SOCIAL AND ENVIRONMENTAL ACCOUNTING: THE EXPANDED VALUE ADDED STATEMENT

by

Laurie Ingrid Mook

A thesis submitted in conformity with the requirements for the degree of Doctor of Philosophy
Department of Adult Education and Counselling Psychology
Ontario Institute for Studies in Education of the University of Toronto

© Copyright by Laurie Ingrid Mook (2007)
Social and Environmental Accounting: The Expanded Value Added Statement

Doctor of Philosophy (2007)
Laurie Ingrid Mook
Department of Adult Education and Counselling Psychology
University of Toronto

Abstract

The Expanded Value Added Statement (EVAS) makes a significant contribution to the field of accounting by highlighting hitherto invisible dimensions and integrating them into a single accounting statement. This, in turn, helps to tell a much richer performance story of organizations and opens up new possibilities for organizational and social change. The EVAS recognizes established traditions in the field of accounting, but at the same time pushes the envelope aiming at viable changes in accounting practices that nurture a more sustainable society. It provides a considerable advance in social accounting by integrating economic, social and environmental factors in a format that is applicable to different organization types, time dimensions, and contexts.

The EVAS has four main influences: mainstream accounting, critical accounting, social accounting, and sustainability. Mainstream accounting, particularly the progressive practice of value added accounting, highlights the wealth created (or destroyed) and distributed through the results of labour and capital in transforming external goods and services. Critical accounting contributed with two insights: that accounting is not a neutral activity, and that accounting practices are shaped by and can in turn can shape social reality. Social accounting, especially the subfield of integrated social accounting, has provided a significant precedent for the EVAS by broadening the range of items
included in accounting statements to take into account externalities. Finally, the concept of sustainability provided the conceptual and normative framework that guided the selection of variables included in the EVAS.

In this manuscript-based dissertation, the EVAS is applied to three case studies. The first looked at the value added of volunteer work and un-reimbursed out-of-pocket expenses in ARNOVA, a non-profit scholarly association. The second case study, a construct of 33 sustainable buildings in the USA, shows the costs and benefits of building in sustainable ways versus using traditional building techniques. The third case, based on a master-planned community in Vancouver, includes an economically targeted investment, a non-profit community police centre, a non-profit neighbourhood house, and municipal government agencies, and shows how the EVAS can integrate economic, social and environmental impacts and help to make investment decisions that support sustainability.
Acknowledgements

I am indebted to many friends and colleagues who have inspired and supported me while undertaking this graduate work. First and foremost, I would like to thank my supervisor, Jack Quarter, who provided unfailing support and guidance throughout the entire process. As a mentor, colleague and friend, he is unparalleled. I would also like to thank the members of my committee. Joel Amernic, Brenda Gainer, and Femida Handy provided valuable feedback and support. My external examiner, Ted Jackson, provided a thorough evaluation of the thesis and raised very thoughtful questions at my defence. Your insightful comments helped to enrich my understanding of this work from different disciplinary backgrounds, and I would like to thank you all for your helpful suggestions to move this work forward.

At the Ontario Institute for Studies in Education, I was lucky to be part of Jack Quarter’s thesis group, which meets monthly to provide mutual support. My thanks go to group members Sherida Ryan, Jorge Sousa, John Whitman, Peter Elson, Kunle Akingbola, Brenda Elias, Suzanne Cook, Clement Jumbe, and Nancy Linley for their friendship, advice and encouragement. Thank you also to the administrative and technical staff at OISE, for providing an environment that encourages and facilitates innovative and important work. I would wish to thank my friend and colleague Betty Jane Richmond for her pioneering work in this area. It was through her that I was first introduced to social accounting.
I would also like to express my sincere gratitude to all of the organizations and people who participated in this research. Without your belief in the importance of this work, this dissertation could not have been written. I would also like to acknowledge the financial support I received from the Social Sciences and Humanities Research Council and the University of Toronto.

