pregnancy care and confusion and division over roles of various providers.

Outcomes

The number of home births has increased from 181 (1.4% of total) in 1991 to 572 (4.9%) in 1997 in the Midland region. More non-Maori babies were born at home. Seven percent of women in Central and Northern Waikato and Hamilton City had a home birth, compared to one per cent in Tairāwhiti. Accordingly, most women still give birth in either a public hospital or a birthing unit. Approximately 76% of women had a normal delivery in a public hospital, but there is some concern at the number having Caesarean sections, not only in Midland, but also throughout New Zealand. Nationally the caesarean section rate is approximately 16 per 100 hospital deliveries, with the lowest rate in the Midland region, 13 per 100 deliveries.

The length of stay in hospital has been reduced from an average 4.5 nights in 1992, to 2.9 nights in 1998. Many women are being strongly encouraged to leave within 24 hours of the birth. The trend toward early discharge has also been blamed for a fall in breast-feeding rates. This was highlighted in a newspaper article headed "Economics cause suckling drop". There is also considerable confusion over who is meant to provide the postnatal care when women are still in hospital. The LMC is responsible for this care, not the nurses on the maternity wards unless the hospital is the LMC. Data is not currently collected on the number of postnatal visits a mother receives, but there is some concern there is a reduction in the number of visits and pressure for midwives to offer more. A recent adjustment to the scheme meant that there was an increase in funds available for these visits and this may increase the number of postnatal LMC visits.

Conclusions

The main lessons that can be learnt from the first two years of this maternity funding scheme are firstly, that choice for woman has not really increased. Secondly, the increased risk associated with being a LMC has resulted in many midwives and GP's withdrawing their services. There has already been one high profile case of a midwife being charged after the death of a baby due to complications during labour. More cases are waiting trial dates.

Another concern is that there has been a lack in progress in developing systems to monitor the quality and quantity of maternity services. A monitoring system was to be introduced when the scheme was first introduced in July 1996. However, this had a lower priority than addressing other problems with the implementation of the scheme. The Health Funding Authority and the Ministry of Health are both separately planning to undertake an evaluation of the maternity scheme within the next six months.

Mainframe Control = Farmer Control = Disaster ■

Warren Hughes

The main thesis outlined here is that so-called farmer control of important NZ industries such as dairying has been as disastrous for NZ as mainframe control of IBM was for that company. IBM recovered from its initial mistake, although it took about 10 years (1985 – 94) to acknowledge and correct it. Economically, a group of companies that both compete and cooperate (IBM, Intel, Microsoft and the Silicon Valley type companies) will enrich employees, shareholders and the country generally to a far greater extent than would be possible with a single company such as IBM or a monopoly such as the NZ Dairy Board (NZDB).

Lessons from Silicon Valley

The holy grail of politicians all over the world is to reproduce in their home countries the industrial miracle of Silicon Valley. Microsoft and Intel are leaders in the world's information technology (IT) industry that is closely associated with the Silicon Valley phenomenon. However, both of these companies owe much of their success to IBM and the IBM PC in particular.

In the early 1980s, Apple Computer seemed poised to capture the entire worldwide PC market. After two in-house efforts, IBM finally decided to produce a serious personal computer. To get to market quickly, make up for lost time and dent the Apple challenge, IBM outsourced the PC's microprocessor to Intel and the operating system to Microsoft. For IBM, Gates secured (but did not himself produce) the operating system known as DOS. IBM could have produced both the processor and the operating system itself, or at least, made them proprietary and subject to license for other PC manufacturers. This latter strategy was followed by Apple, which today has 4% of the worldwide PC market. A telling example of how a good short-term strategy can end up a big long-run loser. The (IBM) PC has the remaining 96% of the market shared among a (shrinking) number of companies including IBM.

