The Long-Term Benefits of MED in a Developed Country: Opportunity International's Program with Indigenous Australians

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Abstract

Micro enterprise development (MED), including the provision of micro credit, has had mixed results outside the developing world. A pilot program in northern New South Wales, Australia, with Indigenous small business owners has taken MED principles learned in developing countries and tested them during a two-year pilot project. This article examines the likely socio-economic benefits of the program to clients, the region and the government based on conservative assumptions about the success rate of participating micro-enterprises and the current level of welfare spending. Using net present value (NPV) calculations on a sample of typical clients, it concludes that government, by investing in the program, can generate a net saving of between $16,000 and $100,000 (an average of $51,000) per participant in future reduced welfare payments and increased tax revenue. Even a relatively costly pilot project is estimated to generate a future stream of benefits of around double the initial government investment. The cost–to-benefit ratio drops significantly as an established MED program realises potential economies of scale. Although the validity of assumptions with respect to levels of success are yet to be determined with a sizeable group of participants and over a reasonably lengthy period, there are signs that MED in a developed country can be justified on an economic basis.

Introduction

Micro enterprise development (MED) programs attempt to assist the economic and social development of people on the margins by supporting the establishment and continuation of micro enterprises. These are small businesses employing few people. One of the problems facing such businesses is the difficulty they have accessing loans for investment purposes, and MED programs often address that need through the provision of micro credit.

The success and long-term benefits of MED in the developing world are well documented. Thousands of programs deliver essential services to millions of people with a substantial positive impact. In the developed world it has struggled to gain a foothold as a serious tool for lifting people out of poverty. The relatively small and diffuse market, the disincentive effects of welfare 'safety nets' and the prohibitively high cost of operations are the most commonly cited factors militating against the development of a strong MED sector. Even relatively successful programs recognise MED is not the 'magic bullet' for moving people off welfare that proponents hoped it would be (Ashe 2000).

Beyond the general challenges presented by a substantially different social and economic landscape, some MED programs in the developed world have imposed serious limitations on themselves.

Uncritical replication of methodologies from the developing world (e.g. some group schemes), addition of credit as an afterthought to job creation programs and the neglect of robust lending principles have reinforced the idea in some quarters that MED may be unsustainable outside of its original context (Schreiner and Morduch 2001).

Nevertheless, it is clear that properly contextualised programs combined with sound government policy and support from the private sector can deliver significant positive benefits to individuals, communities and regions. This paper attempts to quantify some of those benefits based on the experience of a two-year pilot MED project with Indigenous people in northern New South Wales, Australia, implemented by Opportunity International Australia.

Observed benefits to individuals have been widely documented in single and multi-program evaluations, particularly in the United States. They include increased survival rates for long-term borrowing businesses, job creation, limited economic independence and supplemental income for participants (Raheim and Friedman 1999). Ashe (2000) cites an increase in social and economic capital “precisely where it is needed, in low income communities”. Klein et al.’s (2003) report, *Two Year Findings* of ten MED programs, showed participants “posted growth in all measures — sales, assets, net worth, employment and owners’ drawings” (p. 6). There was also a continual decline in the percentage of participants receiving welfare and the contribution of welfare to total household income (p. 7).

The program under investigation (Many Rivers Opportunities — MRO) found that all clients with repeat (second or third) loans experienced significant increases in profitability, acquisition of assets and proportion of income derived from enterprise (Table 1). They also report increased interest in their businesses from family and community members, opportunities to teach skills, and over half have taken on wage labour albeit intermittently.

Table 1. Positive changes for MRO clients by 2nd or 3rd loan cycle

Client	Enterprise income (monthly)		% income from enterprise		Asset acquisition		Prospect for mainstream banking
	Baseline ($)	End cycle ($)	Baseline (%)	End cycle (%)	Baseline ($)	End cycle ($)	
1	800	2250	50	100	12,000	30,000	Ready
2	300	450	47	57	nil	5500	Progress
3	400	1280	56	80	440	795	Unlikely
4	500	1500	56	80	640	1050	Progress
5	6000	7060	89	90	3950	7550	Ready
6	-	700	0	43	-	1500	Progress
7	-	700	0	43	-	1500	Progress
8	870	910	33	54	1850	3100	Progress
9	-	217	0	10	350	800	Ready
10	220	300	37	45	895	4375	Progress
11	150	350	19	44	250	850	Unlikely
12	1200	1550	45	55	543	1833	Ready
13	500	650	59	76	1450	3700	Progress
Average	**842**	**1378**	**38**	**60**	**1721**	**4812**	
Change (%)	**64**		**59**		**180**		

The critical challenge facing MED in the developed world is not the achievement of financial self-sufficiency such as that demonstrated by a growing number of programs in the developing world — a level of subsidisation is inevitable. Neither is it to solve unemployment — the more likely route out of poverty (or welfare dependence) is wage work (Schreiner and Morduch 2001). It is whether, on balance, the direct and indirect benefits of MED outweigh the cost of supply in the long run and, if not, whether there are alternative uses for funds that would be more effective. Little has been done so far to accurately measure MED benefits (Morduch 1999) and this paper goes some way to addressing that gap. Intuitively, it has been suggested by Raheim and Friedman (1999) that “a decade’s worth of program results, demonstration projects and research strongly suggest that the benefits of microenterprise development for welfare recipients outweighs the costs and risks”.