My most heartfelt thanks go to my husband Daniel, who provided incredible support and feedback throughout the years, and my children Alejandro and Ana, who were almost as excited as I that I am now Dr. Mook. Last but not least, I thank my parents, Leo (1932-1992), and Henny Mook, for their love and encouragement, and for being environmental activists since before I was born.
Table of Contents

Abstract

Acknowledgements

Table of Contents

Chapter One:

Introduction

Background

Rationale for the Study

Purpose of the Study and Research Questions

Research Design and Methodology

Rationale for Case Selection

Data Collection

Organization of the Dissertation

Chapter Two:

Literature Review and Conceptual Debates

Introduction

Approaches to Accounting

Progressive Mainstream Accounting: The Value Added Statement

Social Accounting Models

Integrated Social Accounting: Two Waves

The First Wave of Integrated Social Accounting

The Second Wave of Integrated Social Accounting

Accounting Education
Adoption of Alternative Accounting Models 38
Rationale for an Expanded Value Added Approach 40
The Expanded Value Added Model 41

Chapter Three: Case #1 45
The Value of Volunteering for a Non-profit Membership

Association: The Case of ARNOVA

Abstract 45
Introduction 45
Organization: Choice and Background 47
Data Collection: The ARNOVA Survey 49
Findings: Volunteers at ARNOVA 50
ARNOVA: Value Added by Volunteers 51
Expanded Value Added Statement (EVAS): Introducing the Model 52
Estimating the Value Added by Volunteers in ARNOVA 54
Distribution of Value Added 61
Summary of the Expanded Value Added Statement (EVAS) 62
Additional Observations 64
Discussion of Findings 67

Chapter Four: Case #2 71
Integrating and Reporting an Organization’s Economic, Social and Environmental Performance: The Expanded Value Added Statement

Abstract 71
Introduction 71
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Main Assumption: Accounting as a Change Agent</td>
<td>72</td>
</tr>
<tr>
<td>Social Accounting</td>
<td>74</td>
</tr>
<tr>
<td>The Expanded Value Added Statement</td>
<td>76</td>
</tr>
<tr>
<td>Sustainable Building Example</td>
<td>78</td>
</tr>
<tr>
<td>Income Statement</td>
<td>83</td>
</tr>
<tr>
<td>The Expanded Value Added Statement (EVAS)</td>
<td>85</td>
</tr>
<tr>
<td>Value of Outputs</td>
<td>86</td>
</tr>
<tr>
<td>Subtracting External Purchases</td>
<td>87</td>
</tr>
<tr>
<td>Value Added</td>
<td>89</td>
</tr>
<tr>
<td>Ratio of Value Added to Purchases</td>
<td>89</td>
</tr>
<tr>
<td>Distribution of Value Added</td>
<td>90</td>
</tr>
<tr>
<td>Employees</td>
<td>90</td>
</tr>
<tr>
<td>Customers</td>
<td>90</td>
</tr>
<tr>
<td>Society</td>
<td>90</td>
</tr>
<tr>
<td>Organization</td>
<td>91</td>
</tr>
<tr>
<td>Summary of EVAS</td>
<td>91</td>
</tr>
<tr>
<td>Discussion</td>
<td>92</td>
</tr>
<tr>
<td><strong>Chapter Five: Case #3</strong></td>
<td>94</td>
</tr>
<tr>
<td><strong>Social Accounting and Reporting for Economically Targeted</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Investments: The Expanded Value Added Statement</strong></td>
<td></td>
</tr>
<tr>
<td>Introduction</td>
<td>94</td>
</tr>
<tr>
<td>Economically Targeted Investments and Fiduciary Responsibility</td>
<td>95</td>
</tr>
<tr>
<td>An Introduction to Social Accounting</td>
<td>99</td>
</tr>
</tbody>
</table>
Chapter Six: 
Comparative Cross-case Analysis, Recommendations and Conclusions 

Revisiting the Research Questions 

Question One: The EVAS in the Accounting Context 

Question Two: Comparing the Three Cases 

Common Elements across the Case Studies 

Varying Elements across the Case Studies 

Redefining Wealth: Items Included 

Recommendations for Accounting Education and Policy 

Recommendations for Further Research 

Epilogue: The Model in Use 

Conclusions and Limitations 

References 

Appendix A: Valuation Methods 

List of Tables 

Table 2.1 The Value Added Statement 

Table 2.2 The Expanded Value Added Statement in the Context of Integrated Social Accounting 

