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EVALUATING POLICY OUTCOMES: FEDERAL ECONOMIC DEVELOPMENT PROGRAMS IN ATLANTIC CANADA

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Abstract: The Atlantic Canada Opportunities Agency (ACOA) was established in 1987 as the federal government agent for economic development in Atlantic Canada. This article describes the Agency's "corporate" approach to provide credible, quantitative estimates of the long-term policy outcomes of total Agency activity. The focus of evaluation activity has been to determine the contribution of ACOA as a whole to its legislated mandate to enhance the growth of earned incomes and employment opportunities in Atlantic Canada. To provide reliable impact estimates for senior management, ministers, parliamentarians, stakeholders and taxpayers, the Agency has used multiple lines of evidence, both qualitative (client-user surveys and independent verifications) and quantitative, such as economic statistics from multiple sources, econometric modelling, and time-trend analysis versus a comparison group (ACOA clients versus all Atlantic small- and medium-sized enterprises), to measure policy outcomes. This methodological approach is detailed and the findings with respect to broad macro-economic indicators such as employment creation, earned income, tax revenues, and the unemployment rate are presented.

Résumé: L'Agence de promotion économique du Canada atlantique (APECA) a été établie en 1987 afin de veiller au développement économique dans la région de l'Atlantique, pour le compte du gouvernement fédéral. Cet article décrit la méthode «intégrée» adoptée par l'Agence pour fournir des évaluations quantitatives fiables des répercussions à long terme de ses politiques de développement, et ce pour l'ensemble des activités menées par l'Agence. Toutes les évaluations ont eu pour objet de déterminer dans quelle mesure l'APECA a respecté le mandat qui lui est conféré par la loi de favoriser l'augmentation du revenu gagné et des possibilités d'emploi dans la région de l'Atlantique. Pour pouvoir estimer les répercussions avec le plus de précision possible à l'intention des cadres supérieurs, des ministres, des membres du Parlement, des intervenants, et des contribuables, l'Agence a utilisé des sources de données multiples, tant qualitatives (sondages auprès des clients et vérifications indépendantes) que quantitatives. Elle a notamment utilisé les statistiques d'ordre économique de diverses provenances, des modèles économétriques, et des analyses des tendances temporelles par opposition à un groupe comparatif (clients de l'APECA par opposition à l'ensemble des petites et moyennes entreprises des provinces de l'Atlantique) afin de mesurer les répercussions des politiques de l'APECA. La méthode employée est décrite en détail. Les conclusions par rapport aux grands indicateurs macro-économiques, tels la création d'emploi, le revenu gagné, les recettes fiscales, et le taux de chômage sont presentées.

DESCRIPTION OF THE EVALUATION APPROACH

ACOA was created by the *Government Organization Act, Atlantic Canada*, 1987, as the federal government's lead agent for economic development in Atlantic Canada. The Agency's legislated mandate is: "To increase opportunity for economic development in Atlantic Canada and, more particularly, to enhance the growth of earned income and employment opportunities in that region."

In pursuing its mandate, ACOA focuses on small- and medium-sized enterprises (SMEs) because they are the most effective job creators in Atlantic Canada. Statistics Canada research (1999) shows that in Atlantic Canada, from 1989–96, over 95% of newly-created businesses are small- or medium-sized firms with less than 100 employees. ACOA works in cooperation with SMEs and other partners to provide resources such as information and tools for developing export markets; linkages with universities to enhance research and development; and programs tailored to the unique needs of rural SMEs to ensure that they are able to take advantage of business opportunities. ACOA expenditures in fiscal year 1998–99 totalled $363.5 million, less than 1% of Atlantic Canada's Gross Domestic Product (GDP) of $45.3 billion in 1998. As a result, aggregate measures of Atlantic economic activity are in no way an accurate measure of the impact of ACOA programs.

A Focus on Evaluating Policy Outcomes

When we are dealing with regional economic development, we are dealing with a very controversial field. Regional economic development programming designed to stimulate productive investment in

Canada's regions has been part of Canadian economic policy for over 35 years. For most that time, there has been a lot of debate (some of it informed, most of it uninformed) on the effectiveness of these measures: Are these programs making any difference to the economic growth of the regions? What are taxpayers getting for their dollars?