There is a perception that MED in a developed country is constrained by the existence of salaried employment options and a welfare ‘safety net’ for the poor. However, this paper shows that it is the

potential savings in these payments, and the increase in taxation revenue, which ensure that the program should have a net financial benefit.

The Australian Indigenous context for MED

The Indigenous people of Australia (Aboriginal and Torres Strait Islanders) "experience substantial and multiple forms of economic burden in comparison to non-indigenous Australian households" (Daly and Smith 1999). Median incomes are around 69 per cent of non-Indigenous individuals and the number of Indigenous households increased by 25 per cent between 1991 and 1996 compared to nine per cent for non-Indigenous. As is the case for most Indigenous minorities, there is a tendency for the majority to view them as having homogeneous social and economic characteristics. On the contrary, Daly and Smith (1999) contend there is significant cultural diversity within the Indigenous population expressed in different forms of social and economic organisation, distinctive local identities and cultural priorities (p. 1). Significantly, they are not necessarily communistic or egalitarian in outlook and do not necessarily share resources, although "linkages across dwellings… underwrite the viability of many families, ameliorating the impact of low and erratic incomes" (Daly and Smith, p. 2).

Recent experiments in credit and business support to Indigenous Australians have tended towards the granting of larger loans to joint ventures with non-Indigenous partners (McDonnell 1999). The 1997 Parliamentary Inquiry into Indigenous Small Business "raised the possibility of increasing access… through micro-credit" but reinforced the fact that most micro enterprises are invisible. McDonnell's 1999 paper on the possible application of Grameen Bank style lending turned up the usual limitations facing delivery of MED with Indigenous Australians: the inevitability of high transactions costs, limited credit histories, no collateral, sparse information on individual businesses and a history of defaults in more remote areas (p. 3). On the positive side, however, McDonnell estimates the self-employment sector to be as large as four per cent of the Indigenous workforce (approximately 6500), and reports that an internal ATSIC (Aboriginal and Torres Strait Islander Commission) analysis shows smaller loans were more likely to be repaid than larger ones (p. vii).

The Pilot Project (MRO)

Against this background, ATSIC approached Opportunity International Australia in 2000 with a view to establishing the feasibility of a program with Indigenous people based on sound MED principles tested in a real situation. The application of a praxis approach in which MED principles are implemented, results observed and refinements made on a continuous basis has facilitated maximum experimentation and contextualisation. The project (Many Rivers Opportunities) commenced in April 2002. It is located in the Northern Rivers region of New South Wales. About 18,000 Aboriginal people live in the region, of which 1.3 per cent (234 people) officially identify as self-employed (1996 census). The pilot project centres around four towns: Coffs Harbour, Grafton, Lismore and Casino. The number of people of Indigenous working age for each centre is 964, 488, 780 and 446 respectively, making a total of 2674 people. The labour force participation rate is 46 per cent and the unemployment rate is about 36 per cent (1996 census). The median weekly income for females is $212 and $191 for males. They also lack qualifications, with only 5.9 per cent of females and 3.9 per cent of males 15 years and

older having diplomas or higher qualifications. Most of the employed work in the health and community services, education and 'other' industries, and are intermediate clerical, labourers and 'other' workers. (OIA 2001, pp. 17-19.)

The economic benefits of MED in Northern Rivers

As part of a comprehensive evaluation of the pilot project, Opportunity International Australia (OIA) requested an analysis from an economist's viewpoint of the likely socio-economic benefits of the program, including to:

(1) Calculate the benefits of moving one client off welfare to a sustainable, tax-paying livelihood
(2) Calculate the multiplier effect on the local community and the impact of welfare savings and tax income on government
(3) Comment on the social impact of these achievements for the Aboriginal community and the wider community.

It will be seen below that answers to (1) and (2) depend crucially on the composition of the client group, in terms of their family status, expected income from their businesses and how long in the future before each person can be expected to earn an income. The expected benefits for each type of client defined in the terms of these characteristics is provided across 12 scenarios (Table 3), and they are substantial in each case.

The borrowers' characteristics

As of June 2004, Many Rivers Opportunities (MRO), the managing organisation for the pilot program for OIA, has worked with over 100 clients, of which 39 have taken out loans. Thirteen of these have received second loans. The total amount loaned is $126,700.

Loans are granted under the following terms:

- The first loan offered can be up to $2500
- Second and subsequent loans are for $4000 to $10,000
- Commercial interest rate is charged
- Fortnightly repayments are made by direct debit
- Loan terms from six to nine months (longer for re-loans)
- Loan set-up fee of $30 payable by the client
- Zero tolerance for non-payment.

All clients receive targeted training and general business support.

To date, borrowers performed very well. The project's on-time' repayment rate is 96 per cent and the arrears rate (over 30 days) is less than seven per cent as is the portfolio at risk rate. All of the clients received informal training/assistance with business development.

MRO expects that of the 39 who have taken out loans, at least 12 (31 per cent) will expand their operations to become formal businesses and will employ others, 23 (59 per cent) will continue trading over an extended period and only four (10 per cent) will discontinue their relationship with MRO after a single loan cycle. Of the 20 who have completed their first loan cycle, 13 have taken a second loan and three a third. Of the seven who have not re-borrowed, a further three are likely to in the near future and the remaining four are content to use their enterprise to supplement other forms of income.