Table 2.3 Elements of the Expanded Value Added Statement 

Table 3.1 Calculation of Volunteer Non-reimbursed Out-of-pocket Expenses
Table 3.2 Expanded Value Added Statement for ARNOVA 59
Table 3.3 Reconciliation of Expenditures on Audited Financial Statements to Purchases of External Goods and Services on Value Added Statement
Table 4.1 Financial Benefits of Green Buildings (per ft²) 81
Table 4.2 Income Statement 83
Table 4.3 Financial Benefits of SBC Project A (17, 500 ft²/1625.75 m²) 84
Table 4.4 Expanded Value Added Statement – Sustainable Building Co. (SBC) 88
Table 5.1 Rates of Return, Mortgage Fund One, 1995-2004 (%) 109
Table 5.2 Breakdown by Percentage of Expenses of Rental Buildings 115
Table 5.3 Breakdown by Percentage of Expenses of Condominiums 116
Table 5.4 Statement of Operations 118
Table 5.5 Value Added Statement for Community Village, for the Ten Years Ending December 31, 2004 120
Table 5.6: Transportation Cost Factors (in 1996 US dollars) 122
Table 5.7 Average Cost of Property Crime to Victims, by Type of Crime (1996$) 125
Table 5.8 Comparison of ENERGY STAR and Non-ENERGY STAR 127
Table 5.9 Expanded Value Added Statement for Community Village 130
Table 6.1 Summary of Expanding the Boundaries Common to all Cases 138
Table 6.2 Summary of Expanding the Boundaries Specific to each Case 140-41
<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1.1</td>
<td>Case Study Methodology</td>
<td>10</td>
</tr>
<tr>
<td>Figure 2.1</td>
<td>Expanded Value Added Statement in Context</td>
<td>14</td>
</tr>
<tr>
<td>Figure 2.2</td>
<td>Graphical Representation of Inflows and Outflows of Resources of the Socioeconomic Impact Statement</td>
<td>35</td>
</tr>
<tr>
<td>Figure 3.1</td>
<td>Monetary and Non-monetary Contributions</td>
<td>63</td>
</tr>
<tr>
<td>Figure 3.2</td>
<td>Proportion of Total Activity Hours by Volunteers and Staff</td>
<td>64</td>
</tr>
<tr>
<td>Figure 4.1</td>
<td>Graphic Depiction of Value Added Showing Traditional and Sustainable Building Methods</td>
<td>91</td>
</tr>
<tr>
<td>Figure 5.1</td>
<td>A Graphic Illustration of Profit</td>
<td>102</td>
</tr>
<tr>
<td>Figure 5.2</td>
<td>A Graphic Illustration of Value Added</td>
<td>103</td>
</tr>
<tr>
<td>Figure 5.3: Distribution of Value Added</td>
<td>120</td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER ONE

INTRODUCTION

Background

The purpose of this thesis is to examine the limits of traditional accounting and to develop and apply an alternative accounting framework called the Expanded Value Added Statement (EVAS). This framework allows organizations to estimate their economic, social and environmental value added. I locate the Expanded Value Added Statement in accounting theory, and particularly reformist accounting theory. I intend to demonstrate that the Expanded Value Added Statement can be effectively applied to non-profit, for-profit and public-sector organizations to signal an organization’s commitment to sustainability, defined here as improving quality of life and reducing environmental degradation.

I was introduced to this topic several years ago, when I was exposed to the idea of measuring socio-economic impacts of non-profit organizations on their communities (Richmond, 1999). This led me to delve deeper into the limitations of traditional financial accounting, and initiated my own interest in social accounting. Since I am a former accountant and accounting supervisor, my background was well suited to connecting the practical and theoretical dimensions of this field.

Around the same time, I was invited to participate in a collaborative research project to use experimental social accounting and auditing methods to look at how and to
what extent the Waterloo Co-operative Residences Inc. contributed to the social and economic life of its community. In one of my literature searches I came across an article explaining the Value Added Statement (Meek & Gray, 1988), and was intrigued by its possibilities as a social accounting statement. However, the traditional Value Added Statement only included financial items, and I was interested in the possibility of showing both social and economic impacts. I then modified the statement to report both financial and social value added by the co-operative, and named it the Expanded Value Added Statement. The primary innovations of that model were to include an estimated value for social labour\(^1\) contributed by resident-members to the co-operative as part of the value added as well as a value for secondary outputs\(^2\) such as the skills learned by resident-members in running a multi-million dollar organization (Richmond & Mook, 2001).