No conclusive answers to these and other questions had resulted by 1987. It was no doubt for this reason that Parliament included in the ACOA Act a clause requiring that the Agency table a comprehensive report in Parliament every five years, providing an evaluation of all activities in which the Agency was involved and the impact those activities have had on regional disparity. This legislated requirement for evaluation predates by some years the moves by many jurisdictions, including a number of Canadian provinces, the United States federal government, and several American states to legislate requirements for results reporting. Currently, the Agency remains the only major department or agency of the Canadian government that has a legislated requirement to evaluate the economic impact of its programming.

Early in its life, the Agency made a decision to take a "corporate" approach to provide credible quantitative estimates of long-term policy outcomes of total Agency activity. The objective was to determine the impact of ACOA as an entity on the ultimate policy outcomes of regional employment and the unemployment rate, Gross Domestic Product (GDP), a proxy measure for earned income, and regional disparity, as well as intermediate outcomes such as wages, business starts, and exports. As the Auditor General of Canada (1995) has noted, "In addressing the impact of its programming on regional disparity, the Agency has gone beyond most current practice for measuring and reporting results of economic development programs" (p. 18-13). The estimated impacts are related to expenditures to provide "value for money" outcomes, for example, the increase in GDP per dollar of ACOA expenditure. As this information is designed to inform decision making by senior Agency management and ministers of the Crown on resource allocation, the reliability of the estimates is a crucial concern.

Ensuring Reliability

One key to reliability is to utilize multiple lines of evidence or converging partial indicators. The Agency's second *Five-Year Report to Parliament, 1993–1998* (Atlantic Canada Opportunities Agency

[ACOA], 1998) expands and refines the techniques developed for the first *Five-Year Report to Parliament, 1988–1993* (ACOA, 1994).

Some examples of the techniques used to develop multiple lines of evidence are: project monitoring and review, client/user surveys, "tracking" of ACOA client performance by Statistics Canada, quasi-control group analysis, and independent reviews and verifications of the estimation methodologies and assumptions employed.