IBM and Xerox are responsible for the modern PC. Xerox gained a financial zero from its brilliant innovations including the mouse. IBM did better but failed to capture all the gains from its invention. The reason why, as many commentators have stated, was because IBM's mainframe people (the traditionalists) knew the PC would at first undermine and then eventually replace their products and power in the IBM hierarchy. Within the IBM organisation, the PC was to be feared, not promoted by the mainframe traditionalists. Mainframe control almost killed IBM's golden PC.

Although it failed to realise the full potential from its PC, IBM is still a major force in all segments of the computer industry including services. Among the more famous losers (GE, NCR, Burroughs, Control Data, Honeywell, Bull, ICL) is Digital Equipment Corporation (Digital), maker of minicomputers that came to rival the mainframes of IBM. Mainframe control was not a uniquely IBM malaise. Digital's brilliant founder, engineer Ken Olsen, will probably be best remembered for his 1980s comment: "Why would anyone want a PC on their desk ? " In 1998, Digital was taken over by Compaq, a major PC manufacturer.

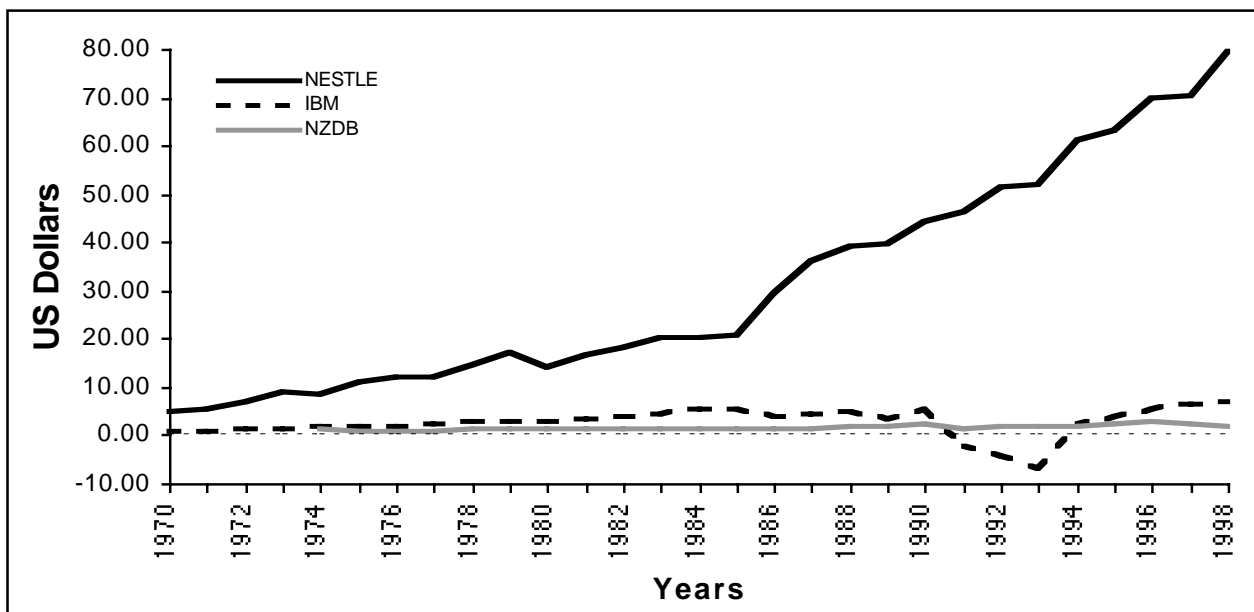
What Does All This Have To Do With Dairying In NZ ?

In reading the above, if we replace IBM or Digital with NZDB, AFFCO or NZ Apple & Pear Board et al and change the names of the products, the same analysis applies. Within any large company or other organisation of reasonable age with an established bureaucracy, there will be the traditionalists and the innovators, the customary and the organics. If the company is also a monopoly (as NZDB or IBM) the traditionalists will win. Any innovation seen as threatening to traditional control will be stifled. Why rock the boat ? However, as in Digital's case, traditional control and failure to change could mean the end of the road. The task of good management is to manage the tension between the traditional and the innovative in a way that the full potential of each can be realised. A well-managed company will achieve an orderly transition from mainframes to PC networks (or other competing products) remaining profitable throughout the transition achieving each product's full potential. Dairy farmers may complain that strategies for high-tech IT firms are not relevant for a low-tech dairy industry. However, as renowned strategist Michael Porter notes, there are no low-tech industries, only low-tech companies.