The business activities covered by these borrowers are diverse and included both Aboriginal and mainstream related activities. They are as follows:

Table 2. Activities for which loans have been granted

Plastering	Recording artist	Ceramics
Jewellery	Boomerang production	Fishing bait retail
Painting	Lawn mowing	Fireworks displays
Disc Jockey	Cultural tour operations	Computer consultant
Rug making	Didgeridoo making	Stump grinding
Café and catering	Building and maintenance contracting	Mobile fast foods

Source: OIA

Socio-economic benefits of the program

The need for employment opportunities

A recent study[1] paints a continuing distressing picture of the current social and financial position of Australia's Indigenous people, whose number now exceeds 410,000:[2]

- Life expectancy is around 20 years lower than for the rest of the country
- Child mortality is more than double that for all Australians
- Literacy rates are significantly lower
- Unemployment is nearly three times that for non-Indigenous people.

While it can be argued that a policy or program that increases income from employment (or self-employment) is not the complete solution to all socio-economic problems, there is a strong argument that people with higher incomes can more easily overcome socio-economic disadvantage. An increase in income clearly improves morale by giving the workers a feeling of greater independence, and by giving them and their dependents increased opportunities for consumption, education and career development. It also improves access to health services and housing. In addition, it improves the attitudes the mainstream population has towards Aboriginal people.

[1] Steering Committee for the Review of Government Service Provision 2003, *Overcoming Indigenous Disadvantage: Key Indicators 2003, Overview*, November.

The need for Australia to have programs that increase the employment opportunities for Aboriginal people is very great now and it will become increasingly so in the future because the Aboriginal population is growing very rapidly (Taylor and Hunter 1998). It is likely that, in common with the Aboriginal population generally, the population of the Many Rivers Region of New South Wales is also growing very rapidly and so employment programs are urgent.

The role of credit in Aboriginal business development

The development of Aboriginal owned and operated businesses, especially small businesses, will have a crucial role to play in the solution to this problem. There are a number of well established reasons why Aboriginal people find it difficult to launch and run businesses. These include: lack of economic resources; poor health; inadequate basic education and skills; remoteness from markets; excessive accountability and bureaucracy which is costly and inhibits innovation; and a value system and community obligations that are sometimes at odds with business requirements. The MED project attempts to overcome some of the inhibitors to Indigenous business development. These inhibitors in turn create difficulties for the MED program. The following are the main ones relevant to an assessment of the project.

Discrimination against Aboriginal workers and businesses

While it is sometimes difficult to document, it is undeniable that Aboriginal people experience discrimination in almost all aspects of life. Some of this is based on racist views of many in mainstream society, but much of it is based on often unfounded generalisations about 'poor behaviour' of Aboriginal people. These generalisations are often reinforced by the media emphasising bad news stories. Some of these views are: Aborigines are lazy, they are financially irresponsible, lack initiative, etc. These attitudes and views lead to Aborigines being excluded for many opportunities in business and employment. These views exclude Aboriginal businesses from various markets, including the financial markets, which makes business development difficult. The lack of high profile successes in business and government allows these views to persist. Any program producing successful business people, such as OIA's MED program, will help overcome this exclusion by providing successful role models and Aboriginal people with business experience who can assist others in pursuing a business career.

Lack of access to finance for investment

This problem applies in all Indigenous business environments. In some cases the problem is eased somewhat by the access to co-investors, such as Indigenous Business Australia (IBA). In other cases, Indigenous ownership of land or rights under the *Native Title Act* result in joint ventures with mainstream investors. This is especially so in the tourism resort industry. There are also some government support programs for small investments. These commonwealth programs include:

[2] Australian Bureau of Statistics 2001, Census.

- the Business Development Program (BDP) run by the Aboriginal and Torres Strait Islander Commission (ATSIC), which lends $5000 and more, and provides business training
- the Indigenous Small Business Fund run by the Commonwealth Department of Employment and Workplace Relations (DEWR), which lends from $5000 to $100,000 to Indigenous organisations
- the Self Help Program run by DEWR as a trial, which gives up to $5500 as a repayable grant for non-wage costs for such activities as financial literacy training.

These programs, however, do not target micro loans of the type targeted by the MRO program.

Lack of education and training in business

Although business education programs abound, no one has yet designed an education program that can guarantee a person will be a success in business. This is partly because personality, motivation and luck are such important factors in success. Nevertheless, training is seen as an essential component of good MED in the developed world because of a persistent (and partly right) perception that "human capital constraints matter more than financial capital constraints" (Schreiner and Morduch 2001). The importance of marketing, knowledge of the products being sold or produced, an appreciation of the importance of record keeping, elementary business planning skills and budgeting is acknowledged. However, the project quickly learned that tying credit provision to completion of a fixed training program would be counterproductive. Entrepreneurs are doers and require non-financial support that they can translate into increased cashflow and profitability immediately. This echoes academic findings such as in Bhatt and Tong's analysis in 2001 that some forms of mandatory training "do more harm than good because they distract them from assessing the feasibility of their ventures" (cited in Schreiner and Morduch 2001).

The welfare trap

One factor that reinforces the poverty of Indigenous people is their dependence on the low incomes provided by the social security system. The public debate in this area has emphasised the psychological and lifestyle impacts of this dependence including:

- the fact that people lose, or never develop, their ability to work
- they lose or do not develop initiative generally
- where they live in societies with high unemployment rates, they believe that working is not the normal way of life
- education and training seems pointless to them.

They also become depressed and frustrated with their poverty, which may lead to anti-social behaviour and substance abuse. All of these attitudes make it difficult for business and employment programs to work.