THE ESTIMATION PROCESS

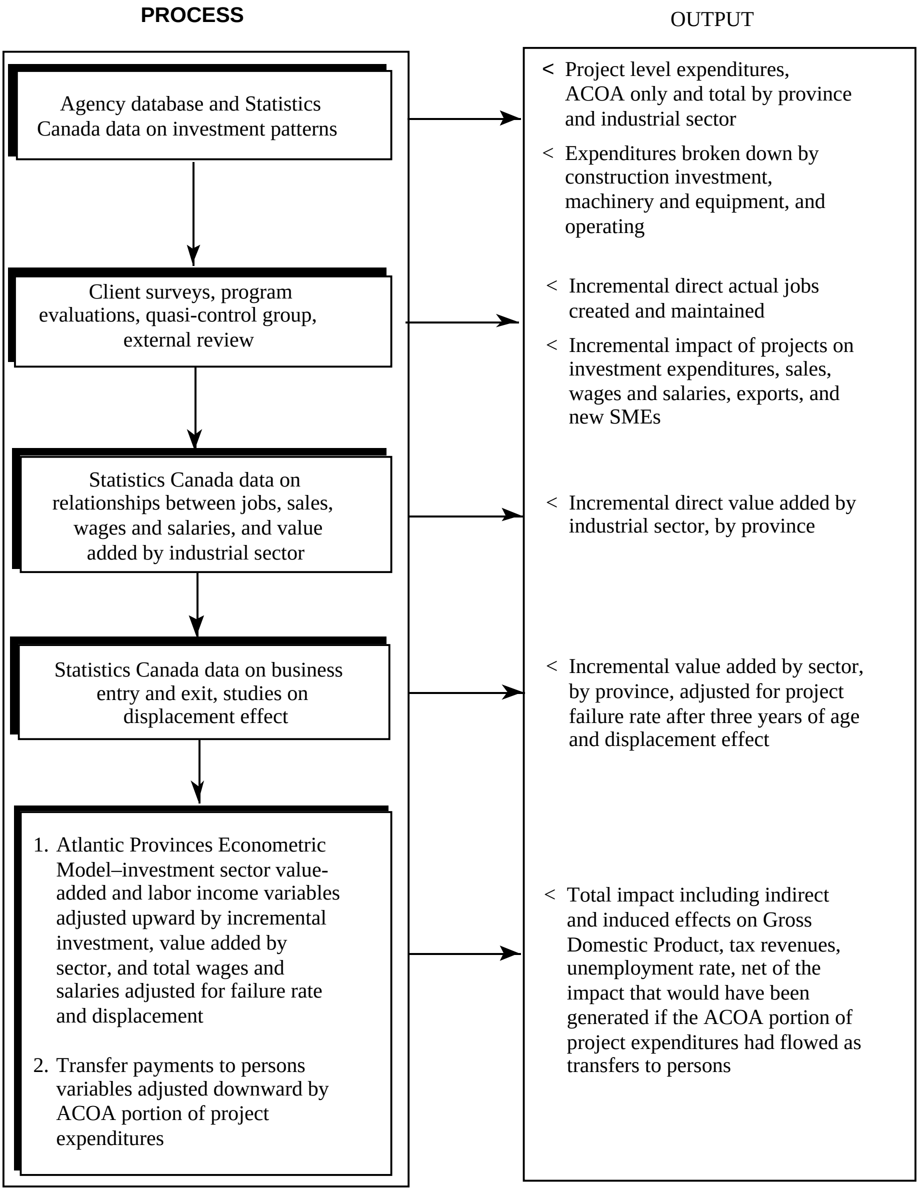
The process used to estimate the policy outcomes of ACOA expenditures, outlined in Figure 1, begins with an estimate of the jobs created and maintained through ACOA support. Actual employment generated by SMEs supported by ACOA was determined through surveys by Statistics Canada (1995, 1997). The jobs created and maintained are then expressed as a total impact on the Atlantic economy. To do this, the jobs are translated into a measure of "value-added" economic impact, sector by sector. Value-added impact by sector is entered in the Conference Board of Canada's econometric model of the Atlantic provinces to estimate the impact on GDP. In this manner, other macro-economic effects, such as the impact on taxes, can also be estimated.

Several important features of the estimates are worth noting:

1) In order that the estimates measure only those impacts "attributable" to ACOA programming, it is important to include only benefits from incremental projects. Incremental projects are those which would likely not have proceeded with the same scope, at the same time and in the same location without ACOA. Several lines of evidence were used to develop a reliable estimate for this crucial factor. The first approach was the traditional subjective approach involving post facto questions of the SME receiving ACOA support. The Statistics Canada surveys asked the client: "Without ACOA support, what would have been the impact on investment?" On this basis, Statistics Canada found that 95% of investments could not have proceeded as planned.

The second technique involved the analysis of a quasi-control group. Asking recipients of money whether they would have gone ahead with the project has its flaws: recipients of aid may be unlikely to say that the aid was unnecessary. Real measurement of incrementality would require randomly assigning equally valid projects to ei-

Figure 1
Process/Output Model



ther the experimental (receive money) or control (rejected) group. A situation close to this took place when ACOA temporarily imposed a $200,000 ceiling on project size on May 15, 1989. A follow-up survey by ACOA (1990) revealed that 58% of the viable projects refused assistance were cancelled altogether and fully 91% did not go ahead as planned, thus yielding an incrementality estimate of .91.

A final technique employed was independent verification. Incrementality was one of the issues examined by the Auditor General of Canada (1995) in the review of ACOA and the other regional development agencies. Findings based on file reviews concluded that "in 19% of the cases reviewed there were indications that the applicant had sufficient means to raise the necessary funds for a proposed project" (p. 18-22). This yields an incrementality estimate of .81.

In light of the evidence presented above, ACOA decided that an incrementality estimate of .67 would be reasonable.

2) Benefits include direct employment gains by ACOA-assisted businesses, plus indirect and induced employment as estimated by the Conference Board's model. Indirect and induced impacts occur as incomes associated with direct employment gains are spent and respent throughout the economy. This impact, commonly known as the "multiplier," is calculated to be approximately 0.4, meaning that four jobs are created through these indirect and induced impacts for every ten jobs created directly by ACOA expenditures.