In a competitive environment, a stodgy Digital is taken over by an innovative Compaq. However, if a monopoly is preserved either by regulation (as in NZ dairying) or by market power (as for IBM in the 1960s and 70s), innovation is stifled. Product transitions are stalled or killed off and the full potential of an industry remains unrealised.

The potentials for NZ dairying with the current and alternative strategies are shown in the following diagram.

FIGURE 1: EARNINGS PER SHARE OR DOLLARS PER KG IN US\$ 1970 - 1998



Sources: Nestle New Zealand Ltd., IBM (NZ) Ltd., Livestock Improvement Corporation Ltd.

For Nestle and IBM, earnings per share (EPS) are shown for the 1970 - 98 period in US dollars. The NZDB graph is average dairy payout (including individual factory bonuses) to the NZ dairy farmer per kilogram of milk solids supplied for 1974 - 98. This is akin to EPS figures since volume of milk solids supplied is the equivalent of shares held in Nestle or IBM. Figures for dairying prior to 1974 were unavailable. All figures are in US dollars and there is no adjustment for inflation over the 1970 - 98 period. Accordingly, we would expect an upward trend for each graph reflecting worldwide inflation over this period as well as increasing profitability for shareholders/suppliers. Note that only relative graph movements are relevant here. For NZ dairying we could express performance as US dollars per tonne of milk solids rather than per kilogram as shown. This would lift the NZDB graph to a higher level relative to the two other graphs, but the trend would be unchanged.

Over the entire 1974 - 98 period, the average NZ dairy payout has been securely anchored to the horizontal axis. Inflation over this period means that the NZ dairy farmer has been working more and more for less and less. The comparatively stellar performance of Nestle reflects the fact that whereas IBM faces formidable competition in the IT industry leading to lower if acceptable increases in returns, Nestle has competitors like NZDB that allow the Swiss giant to earn supernormal profits. Over the 1974 - 98 period the factor increases in EPS or dollars per Kg were 9.2, 4.3 and 1.6 for Nestle, IBM, NZDB respectively. Nestle's share price and Waikato dairy land prices (NZDB) over this period increased by factors of 18.6 and 8 respectively. NZ's CPI index over this period increased by a factor of 7.5. Nestle's dividend yield in 1974 was 5% whereas in 1998 it is 2% reflecting its ever increasing profitability and strong share price growth. In 1998, the after-tax return on a typical Waikato dairy farm with no debt is about 2%.

The IBM story shows recovery from potential disaster. Up to 1985, IBM shows a steady if unspectacular increase in EPS. As mainframe control wins the battle with the PC in the mid-1980s, IBM's EPS starts to crater. It turns up in 1994 and has now recovered to a point roughly comparable to where an extrapolated trend line for its 1970 - 85 results would end up. IBM is back on track.

For NZ dairying the trend with the current farmer control strategy should be clear even to digitally challenged milkers with less than the full hand. It's time to employ the Nestle strategy. But what would this mean for the NZ dairy industry ?

NZ's largest dairy company, the Hamilton based NZ Dairy Group (NZDG) sees itself as the natural successor to the NZDB. Perhaps one or two other NZ dairy companies could emerge as independent producers with major export markets. However, none of these companies, alone or collectively, would have the financial strength or marketing expertise to match that of Nestle, Kraft, Unilever et al with high value products in markets such as the US or Japan. The NZ companies will continue to supply low value milk powder etc. to countries like Russia, Algeria and Peru. And in good years those countries will actually pay for these products. The uninspiring trend in returns to NZ farmers clearly evident above will continue uninterrupted.