While these psychological and lifestyle impacts are very important, the 'welfare trap' is often overlooked and it is very important. The fact that almost every Indigenous community in Australia is

part of the Community Development Employment Programme (CDEP)[3] scheme suggests that the communities are very concerned to see that people work and do not simply receive 'sit-down money'.

An additional factor leading to low interest in work in Indigenous communities (and among non-Indigenous people generally) is called the 'welfare trap'. This refers to the fact that when a welfare recipient's market income increases, they lose welfare entitlements and pay increased taxes, so that the net addition in income as a person moves from complete welfare dependence to income earning may be very little. A concept called the 'effective marginal tax rate' (EMTR) is used to measure this effect. It is defined to be the proportion of an extra dollar earned in market income because of the decline in social security benefit and increased taxation.

An example can be seen in Appendix 1. If a single person with no children is unemployed and in receipt of the maximum rent allowance, that person receives $12,464 a year. If however, that person gets a job and earns $20,000 or $17,620 after tax, this is an increase of only $5156 a year, which may not cover the additional clothing, transport and other costs associated with going to work, let alone providing a financial incentive. This is equal to an EMTR of 74 per cent (($20,000 – $5,156) / $20,000). For some welfare recipients, the EMTR is closer to 100 per cent.

The welfare trap provides significant discouragement for anyone considering moving from welfare to employment, or an Aboriginal person moving from CDEP or Newstart Allowance[4] to employment. There is no simple solution to the problem since it is caused by the structure of social security payments and the taxation system. The welfare trap may have an adverse impact on the MED program since it will create a low interest among some people in undertaking the substantial additional effort required to establish and run a business.

The benefits of the program

Scenarios examined

The following analysis is based on various cases or scenarios, which vary in terms of assumed circumstances for the client such as: marital status (single or partnered); number of children (none, three or four); level of income earned from the enterprise ($20,000 or $30,000 a year); the timing of the receipt of that income (starting in year three or five), and whether the enterprise employs one or two people.

[3] A 'work for welfare' scheme through which indigenous people can receive an amount equivalent to the unemployment benefit (Newstart Allowance) by working for an Indigenous community organisation.

[4] Newstart is the name given to the generic 'unemployment benefit' at a current rate of $191 a week.

Assumptions of principle

(1) The MED program is the only factor resulting in a person/persons changing from being unemployed (or under-employed) to being employed. That is, without the MED program the person/persons would remain dependent on some level of income-related welfare indefinitely.

(2) When measuring the regional Gross Domestic Product (GDP) effects of the program, it is assumed that the client's business produces *additional* output to the regional economy. That is, it is assumed that:

- the client's business is not simply replacing an existing business's output, but results in an increase in total output of that commodity in the region. In some cases this may be realistic, while in others it is not. It is likely to be true for the production of Aboriginal artefacts but is less likely to be true for stump grinding, for example
- the expansion in output in the client's industry does not simply involve 'expenditure switching'. For example, the expansion in output, say in stump grinding, must not be offset by a decline in expenditure on and the production of other commodities such as professional lawn mowing. Again, the production of Aboriginal artefacts for sale to tourists to the region will meet this condition, while the production of some products strictly for the local market may not.

If these conditions are not met, then the output of a successful client's business will not add to the total value of output for the region and so it will not increase the regional GDP.

Simplifying assumptions

(1) The period of time over which the MED program is assumed to have an impact is 20 years. This is an arbitrary period and is just intended to mean an indefinite change such as a person never getting off welfare on the one hand or starts and remains in employment because of the MED program on the other.

(2) All values used in calculations are 'real' values. That is, the impact of inflation is excluded.

(3) The benefits that an unemployed client would receive do not change over the 20 years for which a person is assumed to remain unemployed, if not for the MED program. In fact, there are a number of changes within each scenario that would affect the outcome, but the various directions and effects are too numerous to try and predict.

(4) The real income a person is assumed to receive because of the MED program, either $20,000 or $30,000, is assumed to remain unchanged over the 20 years. In fact, the client is likely to experience an increase in income over time because their work and business skills will improve with experience. The effect of this assumption is that the estimated benefit will be underestimated somewhat.

(5) When calculating the Net Present Value (NPV) of benefits, a rate of discount of six per cent is used. This is intended to represent the real valued risk free rate of discount. If anything, it is a bit high,

but that will bias the estimated value of the benefits of the MED program downwards somewhat. Not all clients of the program will be successful, so there is risk associated with the anticipated benefits of the program. In NPV analysis, there are various ways of dealing with risk. One common method is to 'load' the discount rate. With this method, if the rate of discount for a certain outcome is, say six per cent, then the researcher may use a discount rate of ten per cent for a similar project with an uncertain outcome. This method is not used here. Rather, the 'expected value' approach is used. That is, the discount rate remains at the risk-free rate of six per cent, but the value of benefits are measured as their estimated possible value multiplied by the probability of that value occurring. In the calculations in Table 2, the NPV of the benefits assuming certainty, are multiplied by the chances of a client being a success, which is estimated to be 30 per cent. This is called the expected value of the NPV of benefits.