After completion of the project with the student co-operative, I applied the Expanded Value Added Model to four Canadian non-profit organizations: the Canadian Red Cross, Toronto Region; the Canadian Breast Cancer Foundation, Ontario Chapter; Canadian Crossroads International; and the Jane/Finch Community and Family Centre. This project made it possible to address more specifically the challenges in attributing a comparative market value to volunteer contributions and in including them in the Expanded Value Added Statement.

I continued this line of research with Junior Achievement of Rochester in the State of New York, applying the Expanded Value Added Statement to that organization. Alongside that work I also created two additional social accounting statements. One of them was the Socioeconomic Impact Statement, which highlights the flow of monetary

\(^1\) Social labour: Work duties required as a condition of membership in a co-operative

\(^2\) Secondary outputs: the indirect effects of an organization’s service on its members, customers, clients or patrons.
and social resources to and from stakeholders. The other was the Socioeconomic Resource Statement, which reports an organization’s value creating resources broken down into economic capital (including financial and physical capital) and intellectual capital (including human, organizational and relational capital). I also applied the Socioeconomic Resource Statement to a case study of California commuters to illustrate the environmental impact of an organizational policy to encourage employees to use more environmentally friendly transportation to and from work. These research projects were included in a book called *What Counts: Social Accounting for Nonprofits and Cooperatives*, co-authored with Jack Quarter and Betty Jane Richmond, published by Prentice Hall in 2003 and in a second edition by Sigel Press in 2007.

**Rationale for the Study**

In Canada and throughout the world, there is a myriad of organizations that have both social and economic objectives. Among them are non-profit organizations, co-operatives, social enterprises, other for-profits with environmental and social mandates, and public sector enterprises. All these entities can be grouped under the umbrella concept of socially minded organizations. The main impetus for this dissertation was that the traditional accounting statements that these organizations prepare fall short in showing their social and environmental side. Indeed, traditional accounting statements were developed to measure success in terms of profit and shareholder returns. While the logic of traditional accounting does not reflect the broader objectives of socially minded organizations, traditional accounting also falls short because non-monetary resources are
excluded from consideration. This can be especially significant for those organizations that rely heavily on volunteer labour.

Thus, traditional accounting for socially minded organizations falls short in two important areas. First, traditional accounting is incomplete as it ignores a significant source of inputs, in particular, volunteer labour. Second, it is incomplete as it ignores a significant part of its outputs, particularly social and environmental outputs. Because of these two features, traditional accounting leaves much to be desired in helping socially minded organizations measure their performance according to their combined social and economic objectives.

**Purpose of the Study and Research Questions**

The purpose of this study is to explore the relationships between accounting and sustainability by broadening the boundaries of accounting. For this, it aims at developing a holistic social accounting model that integrates economic, social and environmental variables. The focus of this work is on socially minded organizations, that is, organizations that explicitly have more than an economic purpose as their primary reason of being. This thesis pays specific attention to two related questions:

1) Can the economic, social and environmental impacts of an organization be quantified to be included in an accounting model? If so, how?

2) Can an organization’s contribution to sustainability or detraction from unsustainability (quality of life and environmental health) be reflected in an accounting model? If so, how?
While the first question addresses more procedural issues, the second question places this work within a social/eco-justice framework and involves a visualization of ‘the world we want’.

**Research Design and Methodology**

This thesis includes three case studies. The first is the Association for Research on Nonprofits Organizations and Voluntary Action (ARNOVA), a scholarly association with over 1,000 members. The second is a construct of 33 sustainable buildings in the USA, grouped under the name of Sustainable Building. The third is a composite of four interrelated organizations that are part of a master-planned community: an economically targeted investment, a non-profit community police centre, a non-profit neighbourhood house, and the municipal government. This case study, which I call “Community Village”, is partially based on a real community located in Vancouver, Canada.

Case study research is used to explore particular dynamics within single settings (Eisenhardt, 1989). In the multiple case-study approach, each of the cases serves a specific purpose within the overall scope of inquiry (Naumes & Naumes, 1999; Yin, 2003). The case study approach is particularly appropriate to explore how research questions investigate a contemporary phenomenon within a real-life context, when the boundaries between phenomenon and context are not clearly evident and in which multiple sources of evidence are used (Yin, 2003). In this study, the focus is on making visible economic, social and environmental factors that relate to the wider concept of sustainability, in other words, quality of life and the environment.