One possible strategy to quickly reverse this dismal outlook is to invite Nestle et al to become part of the NZ dairy industry. Only companies such as these have the cash for new factories as well as the access to high value markets for the resulting products. Hopefully NZDG and other NZ companies will survive and learn in a more intensely competitive environment, as IBM has been able to do. It is a gamble, but one NZ can no longer afford to ignore.

With this industry structure, we would expect NZDG and other NZ companies to pursue traditional, “safe” strategies. This maximises the chance that NZDG executives will keep their jobs and their salaries; at least for the medium term. Nestle et al could pursue “riskier” strategies/markets since their future is not solely dependent on NZ production. Typically riskier strategies produce higher returns on average over time. If successful, and the trend above suggests this will be the likely outcome, Nestle et al will diversify end use of NZ produced milk solids. This has to be good for the NZ economy. We are then less susceptible to the economic fall-out from a Russian default and other problems with the “safe” approach.

A fully operational presence of Nestle, Kraft et al could also leverage NZ’s extensive investment in dairy related research in the Universities, Ruakura Research Centre, the Dairy Advisory Bureau, Agriculture NZ Limited etc. Currently, research payoffs are handicapped by the demonstrated lack of expertise of our management and marketing evidenced by the NZ dairy industry’s relative performance in the above diagram. NZ dairying, from innovative research through to worldwide marketing by several multinational companies, could become the world equivalent of the IT industry in the US.

In modern economics jargon, NZ would become the world’s leading dairy industry *cluster*. This is not too farfetched. After acquiring Rowntree Mackintosh, Nestle relocated its confectionery business to York in the UK where Rowntree was originally based, because a vibrant food cluster thrives there. Similarly, it relocated its bottled water division to France, the most competitive world location in that industry. It is quite conceivable that Nestle could establish a major dairying division in NZ to service its Asia/Pacific markets. Given time, we could reasonably expect that Nestle, Kraft et al may eventually source their supply of high value markets in North America and Europe from NZ.

Is There a Profitable Future for NZ Dairying?

An optimistic economist such as myself might predict that within 5 years of revoking the NZDB monopoly with new entrants like Nestle, NZ dairying in worldwide dairy based products will indeed be the equivalent of the IT industry in today’s US. The recent history of this industry in the US suggests that:

- Competition not monopolies fosters innovation and high returns. Overconsolidation, mutual understandings and groupthink as currently manifested in the NZDB only foster stagnation.
- Even a monopoly as powerful as IBM (or Microsoft or Intel) cannot win in all markets all the time, although all the above have come close at times and face (or faced in the case of IBM) US government investigation of their tactics.
- Reliance on a few major products and/or markets can prove fatal (Digital and possibly even Intel in the future) and monopoly/closed/proprietary/single desk systems are doomed (Apple) faced with competing firms pursuing the open systems alternative (the PC).
- Second sourcing is a necessity for long-term commitment by customers. Dairy multinationals like Nestle would have NZ capacity if droughts or other events curtail production in other countries. The corollary to this is that NZDG should perhaps look to Tasmania for additional supply and processing of milk solids.

The choice for the NZ dairy farmer is whether to end up like IBM (still a very profitable company) or end up as an Apple and face a possible Digital endgame. If they want to be like IBM, some control and returns must accrue to Nestle and the other foreign companies, just as IBM had to concede significant returns to Intel and Microsoft. In exchange, the NZ dairy farmer will enjoy:

- Competing bids for his milk solids from genuinely independent processors.
- Many diversified end markets most of which will not default on paying for NZ exports.
- Access to frontier R&D in dairy product and market research and further development of our own R&D capabilities financed in part by profitable multinational corporations.
- A more secure future in general for both dairying and the NZ economy.

After almost 30 years, can there be any doubt that the current strategy will merely entrench the horizontal coma-like crawl in returns to NZ dairy farmers? Being such a major part of NZ's economy, continuation of farmer control strategies in dairying (20% of NZ exports) and other primary producing sectors will only prolong our status as a poor relation in the league of developed countries.