(6) One of the gains for the government of the MED program is the Goods and Services Tax (GST) that successful businesses will pay.[5] Directly estimating the amount to be paid by the clients' business is not possible here because the researchers have no information on the likely revenue to be earned by these businesses. Consequently, the following method of estimating the GST to be paid is used. The GST is levied at the rate of ten per cent on the value of goods and services sold in excess of $50,000 a year. The actual amount paid is reduced by input credits. Now, the value of sales for any business equals the value of materials purchased, rent paid, wages, interest costs and profits. Because of GST credits, the business actually pays GST on an amount equal to only the sum of wages, interest and profit. In the case of the micro enterprises being discussed here, the amount of interest will be very small, resulting in the GST taxable income for the enterprise being approximately equal to the value of the income of the proprietor and employees. This is why economists sometimes say that 'the GST is just another tax on labour'. Thus, in Table 3 the authors estimate the GST payable by the enterprise as being equal to ten per cent of the income earned from the enterprise, where that is $50,000 or more.

(7) When estimating the benefits to the government of the program moving a person from unemployment to employment, it is necessary to estimate the value of benefits received by the person when unemployed, and compare that with the estimated value of government benefits received when the person is employed and receiving $20,000 or $30,000 a year, and the level of tax paid. Appendix 2 shows how those figures were calculated. The welfare payment system is extremely complex and the value of benefits depends on the circumstances about which the researcher has no knowledge. The following are comments on some of the items:

- An arbitrary assumption has to be made on the level of benefits received. It was decided that, in general, the most reasonable assumption is that the program's client would receive the maximum benefit.

[5] A Federal consumption tax based on the value added at each stage of the production of selected goods and services.

- The exception is the estimate of the Child Care Benefit received. Since many Aboriginal people will rely on members of their extended family for child care, it was assumed that on average some benefit is received, but less than the maximum benefit.
- The maximum rental allowance is used. It is assumed that either the client is in the private rental market, or is in government housing, in which case the rental allowance is used to roughly reflect the level of government subsidy provided in such housing.

Results

Table 3 summarises the results of an analysis of the impact of the MED program. Details of these calculations are provided in Appendices 2 and 3.

An explanation of the terms used in the table is as follows:

(1) 'Annual savings by government' — this measures the net savings for government as a result of a person/persons moving from unemployment to employment. It is equal to the tax paid by the person (including GST where appropriate), less government family support when employed, plus the welfare payments saved by a person being employed.

(2) 'NPV of saving assuming success' — this is the net present value of the government savings of one successful person or project assuming the benefits last for 20 years and the appropriate rate of discount is six per cent. It is the lump sum value to the government in today's terms of a successful client of the MED program.

(3) 'NPV of saving assuming 30 per cent chance of success' — this is the expected value of a successful client for the government, assuming that there is a 30 per cent chance of a client being successful. This represents the maximum amount, as a lump sum, which the government should be prepared to invest in a client of the program.

(4) 'Annual additional wages (assumed)' — these are arbitrary figures but seem reasonable and conservative. Here, 'wages' includes profit, where the person is the proprietor. It is assumed that he/she is taxed at the personal rate, not at the company rate. If the actual level of wages is in fact higher, then the benefits of the program will be higher than that estimated.

(5) 'Annual additional regional GDP (assuming multiplier 1.5)' — this is an estimate of the increase in GDP for the region as a result of a successful client. The regional GDP is the value of goods and services produced for consumption or investment in a region over one year. It can be measured as the level of incomes earned over the same period. Since social security benefit recipients do not work for their benefits and hence produce an output (excluding CDEP workers), their 'incomes' are not included. Thus the additional GDP produced by a successful client is equal to his/her wages and profit ('income'), plus interest paid by the business, plus rent paid. The interest paid will be very low and the rent paid is unknown. Thus the assumed incomes earned by the client and the

employee, where appropriate, has been used as the measure of the value of output created by the client.

The output created by a successful client will lead to an increase in output of other businesses because the client will buy inputs to be used in production and because the client will spend his/her increased income. This is the 'downstream' or 'multiplier' effect. The multiplier is relatively small for regions because most of the goods and services purchased are imported.[6] The multiplier for a large region, such as all of Australia, overall is larger because more of the goods and services are produced in Australia than are produced in the Many Rivers Region of New South Wales. There is no evidence available to indicate what the multiplier is likely to be for the activities undertaken by the clients. However, the figure of 1.5 is sometimes used for regional multipliers and that will be used in this study. The GDP calculations for the figures in Table 3 are provided in Appendix 2. Briefly, the enterprise's contribution is equal to the level of wages earned (which is used as an estimate of additional net output from the enterprise) plus the multiplier effects that increase income, which the client experiences as he/she moves from welfare to work.

Table 3. Results for cases

Example cases	Annual saving by government (1)	NPV of saving assuming success (2)	NPV of saving assuming 30% chance of success (3)	Annual wages (assumed) (4)	Annual additional regional GDP (assuming multiplier 1.5) (5)
(1A) Single, income $20,000 in year 3, no children, no employees	$14,844	$143,045	$42,913	$20,000	$22,578
(1B) Single, income $20,000 in year 5, no children, no employees	$14,844	$118,823	$35,647	$20,000	$22,578
(2A) Single, income $30,000 in year 3, no children, no employees	$17,636	$169,950	$50,945	$30,000	$36,182
(2B) Single, income $30,000 in year 5, no children, no employees	$17,636	$141,173	$42,352	$30,000	$36,182
(3A) Single, income $20,000 in year 3, three children, no employees	$6818	$65,701	$19,710	$20,000	$26,591
(3B) Single, income $20,000 in year 5, three children, no employees	$6818	$54,577	$16,373	$20,000	$26,591
(4A) Single, income	$11,744	$113,170	$33,951	$30,000	$39,128

[6] In MRO's experience, many of the inputs to clients' businesses are purchased locally. The multiplier effect is therefore likely to be relatively conservative.