---

3 Economically target investments refer to pension-fund investments that “seek to obtain risk-adjusted market grade returns while achieving collateral benefits for plan members and their communities” (SHARE, n.d.).
Each case study in this dissertation is a whole study on its own, and each follows the same conceptual model and asks the same general research questions. The differences between the cases are in the organizational type, unit of analysis, and mix of research methods used to collect data. The lessons from each case informed the next iteration of the model.

Rationale for Case Selection

The three cases were selected in order to provide differing organizational contexts (non-profit, for-profit and public sector) in which to test the model, and to further the development of the model by including a different array of social and environmental variables. The intent was not to evaluate the contribution to or detraction from sustainability of each organization, but to test the flexibility and viability of the Expanded Value Added Statement.

The first case study involves a membership non-profit organization. It consists of an exploratory analysis of how the volunteer work of members and their unreimbursed out-of-pocket expenses can be valued and presented within the Expanded Value Added Statement. The study is based on the Association for Research on Nonprofits Organizations and Voluntary Action (ARNOVA), an international organization that brings together academics and practitioners involved in research on non-profit organizations and voluntary action. Although research indicates that volunteer labour is of significant value to many non-profit organizations and to society, this value is generally not included in the organizations’ financial accounting statements. The first case utilizes the Expanded Value Added Statement to demonstrate how this could be done.
To explore how the model could be used in a for-profit setting, I created an entity called Sustainable Building, which is presented, in the second case. In this case, a variety of social and environmental impacts attributed to sustainable building are included in the Expanded Value Added Statement. The original data informing this case study come from Kats et al.’s (2003) analysis of 33 sustainable building projects in the USA. Such analysis included the impact of sustainable buildings over 20 years on energy use, waste disposal, water costs, environmental and emissions costs, operations and maintenance costs, and productivity and health. My contribution was to integrate the data into a holistic model and include it in the Expanded Value Added Statement.

The third case, Community Village, goes further in considering social and environmental factors, and also brings together organizations from three sectors—for-profit, non-profit and public—over a 10-year period. It is a case partially based on the master-planned community of Collingwood Village in Vancouver, B.C. As mentioned before, this case considers the combination of an economically targeted investment, a non-profit community police centre, a non-profit neighbourhood house, and the municipal government. It considers the contributions of volunteers and the individual and societal impacts of four dynamics: a) a reduction in car use due to proximity to a rapid transit line; b) the promotion of a physically active lifestyle; c) a focused effort on crime prevention; and d) the purchasing of energy-efficient equipment. The Expanded Value Added Statement in this case was intended to help investment decision-makers take into consideration economic, social and environmental impacts.

Figure 1.1 shows how the multi-case study evolved. The development of the three cases overlapped, with the first two cases providing the necessary insights to complete
the third case. Indeed, the ARNOVA case provided the background to include volunteer contributions, and the Sustainable Building case provided the basis for including social and environmental factors over a long term. Bringing all three cases together provided an opportunity to reflect on the model and implications for further research. I will address those issues in the final chapter.

**Data Collection**

Data were collected through reviews of documents and archival records, interviews, and an online survey. The aim of data collection was to gather information about the organizations’ impacts to enable the estimation of their comparative market value so they could be included in the Expanded Value Added Statement.

In the ARNOVA case, data were collected through document reviews and an online survey with members of the association. Documents included financial reports, annual reports, volunteer tracking reports and internal communications.

The Sustainable Building case relied on secondary data collected by Kats et al. (2003) from a study of 33 green buildings. These data were used to provide in the model the financial valuations relating to the environmental and health benefits of green building.

The Community Village case involved collecting data from a variety of organizations: a for-profit real estate development company, a non-profit community policing office, a non-profit neighbourhood center, and the municipal government. Interviews were conducted with two top management persons and two staff of the real estate development company, the executive director of a community policing centre, and
a researcher who had done previous research on this community. The real estate
development company provided selected financial data, and other financial documents
were obtained from government Internet sites. Other documents reviewed included
minutes from government meetings, internal newsletters and communications,
organization pamphlets and reports, personal correspondence, and government reports.