3) The impact on GDP is net of the impact which would have been obtained if the ACOA expenditures had been directed instead to providing income support (for example via employment insurance or social assistance) to individuals. In the absence of ACOA expenditures to support productive investment and long-term employment, a most likely use of equivalent federal spending would have been this type of cash transfer to individuals.

4) While the underlying surveys and evaluations exclude any projects that had failed at the time of the surveys, it is recognized that some companies will fail subsequent to completion of the ACOA involvement with them. To the extent that firms assisted in earlier years fail, there will be a reduction in overall economic impact in the 1993–98 period. The average age of a completed project is about three years. Available data on the survival rate of ACOA-assisted firms from Statistics Canada (1998) indicates that a further 8% of firms fail between three and five years of age. To recognize the impact of

projects failing after completion, the overall impacts have been reduced by 10% to reflect failure rates between three and ten years, since the survival rate of businesses after five years is relatively stable (Statistics Canada, 1991). This assumption is believed to be conservative because it takes no account of the fact that some projects will do better than expected and offset failed projects.

5) It is also possible to make an allowance for what is called the "displacement" effect (i.e., ACOA support to firms adversely affecting competitors). The little evidence available indicates that this effect is weak. For example, the Economic Council of Canada (1977) found that if there is an effect, it is not very strong or occurs by inhibiting expansions. More recent evidence compiled by the National Audit Office (1991) on the United Kingdom experience indicates a displacement effect of between 6% and 29%. The Agency has procedures in place to ensure that adverse impact on competitors is kept at a minimum consistent with achieving the objective of improved competitiveness. It is true, however, that the Auditor General (1995) did find some instances where existing producers could have been affected by Agency support. Accordingly, for the purposes of ensuring conservatism in reporting results, a displacement effect of 15% has been assumed for ACOA-supported projects.

As a final step to ensure reliability and credibility of the estimates of policy outcomes, ACOA commissioned an expert review from outside sources. An independent audit undertaken by PricewaterhouseCoopers (1998) commented on the components of the process and the assumptions made (e.g., with respect to incrementality, displacement, and failure rates) and provided an opinion on the reliability of the overall estimates. Overall, PricewaterhouseCoopers concluded that "ACOA's process and assumptions are reasonable and perhaps conservative, i.e., the final ACOA-derived figures, for jobs created and maintained, could in fact be less than the real number, and the consequent impact on the unemployment rate could be higher" (p. 1).

THE ECONOMIC IMPACT OF ACOA EXPENDITURES

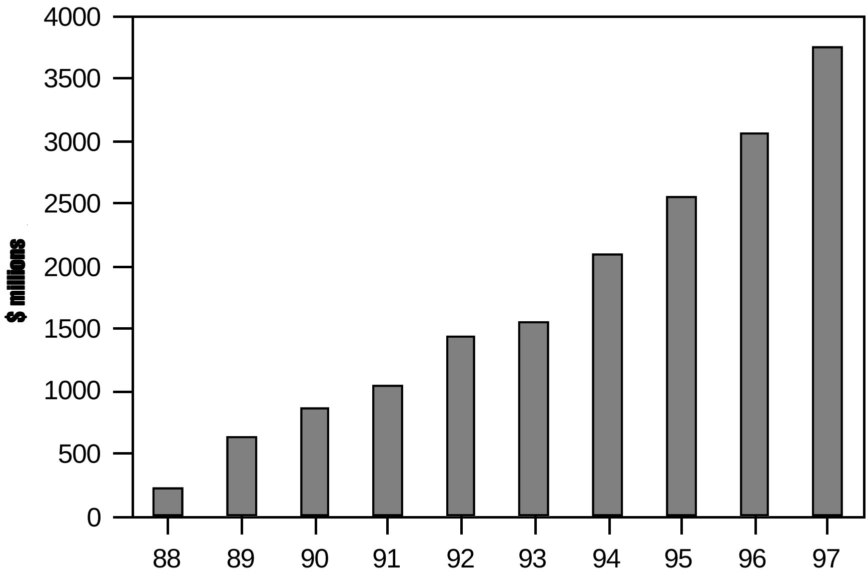
The estimation process described above produced the following estimates of the economic development policy outcomes of ACOA expenditures.