$30,000 in year 3, three children, no employees					
(4B) Single, income $30,000 in year 5, three children, no employees	$11,744	$94,008	$28,202	$30,000	$39,128
(5A) Owner partnered, dependent spouse, four children, income $30,000 in year 3; one employee, single, no children, income $20,000 in year 3	$34,810 (or average $17,405 each)	$335,445 (for project)	$100,634 (for project, $50,317 per person)	$50,000	$64,970
(5B) Owner partnered, dependent spouse, four children, income $30,000 in year 5; one employee, single, no children, income $20,000 in year 5	$34,810 (or average $17,405 each)	$278,648 (for project)	$83,594 (for project, $41,797 per person)	$50,000	$64,970
(6A) Partnered couple, both earning $25,000 in year 3, four children	$30,691 (or $15,345 each)	$295,752 (for project)	$88,726 (for project, $44,363 per person)	$50,000	$67,155
(6B) Partnered couple, both earning $25,000 in year 5, four children	$30,691 (or $15,345 each)	$245,675 (for project)	$73,703 (for project, $36,851 per person)	$50,000	$67,155
Average		**$171,247**	**$51,396**		

Interpretation of results

For the purpose of illustrating the interpretation of results in Table 3, case 4A will be examined. In this case, it is assumed that the client is a single person with three dependent children, living in private rental accommodation. If successful, the business will only employ the client and will provide an annual income of $30,000 for the client, starting in three years' time and lasting for the next 17 years. If not for this program, the client would have continued without employment for the next 20 years. The results of the analysis are as follows:

- While unemployed, the client will receive a total of $28,070 a year, assuming they receive the maximum rental allowance as shown in Table 4 in Appendix 1.
- When employed in the business and earning $30,000, the client will pay tax but will also receive a Parenting Payment, FTB parts A and B and will receive an assumed child care benefit of $5500 a year. See Table 5 in Appendix 1. This costs the government $16,326 net a year.
- Thus, if this client is successful, the government's costs for this client will decrease by $11,744 a year ($28,070 to $16,326). These benefits for the government start in year three and continue to year 20. This stream of benefits has a value for the government equal to $113,170 as a lump sum.
- However, it is assumed that only 30 per cent of clients in this category will be successful, so the value to the government of a client when they join the program and before it is certain that the client will be successful, is 30 per cent of that lump sum. That is, $33,951 for each new client.

Consequently, this is the maximum amount that the government should be prepared to spend supporting the new client.

- Under the assumption of principle (2) above, the increase in GDP for the region as a result of the success of this client should be about $39,128 a year from year three until year 20. See Appendix 2.

Generalisations

An examination of the table suggests some generalisations can be made. The gain to the government:

- is higher when the expected incomes are higher — because government benefits decrease as incomes increase
- is higher when the client earns income earlier (year 3) than later (year 5) — because a dollar received in five years' time is worth less than a dollar received in three years time
- is higher for clients without dependent children than for clients with children — because some government family support continues even though incomes increase.

Total benefits of the MED program

The potential economic benefits of the program can best be approximated by looking at the range and averages of NPV savings demonstrated in Table 3:

- At the bottom end of the range, assuming a 30 per cent chance of success (Column 3), the net savings to government per person over the next 20 years expressed as a lump sum in today's money is $16,373 (scenario 3B). This is the lowest amount government would need to invest now and still 'break even' over the long term. An alternative way to express it is that this is the most conservative measure of the 'opportunity cost' of not investing.
- At the top end of the range, under the same assumptions, savings amount to just less than $51,000 per person ($100,000 per project).
- The average imputed savings, under the same assumptions, is $51,300
- Indirect benefits, in terms of annual additions to regional GDP, are estimated at between $22,578 and $67,155 per person.

The two-year pilot project required an initial government investment of approximately $1 million. Using the 30 per cent success rate suggested by the analysis (and supported by pilot project numbers) and its average imputed savings of $51,300, the likely stream of benefits can be estimated at just over $2 million (39 x $51,300) or about double the investment. The pilot project has incorporated extra costs for experimentation, methodology development and general set-up. The cost estimates of an MED program are predicted to drop significantly,[7] suggesting even higher net benefits as the program realises an economy of scale.

Conclusions

The above analysis of the MED pilot program conducted in the Many Rivers Region of New South Wales suggests that there are substantial potential benefits arising from it. This view is based on the following observations:

(1) The lack of investment finance is an important inhibitor to the development of Aboriginal businesses. This is especially so in terms of the availability of small loans. The MED program is intended to assist Aboriginal small enterprise development by providing such finance.

(2) Aboriginal people generally lack many of the skills and knowledge that are required to establish and run a successful business. The MED program provides training and general business support for the purpose of overcoming this problem.

(3) The loan performance of the clients in the pilot program has been very good, suggesting that the program has been successful in selecting and supporting clients in this difficult area of finance provision.

(4) Under the assumptions that 30 per cent of clients will be successful in establishing and running their businesses, and that without the program they would have remained unemployed in the long term, the program will provide substantial gains to the government and to the regional economy. These gains were measured in terms of the program's impact on government welfare expenditure and taxation receipts.

(5) In addition, the program makes a significant contribution to the regional economy through clients' enterprises and the expenditure of the program itself.