A New Event Centre for Hamilton

*Frank Scrimgeour and Stuart Locke**

Introduction

Many residents in Hamilton would appreciate a new modern Event Centre/Stadium (EC) suitable for hosting major sporting and community events. In recent years the Waikato Event Centre Trust has taken the lead in initiating the construction of such a centre. The Trust, which has been strongly supported by the Waikato Rugby Union and Northern Districts Cricket, has sought to establish a new EC at the Tristram St/Willoughby St site, which is currently the home of Rugby Park. The Trust has designed an EC and has just received resource consents (which are potentially subject to appeals). Assuming the Trust gains final consent the remaining challenge is to secure the funding necessary to build the EC.

The proposed centre has been a politically sensitive issue because Hamilton City Council had to decide if it was going to be supportive of any consent application and if it was going to make any financial contribution. The Council decided in 1998 to provide \$6 million towards the cost of the construction at a preferred site for the City. To that end they commissioned the Management Research Centre of the University of Waikato Management School to evaluate four sites. These were:

- Claudelands (Show Ground sites - 29.5 ha).
- Mystery Creek (National Field Days site - 87 ha).
- Te Rapa (adjacent to race course - 55 ha).
- Tristram St/Willoughby St (current site of Rugby Park – 3.05 ha).

The study prepared for the city council focused only on the siting question. The terms of reference for the study precluded consideration of the:

- Economic or financial viability of a new EC
- Optimal size of EC
- Benefits and costs which fall outside of Hamilton
- Optimal ownership/management structure of the EC.

Hence, the study was limited to determining the optimal site, assuming an EC of a given size is to be built. Although some benefits and costs do fall outside the City these were not considered. Similarly, the optimal ownership, governance and management were not examined, although it is recognised that these factors are a major determinant of the likely success of any new EC.

Determining the Preferred Site

The study initially identified the relevant benefits and costs to be considered in determining the optimal site. Once these effects had been identified the size of their impact was estimated. The size estimates of the impacts draw heavily on market research, which was undertaken and other data currently available. Given estimates of the size of the relevant effects, the total impact (associated with each site) was calculated and its sensitivity to different estimates of the effects.

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Identification of Specific Benefits and Costs

The study identified the following factors, which were critical in determining the optimal site:

- Benefits and costs associated with construction
- Benefits and costs for patrons
- Benefits and costs for sponsors
- Benefits and costs for sporting codes and other EC users
- Benefits and costs for neighbours
- Benefits and costs for with respect to city infrastructure
- Benefits and costs for the local business community
- Other benefits and costs

These factors were discussed in general terms and with specific empirical estimates for each proposed site.

Market Research

Market research was carried out to determine the preferences of patrons, sponsors, residents near the proposed facilities, and city businesses.

Patrons will attend events on the basis of the event, the facility, the ease of getting to and from the event, and its proximity to other activities in which they may wish to engage. The advantages and disadvantages of different sites to spectators will be revealed in their attendance at events. Predictions are necessary to forecast these benefits and costs.

Sponsors primarily benefit from publicity they receive at events. The value of such publicity depends on sponsor perceptions of the number of relevant people who will receive their promotional messages. They also benefit from those who receive their sponsorship message at other times such as foot and road traffic. Sponsors' overall benefits are revealed in their willingness to pay for sponsorship at different sites. Sponsors' willingness to pay may be declining due to technological advances in imaging advertisements on to the television screen, which are not controlled by the EC.

Sporting codes are concerned with attendance at events, ease of management and synergies in operation between the EC and their other activities and sites. Other EC users are concerned about the potential for synergies between the operation of the EC and other facilities nearby so as to enhance cost effectiveness.

Neighbours may benefit from relatively easy access to events but their major concerns relate to the impact of events on their lifestyles. Particular concerns relate to noise, lighting, traffic flows and parking, vandalism and litter.