- From 1992 to 1997, the impact of ACOA programming on Atlantic GDP has grown from $1.4 billion to $3.7 billion a year (Figure 2);

- Over the ten years of its operations, every $1.00 of ACOA spending generated $5.00 of GDP impact;
- From 1988 to 1997, the Conference Board of Canada's model has calculated that ACOA program spending of $3.2 billion generated $3.9 billion in personal income taxes and sales taxes (Figure 3);
- The Atlantic unemployment rate is 2.8% lower due to ACOA programming than it would have been without that programming (Figure 4).

As further confirmation of the impact of ACOA programming, the Agency commissioned Statistics Canada (1998) to track comparison groups of ACOA-assisted clients versus all businesses in Atlantic Canada. This type of analysis responds to the comments of critics who claim that because aggregate employment in the economy has declined, then ACOA could have had no impact. What this analysis does reveal, as indicated in Figure 5, is that there have been signifi-

Figure 2
Total Increase in GDP ($ 1986) Resulting from ACOA Programming



Source: ACOA, based on estimates from Statistics Canada and the Conference Board of Canada's econometric model of the Atlantic provinces.

Figure 3
Tax Revenue Resulting from ACOA Expenditures

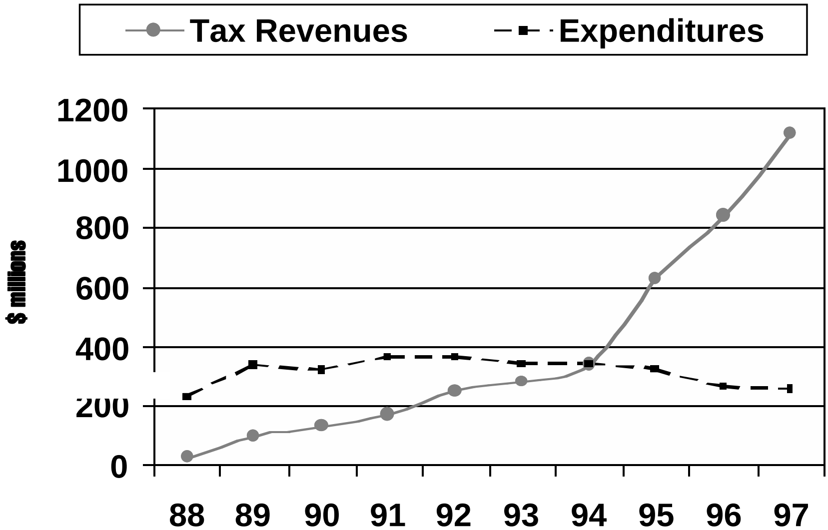
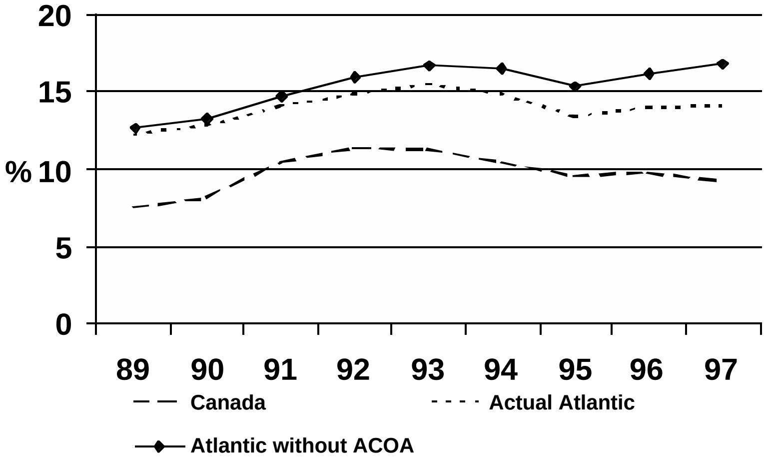