In order to expand the boundaries of traditional accounting, suitable valuation
methods had to be selected. Even though there may be disagreement on the specifics of
assigning a value to social and environmental outputs, placing a value on them recognizes
their presence and their relative importance to economic performance, and documenting
the assumptions behind these calculations enables readers to assess the basis of these
valuations.
FIGURE 1.1: Case Study Methodology.

Adapted from Yin (2003).
Organization of the Dissertation

This dissertation follows the manuscript-based approach. The first chapter provides the background and rationale for the proposed study and outlined the methodology used. Chapter two elaborates upon the critique of traditional accounting initiated in this first chapter and reviews alternative accounting models (e.g., value added accounting, social accounting, sustainability accounting). It also outlines the conceptual model that guided the data collection and analysis.

Chapters three, four and five consist of manuscripts of the three case studies. The first manuscript, ‘The Value of Volunteering for a Nonprofit Membership Association: The Case of ARNOVA’, will be published in the journal, Nonprofit and Voluntary Sector Quarterly in the Fall of 2007. In this case study, the value added by members of a scholarly association, the Association for Research on Nonprofit Organizations and Voluntary Action, is explored and included in an Expanded Value Added Statement.

The second manuscript, ‘Integrating and Reporting an Organization’s Economic, Social and Environmental Performance: The Expanded Value Added Statement’, was published as a chapter in the book, Sustainability Accounting and Reporting (Schaltegger, Bennett & Burritt, 2006). This chapter takes the Expanded Value Added Statement (EVAS) and applies it to a sustainable (green) building to demonstrate how the model can focus attention to and report on environmental and social impacts.

A version of the third manuscript, ‘Social Accounting and Reporting for Economically Targeted Investments: The Expanded Value Added Statement’, will be published as a chapter in book, The Socially Responsible Investment of Pension Funds (Quarter et al., forthcoming 2007).
This manuscript applies the model to a master planned community developed as an economically targeted investment (ETI) by a real estate owned by union and management pension plans.

Finally, chapter six provides a cross-case analysis and outlines the limitations and significance of the work. It then discusses some implications for policy, and for education and makes suggestions for further research.
CHAPTER TWO

LITERATURE REVIEW AND CONCEPTUAL DEBATES

Introduction

As mentioned in chapter one, the main contribution of this work to the field of accounting is the development of a conceptual tool called the Expanded Value Added Statement (EVAS). I provide the larger context of the EVAS in Figure 2.1.

As shown in the diagram, the Expanded Value Added Statement has four main influences: progressive mainstream accounting, critical accounting, sustainability, and social accounting (Figure 2.1). The first influence that informed the development of the EVAS is mainstream accounting, particularly the progressive practice of value added accounting. Value added accounting highlights the wealth created (or destroyed) and distributed through the results of labour and capital in transforming external goods and services into something else. A second influence is critical accounting, an academic subfield of the accounting discipline that provides two main insights for the conceptualization of the EVAS: namely, that accounting is not a neutral activity and that accounting practices play a role in shaping social reality. A third influence comes from the field of sustainability, which provides the value system and principles (e.g., a focus on quality of life and on the environment) that guide the selection of variables in the EVAS. Finally, the EVAS is highly influenced by the field of social accounting, especially by the subfield of integrated social accounting.
FIGURE 2.1: Expanded Value Added Statement in Context

In the remainder of this chapter, I outline the main approaches that can be found in the field of accounting: traditional accounting, critical accounting, and social accounting. In this section I also address the main critiques raised to these approaches. In the next section, I describe the Value Added Statement, and a subset of social accounting models that I call integrated social
accounting. In that part, I will distinguish between the first wave of integrated social accounting that emerged in the 1970s and the second wave that emerged in the 1990s and still continues. Afterwards, I discuss some of the obstacles that have precluded the adoption of these alternative models by the accounting profession. Lastly, I advance the rationale for utilizing a value added approach and describe in greater detail the model proposed in this dissertation, the Expanded Value Added Statement.