The market research was carried out by surveys. It revealed the preferences of respondents and provided information complementary to that provided by the City and technical experts concerning the costs and benefits associated with construction and the many infrastructure issues.

Study Results

After accounting for all benefits and costs the study ranked the four sites in order of preference as 1) Claudelands, 2) Tristram St/Willoughby St, 3) Mystery Creek, 4) Te Rapa.

The critical factors, which determined this result, were:

- The opportunity costs of land
- Lower construction costs at Mystery Creek
- The extent to which patronage varied at different sites
- The extent to which sponsorship varied at different sites
- The extent of adverse external effects at different sites
- The extent of infrastructural spending required at different sites
- The extent of management synergies possible at different sites
- The extent to which there was a loss of flow on business activity due to lower patronage at different sites.

Variation in the values of these impacts has the potential to alter the ranking of the sites. However sensitivity analysis revealed it would take substantial changes for the Tristram St/Willoughby St site to displace Claudelands as the preferred site.

Implications of the Study

The results of the study raise a series of questions, which are worthy of further consideration.

- Why did the Council commission this study in 1998 when the first serious proposal was put to the Council in 1995?
- What financial contribution *should* the Council make towards the building of the stadium?
- Why is the Stadium Trust so committed to the Tristram St/Willoughby St site given greater support for an alternative site even though this alternative has not been promoted?
- What are the implications for the Council if the Trust cannot raise all the funds needed for the project?
- What should the governance arrangements be for an operational EC?
- What is the best use of the Claudelands site?

These issues relate to both process and outcomes. Consideration of the likely outcome raises the question of whether or not the EC should have the use of public land at nominal rent. The dividing line between public amenities such as parks and reserves and an EC, which runs commercially, is a very fine line. Perhaps organisers of events other than sport (such as cultural events) should have access to publicly funded land for artistic activity, gambling, or the practice of religious rites. Financial viability for the EC will be checked through its business plan. This does not eliminate risk however, and if the EC turns turtle and loses money there is a public liability. At a minimum, somebody, probably the Hamilton City Council, will have to maintain the structure or pay for its demolition and removal. The issue of process is important to ensure that sound decisions are made in a timely manner. There are potentially large costs and risks for both the City and community groups like the Trust currently proposing the EC. It is important that the Council is both fully informed for making decisions and is transparent with respect to its policies and procedures.

The development of the new EC will continue to raise many critical issues for the city. It is appropriate for these issues to be addressed in a timely and considered manner.

Regional Indicators and Forecasts

Warren Hughes

The *Economic Statistics* section of the current issue shows the region to be in a recessionary state. Although retail sales for the region for the year to September 1998 show a growth rate of 2.5% (the highest rate shown), all other statistics are bad news for the region. Unemployment is up significantly and construction activity is down almost 10% over the year to September 1998.

Table 1 summarises the current outlook. First we consider past forecast performance. Our retail sales projections in the July 1998 issue were 5.1% and 3% too optimistic for the June and September 1998 quarters respectively. Like most forecasters, we underrated the affect of the Asian contagion. For building consents, projections were both too high and too low. However, looking at the nine-month total projections to September 1998, forecast permits at \$200.2 million were only 4.1 percent above the actual value of \$192.4 million. Again, the projections were a little too optimistic but percentage errors of this magnitude do not make the projections worthless. As noted in previous issues, it is very difficult to get the allocation of values between quarters as accurate as one would wish due to the many factors (interest rates, climate, business confidence etc.) that impact on construction intentions.

Note that retail sales projections are for the entire Waikato regional economy whereas building consents cover only the Hamilton Urban Area (includes Cambridge and Te Awamutu). That is, building in the rural areas of the region is excluded from the consent values shown in Table 1.