(6) By providing independent employment and increasing peoples' incomes, the program will provide a range of social benefits to the clients and to the Aboriginal population generally. These benefits include improved self-esteem and confidence, greater work experience and the development of successful role models for the Aboriginal community. It will also demonstrate to the mainstream community that Aboriginal people possess a range of skills and abilities and this may lead to better employment opportunities for Aboriginal people generally. In addition, the increased incomes will allow the clients and their families to have better access to health and education facilities and to better housing, and this will provide better living conditions and facilitate home study for children. This is likely, in turn, lead to a cycle of improvement in a family's socio-economic status.

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Appendix 1. Government payments

Table 4. Government payments to unemployed persons

Scenarios — all parties unemployed	Maximum rental allowance	NewstartAllowance	Parenting Payment	Maximum FTB, Part A*	Maximum FTB, Part B**	Total Welfare Payments
Single, no children	$2454.40	$10,010.00	n/a	n/a	n/a	$12,464.40
Single, one dependent	$2882.88	n/a	$11,772.80	$3,392.48	$2,912.00	$20,960.16
Single, three dependents	$3257.80	n/a	$11,722.80	$10,177.44	$2,912.00	$28,070.04
Partnered, no children	$2319.20	$18,059.60	n/a	n/a	n/a	$20,378.80
Partnered, one dependent	$2882.88	$9029.80	$9029.80	$3392.48	$780.00	$25,114.96
Partnered, two dependents	$2882.88	$9029.80	$9029.80	$6784.96	$780.00	$28,507.44
Partnered, four dependents	$3257.80	$9029.80	$9029.80	$10,177.44	$780.00	$32,274.84

* Maximum paid per child under age 13 years ($130.48 per fortnight)
Singles with dependents receive the quoted amount ONLY IF NOT RECEIVING ANY OTHER MAINTENANCE.
** Singles with dependents receive the quoted amount of $112 per fortnight for children 5-18 years ($2912 pa), or $78.12 per fortnight for children over five years ($2031.12 pa).
Source: <http://www.centrelink.gov.au> and <http://www.familyassist.gov.au>, and Centrelink telephone advisers. See notes for Tables 4 and 5 for more information on these government payments.

Table 5. Net government payments to employed persons

Scenarios	IF EARNING $20,000 pa								
	Tax Paid on Earnings	Less Newstart Allowance	Less Parenting Payment	Less FTB Part A*	Less FTB Part B**	Approx. CCB***	Total deductions	Notes CCB	Gov't payment less taxes paid
Single, no children	$2380.00	n/a	n/a	n/a	n/a	n/a	$0.00	n/a	-$2380.00
Single, one dependent	$2380.00	n/a	$5042.44	$3392.48	$2,912.00	$5000.00	$16,346.92	$137/wk	$13,966.92
Single, three dependents	$2380.00	n/a	$5042.44	$10,177.44	$2,912.00	$5500.00	$23,631.88	$446.96/wk	$21,251.88
Partnered (one earning), no children	$2380.00	$5382.00	n/a	n/a	n/a	n/a	$5382.00	n/a	$3002.00
Partnered (both earning), no children	$4760.00	n/a	n/a	n/a	n/a	N/a	$0.00	n/a	-$4760.00
Partnered (one earning), one dependent	$2380.00	n/a	$5382.00	$3600.48	$780.00	$5000.00	$14,762.48	$137/wk	$12,382.48
Partnered (both earning), one dependent	$4760.00	n/a	$0.00	$1092.00	$0.00	$5000.00	$6092.00		$1332.00
Partnered (one earning), two dependents	$2380.00	n/a	$5382.00	$6784.96	$780.00	$5250.00	$18,196.96		$15,816.96
Partnered (both earning), two dependents	$4760.00	n/a	$0.00	$1092.00	$0.00	$5250.00	$6342.00		$1582.00
Partnered (one earning), four dependents	$2380.00	n/a	$5382.00	$13,569.92	$780.00	$5750.00	$25,731.92		$23,351.92
Partnered (both earning), four dependents	$4760.00	n/a	$0.00	$1092.00	$0.00	$5750.00	$7092.00		$2332.00

* Maximum rate is paid up to a family income of $31,755 and is reduced by 30 cents for every extra dollar of income.

** Maximum payment of $112 for children under age five and $78.12 for children over five years of age (payment is NOT per child).

*** To receive payment, approved or registered child care must be used. Broad estimate used (assume five per cent increase per additional child).

Table 5 (cont'd)

IF EARNING $25,000 pa									
Scenarios	**Tax paid on earnings**	**Less Newstart Allowance**	**Less Parenting Payment**	**Less FTB Part A**	**Less FTB Part B**	**Approx. CCB*** **	**Total deductions**	**Notes CCB**	**Gov't payments less tax paid**
Partnered (both earning), two children	$7760.00	n/a	$0.00	$2184.00	$0.00	$5250.00	$7434.00		-$326.00
Partnered (both earning), four children	$7760.00	n/a	$0.00	$8344.44	$0.00	$5750.00	$14,344.44		$6584.44

Tax paid on earnings = $3880 each if earning $25,000 pa

Table 5 (cont'd)