**Approaches to Accounting**

The prevailing approach to traditional accounting consists of identifying, gathering, measuring, summarizing and analyzing financial data in order to support economic decision-making (American Accounting Association, 1990, 1992). Traditional accounting follows a positivistic interpretation of the world (Chua, 1986; Lodh & Gaffikin, 1997). This understanding of accounting is based on the assumption that people are not active in the construction of their social reality (Chua, 1986). People are treated as resources used to generate profits, as opposed to the organization being treated as a resource for people (Cherns, 1978). The main raison d’être of economic organizations—and of actors in those organizations, including accountants—is to contribute to the ultimate goal of utility maximization. In this worldview, it is also assumed that the social order is stable and controllable, and that conflict is dysfunctional and hence should be avoided. Social order and progress are achieved through ‘free’ markets with limited state intervention, and the role of accounting research is to find the most efficient and effective way of meeting informational needs in order to maximize shareholder returns without making moral judgements about those needs or goals (Chua, 1986).
This traditional approach to accounting is reflected in teaching and professional development, which tend to focus on technique acquisition (Gray, Bebbington & McPhail, 1994; Roslender & Dillard, 2003). Moreover, students are often taught that accounting decisions in businesses are made in order to maximize shareholder wealth (Ferguson et al., 2005, 2006). Overall, accounting education treats the discipline as a neutral, technical, and value-free activity (Hopwood, 1990; Lewis, Humphrey & Owen, 1992).

The sustained criticisms to traditional accounting that emerged in the 1960s and 1970s gave birth to a second approach known as critical accounting. Critical accounting scholars began to systematically question the assumptions underlying traditional accounting, arguing that accounting practices are neither objective, neutral, nor value-free, and that they create, sustain and change social reality (Cooper & Neu, 1997; Craig & Amernic, 2004; Gray, 2002; Hines, 1988; Hopper, Storey & Willmott, 1987; Llewellyn, 1994; Lodh & Gaffikin, 1997; Mathews, 1997; Morgan, 1988; Tinker, 1985). For instance, critical accountants argue that, by the very act of counting certain things and excluding others, accounting shapes a particular interpretation of social reality. This interpretation, which corresponds to particular assumptions about how society functions and should function, has in turn implications for decision-making and policy (Hines, 1988; Tinker, Merino, & Neimark, 1982).

Critical accounting also urges us to reflect upon the conditions and consequences of accounting, especially as they lead to alienation, oppression and emancipation, and to consider accounting within a broad, societal context (Lodh & Gaffikin, 1997; Roslender & Dillard, 2003). Critical accounting asserts that organizations have an impact on a wide group of stakeholders and that accountability to these groups as a democratic mechanism is desirable (Gray et. al., 1997).
The range of contributions to the scholarship on critical accounting is diverse (Cooper & Hopper, 1987). There is a wide variety of theoretical and methodological underpinnings in critical accounting research including symbolic interactionism and ethnomethodology, political economy, Habermassian critical theory, Foucauldian approaches, Giddens’ structuration theory, Gramsci’s concept of hegemony, Derrida’s deconstructionism, social constructionism, critical structuralism, and actor-network theory (Lodh & Gaffikin, 1997).

At its best, critical accounting seeks not only to understand the world but also to change it. Indeed, in theory, critical accounting aims to “engender progressive change within the conceptual, institutional, practical, and political territories of accounting” through all evaluative forms of social praxis (Tinker, 2005, p. 100). Yet, this goal is hypothetical more than a reality, as most often, critical accounting theorists develop critiques without suggesting alternative models to address issues of economic, social and ecological justice in everyday life (Cooper, 2000; Cooper & Hopper, 2006; Dey, 2000, 2002; Gray, 1998). This emphasis on theoretical critique does not detract from the merits of critical accounting. In fact, its contributions have raised important insights to understand accounting frameworks and practices from a critical perspective. However, for the most part, this approach does not provide accountants with working strategies and tools that challenge traditional accounting practices. This is precisely the intent of the third approach, social accounting.

Social accounting shares most of the critiques of traditional accounting raised by critical accounting, but at the same time provides a working framework that takes into consideration a broader range of factors and actors in the accounting process. Social accounting is a broad term that includes a variety of alternative accounting models, including expanded value added accounting, environmental accounting, and sustainability accounting.
Social accounting has been criticized in both traditional accounting and in critical accounting. The traditional response relates to Friedman’s (1970, p. 32) often quoted statement on corporate orientation: “There is one and only one social responsibility of business—to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud.” From this perspective, social responsibility is narrowly constructed to mean the maximisation of profits, and thus any focus outside of this is not in the best interest of the firm.