TABLE 1: PROJECTIONS FOR REGIONAL RETAIL SALES AND BUILDING PERMITS

Quarter	RETAIL SALES				BUILDING CONSENTS			
	\$ m Actual	\$ m Projected	% Error	% Change over Previous Year	\$ m Actual	\$ m Projected	% Error	% Change over Previous Year
Mar 98	921.2			4.4	59.3	55.4	- 6.6	14.0
Jun 98	865.1	909.6	5.1	0.8	59.8	67.0	12.0	-11.5
Sep 98	865.2	891.4	3.0	2.4	73.3	77.8	6.1	-11.2
Dec 98		954.1		-2.1		61.3		-3.0
Mar 99		897.3		-2.6		55.3		- 6.7
Jun 99		877.4		1.4		69.7		16.6
Sep 99		875.6		1.2		72.3		-1.4
Dec 99		964.5		1.1		69.1		12.7
Mar 00		907.7		1.2		55.9		1.1
Jun 00		887.8		1.2		67.5		-3.2
Sep 00		886.0		1.2		71.5		-1.1
Dec 00		979.0		1.5		72.1		4.0

In projecting beyond the September 1998 quarter, we need to account for the current low level of regional business and consumer confidence and the first signs of a recovery in the Asian economies. Log exports to Korea have recommenced so this is good news for the region's forestry sectors and workers.

The projections for retail sales do show falls below last year's levels for the forthcoming December and March quarters. However, the percentage falls are not large and the recovery starts to manifest itself in the second half of 1999. Overall though, these figures are not as encouraging as one would wish them to be. Some uncertainty will be engendered too by the timing of the next election.

Construction projections follow the same general pattern as retail sales. On a calendar year basis, 1999 is projected to be about 2% better than the depressed level of 1998. In the July 1998 issue of the *Bulletin*, growth for calendar year 1999 was projected at 7.2%. The milk treatment plant project and retail project at Te Rapa are welcome news for the region's beleaguered construction sectors. These major projects should go some way to maintaining the workload for the region's construction workforce until an increasing number of smaller projects can once again sustain steady growth in regional construction activity.

Economic Statistics

REAL GROSS DOMESTIC PRODUCT <i>(\$ Millions, 91/92 prices for quarter ended)</i>	June '97	June '98	% Change
Agriculture	1296	1280	-1.2
Forestry, Fishing & Mining	617	511	-17.2
Manufacturing	4056	3882	-4.3
Total Gross Domestic Product	22262	21996	-1.2
RETAIL SALES <i>(\$ Millions for year to date)</i>	Sep '97	Sep '98	% Change
Auckland Region	12735.9	12615.4	-0.9
Waikato Region	3536.6	3625.7	2.5
North Island	29355.2	29588.3	0.8
South Island	9161.6	9200.2	0.4
All New Zealand	38516.8	38788.5	0.7
BUILDING ACTIVITY <i>(Work in place \$m to year ended)</i>	Sep '97	Sep '98	% Change
Dwellings: All New Zealand	4252.1	3894.7	-8.4
Sth Auckland Statistical Area	798.4	782.5	-2.0
Total: All New Zealand	7056.4	6486.8	-8.1
Sth Auckland Statistical Area	1204.1	1088.7	-9.6
LABOUR MARKET	Sep '97	Sep '98	% Change
All New Zealand: Unemployment Rate %	6.6	7.3	10.6
Waikato Region: Unemployment Rate %	6.1	7.8	27.9
All New Zealand: Labour Force ('000)	1852.0	1851.5	0.0
Waikato Region: Labour Force ('000)	166.8	162.2	-2.8
Working Age Population ('000)	268.7	259.5	-3.4
Participation Rate %	62.1	62.5	0.6
PRICES <i>(Index Dec '93 = 1000)</i>	Sep '97	Sep '98	% Change
Consumer Prices	1088	1107	1.7
Producer Prices	1196	1213	1.4
INTEREST & EXCHANGE RATES & RESERVES	Oct '97	Oct '98	% Change
Reserve Bank Base Rates (% p.a.)	11.55	9.48	-17.9
Trade Weighted Exchange Rate (Jun '79 = 100)	64.50	55.80	-13.5
Total Official Reserves (\$ millions)	6979.90	8518.30	22.0

Postscript

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