Figure 4
Impact on Unemployment Rate — ACOA Expenditures



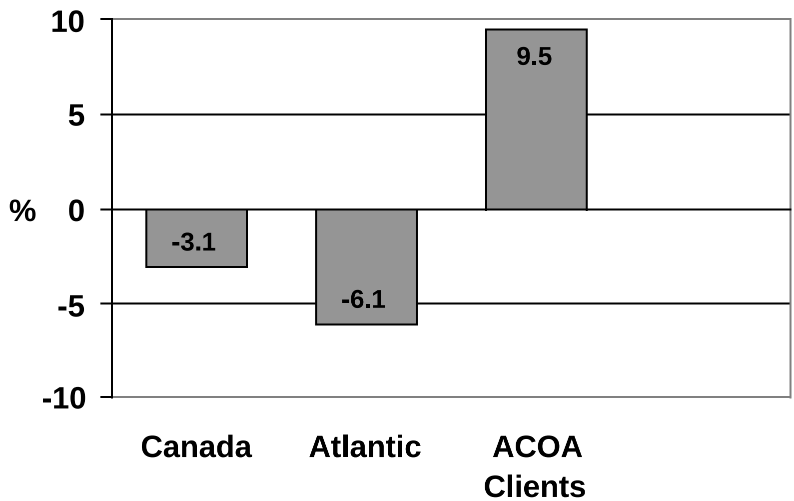
Source: ACOA, based on estimates from Statistics Canada and the Conference Board of Canada's econometric model of the Atlantic provinces.

cant gains in ACOA-assisted firms which have been offset by losses in unassisted firms due to economic restructuring and, in particular, the collapse of the Atlantic groundfish fishery in the early 1990s. This analysis directly responds to those observers who rely on aggregate measures to judge the efficacy of regional development programming. Figure 6, which compares employment performance for ACOA-assisted versus all firms for the manufacturing sector, which accounts for 60% of all ACOA support, provides a closer match of assisted to unassisted firms and a better indication of the employment growth attributable to ACOA. As Storey (1998) points out, evaluation of this type, which compares the performance of program recipients with comparable groups of unassisted enterprises, provides much stronger evidence of the difference made by the programming than monitoring techniques which typically only seek the opinions of recipients of support.

CONCLUSION

The Atlantic Canada Opportunities Agency has directed its evaluation efforts to providing estimates of the policy outcomes of its total

Figure 5
Business Employment Change (1989–1995)



Source: Statistics Canada

expenditures. As the federal government agent for economic development in the Atlantic Region, the Agency has focussed on providing information to senior government managers, ministers of the Crown, parliamentarians, and taxpayers on the contribution of its activity to regional growth in employment and income. In an effort to ensure the reliability of these estimates, the Agency has employed multiple lines of evidence using both quantitative and qualitative techniques. The resultant estimates demonstrate that the Agency's programs have made a significant difference to economic development in the region and are producing value-for-money outcomes. The approach isolates the impact of ACOA from external factors affecting economic growth and explains how the Agency's programs can have a positive impact even when aggregate economic growth is weak.

ACKNOWLEDGMENTS

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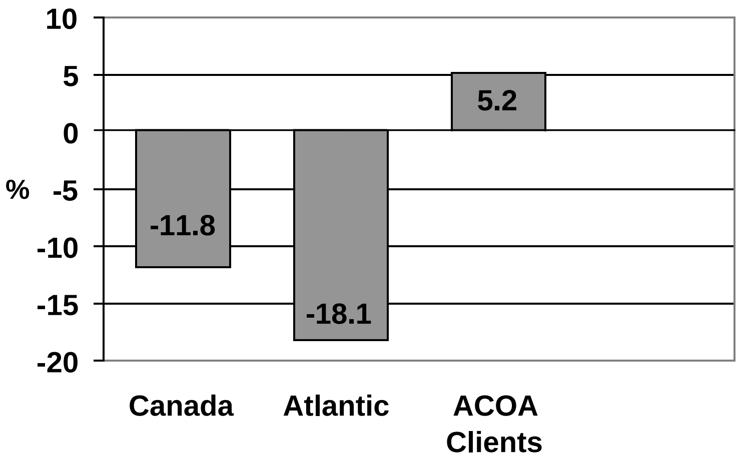
Figure 6
Manufacturing Employment Change (1989–1995)



Source: Statistics Canada

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