Scenarios	IF EARN ING $30,000 pa								
	Tax Paid on Earnings	Less Newstart Allowance	Less Parenting Payment	Less FTB Part A*	Less FTB Part B**	Approx. CCB***	Total deductions	Notes CCB	Gov't payment less taxes paid
Single, no children	$5172.00	n/a	n/a	n/a	n/a	n/a	$0.00	n/a	-$5172.00
Single, one dependent	$5172.00	n/a	$520.00	$3392.48	$2912.00	$5000.00	$11,824.48		$6652.48
Single, three dependents	$5172.00	n/a	$2908.62	$10,177.44	$2912.00	$5500.00	$21,498.06		$16,326.06
Partnered (one earning), no children	$5172.00	$5382.00	n/a	n/a	n/a	n/a	$5382.00	n/a	$210.00
Partnered (both earning), no children	$10,344.00	n/a	n/a	n/a	n/a	n/a	$0.00	n/a	-$10,344.00
Partnered (one earning), one dependent	$5172.00	n/a	$0.00	$3392.48	$2912.00	$5000.00	$11,304.48		$6132.48
Partnered (both earning), one dependent	$10,344.00	n/a	$0.00	$1092.00	$0.00	$5000.00	$6092.00		-$4252.00
Partnered (one earning), two dependents	$5172.00	n/a	$0.00	$6784.96	$2912.00	$5250.00	$14,946.96		$9774.96
Partnered (both earning), two dependents	$10,344.00	n/a	$0.00	$2184.00	$0.00	$5250.00	$7434.00		-$2910.00
Partnered (one earning), four dependents	$5172.00	n/a	$0.00	$13,569.92	$2912.00	$5750.00	$22,231.92		$17,059.92
Partnered (both earning), four dependents	$10,344.00	n/a	$0.00	$4368.00	$0.00	$5750.00	$10,118.00		-$226.00

* Maximum rate is paid up to a family income of $31,755 and is reduced by 30 cents for every extra dollar of income.

** Maximum payment of $112 for children under age five and $78.12 for children over five years of age (payment is NOT per child).

*** To receive payment, approved or registered child care must be used. Broad estimate used (assume five per cent increase per additional child).

Source: <http://www.centrelink.gov.au> and <http://www.familyassist.gov.au>, and Centrelink telephone advisers.

Notes for Tables 4 and 5

Rental Allowance

Rent Assistance is paid at a rate of 75 cents for each dollar of rent a person pays above the relevant rent threshold, up to a maximum rate. The maximum rates and rent thresholds vary, depending on the family's circumstances, that is, whether a person is single or partnered and the number of dependent children in the family.

If the person is single without children, the maximum rate also varies according to whether or not the person shares accommodation with others.

If employed and earning an income, the payment for families with children is usually paid with Family Tax Benefit.

This allowance is not generally paid to people who pay rent to a government housing authority (such as Housing Commission).

Newstart Allowance

If a person is unemployed, Newstart Allowance helps while the person is looking for work and allows him/her to participate in activities designed to increase the chances of finding work.

Parenting Payment

This payment provides financial help to people who are primary carers of children. Parenting Payment can only be paid to one person who cares for a child. It is paid each fortnight to some low income families.

FTB Part A = Family Tax Benefit Part A

This payment is an annual tax benefit designed to help families with the cost of raising children. It is paid for dependent children up to and including the age of 20 years, and in some circumstances, up to the age of 24.

FTB Part B = Family Tax Benefit Part B

This payment is designed to give extra assistance to single income families including sole parents, especially families with a child under the age of 16 (or up to 18 in certain circumstances). It also gives extra assistance to families who have children under the age of five.

Appendix 2. GDP Results

Example cases	Income unemployment benefits (1)	(1) x k (2)	Government transfers in addition to earnings (3)	Total income (net wages + transfers) (4)	(4) x k (5)	(5)– (3) (6)	(6) – (2) (7)	Annual additional regional GDP (assuming multiplier 1.5) (7) + (1)
(1A) Single, income $20,000 in year 3, no children, no employees	$12,464	$18,696	-$2380	$17,620	$26,430	$28,810	$10,114	$22,578
(2A) Single, income $30,000 in year 3, no children, no employees	$12,464	$18,696	-$5172	$24,828	$37,242	$42,414	$23,718	$36,182
(3A) Single, income $20,000 in year 3, three children, no employees	$28,070	$42,105	$21,251	$41,251	$61,876	$40,625	-$1,479	$26,591
(4A) Single, income $30,000 in year 3, three children, no employees	$28,070	$42,105	$16,326	$46,326	$69,489	$53,163	$11,058	$39,128
(5A) Owner partnered, dependent spouse, four children, income $30,000 in year 3; one employee, single, no children, income $20,000 in year 3	Person 1 $32,274 Person 2 $12,464	$48,411 $18,696	$17,059 -$2380	$47,059 $17,620	$70,588 $26,430	$53,529 + GST ($5,000) $58,529 $28,810	$10,118 $10,114	$42,392 $22,578 $64,970
(6A) Partnered couple, both earning $25,000 in year 3, four children	$32,274	$48,411	$6584	$56,584	$84,876	$78,292 + GST ($5,000) $83,292	$34,881	$67,155

Note: The calculations of GDP effects are complicated by the fact that the 'marginal propensity to consume' is unknown. Thus the following method is used:

Step 1: Calculate the level of income from employment (column 4) and multiply it by the multiplier (5); and subtract from that the level of income received when unemployed (1) times the multiplier (2). This would give the increase in GDP, if the person had been employed at the prior setting up the business (7). The person was not actually employed, however, so the subtraction is too high by the amount of the social security income. This income did not actually represent output. Thus, add that back to obtain column (8).