From a critical accounting standpoint, social accounting is sometimes seen as a discourse that legitimizes the status quo, does not question the role that capitalism plays in perpetuating unequal and exploitive social relations, and provides an illusion that progress can be made by corporations (Everett & Neu, 2000). Lehman (1999, p. 220) goes even further and states: “The procedural and instrumental tendencies within reform accounting models can stall the construction of more critical and interpretive models.” Indeed, it is becoming more apparent that the current form of capitalism, “based on private property rights, growth and expansion, competition, maximizing consumption of non-essentials, maximizing returns to shareholders and directors and so on,” is not sustainable and cannot be sustainable (Gore, 2006; Gray, 2005; Gray & Milne, 2004, p. 73).

The problem with the critique is that it does not give any agency to accountants to contribute to social change by changing accounting frameworks and practices. I argue instead that accountants have the option of continuing with the current accounting systems that sustain the status quo or creating more democratic, transparent and participatory accounting practices in the context of a broader strategy for social change.
Moreover, social accounting can be applied to any social system and is not strictly a capitalist project. The idea of looking at three bottom lines through a stakeholder perspective is a useful way of understanding the interconnections between the economic, social and environmental dimensions of any society. Indeed, it provides processes necessary to understand and take simultaneous action on economic, social and ecological justice issues.

In the next two sections, I describe the main actual working models that have come out of the progressive mainstream accounting and integrated social accounting literatures. In reference to progressive mainstream accounting, I focus on the Value Added Statement. Regarding integrated social accounting, I discuss a variety of models that bring together economic, social and environmental factors into a single statement.

**Progressive Mainstream Accounting: The Value Added Statement**

To develop the model in my dissertation, I chose to start with a progressive practice (still marginal) of mainstream accounting called the Value Added Statement. As Burchell et al. (1985, p. 388) state:

value added has the property of revealing (or representing) something about the social character of production, something which is occluded by traditional profit and loss accounting. Value added reveals that the wealth created in production is the consequence of the combined effort of a number of agents who together form the co-operating team.

The Value Added Statement was proposed by Waino Suojuanan in 1954. Suojuanan based his ideas on the concept of value added developed by the United States Department of Commerce in the late 1940s for national income analysis. He recommended the Value Added Statement as a supplemental report, which analyses “the value added in production and its source
or distribution among the organization participants” (Suojanen, 1954, p. 396). The format of the statement is shown in Table 2.1, and is similar to the one used today.

Making the assumption that an enterprise is responsible to all participants and not only to its stockholders, Suojanen argues that the concept of income as it appears on the traditional income statement is deficient as it projects the idea that the sole purpose of the organization is to provide income to its owners. Through the Value Added Statement, which he also called a new form of enterprise accounting, Suojanen (1954) hoped to shift the conceptual basis of accounting from the primacy of accounting for profit to the wider representation of value added. In this new frame of reference, it is recognized that the organization’s primary focus is its viability, not the rights of its shareholders.

**TABLE 2.1: The Value Added Statement**

<table>
<thead>
<tr>
<th>Goods Produced, at Selling Price</th>
<th>$1,000,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less: Purchases of External Goods and Services</td>
<td>200,000</td>
</tr>
<tr>
<td>Total Value Added by Production</td>
<td>$800,000</td>
</tr>
</tbody>
</table>

**Source of Value Added:**

<table>
<thead>
<tr>
<th>Wages and Salaries</th>
<th>$400,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taxes</td>
<td>100,000</td>
</tr>
<tr>
<td>Interest</td>
<td>20,000</td>
</tr>
<tr>
<td>Depreciation</td>
<td>180,000</td>
</tr>
<tr>
<td>Profit</td>
<td>100,000</td>
</tr>
<tr>
<td><strong>Total Value Added</strong></td>
<td><strong>$800,000</strong></td>
</tr>
</tbody>
</table>

Value added resurfaced in the mid-1970s due to the growing power of labour, increasing recognition of consumer rights, and changing political conceptions of corporate accountability,
especially with respect to the environment (Burchell et al., 1985). The renewed impetus for value added started in 1975 with the publication of *The Corporate Report* by the U.K. Accounting Standards Steering Committee (Burchell et al., 1985; Haller, 1997; Roslender, 1992). This report (the findings of a committee that was re-examining “the scope and aims of published financial reports in the light of modern needs and conditions”), argued for a much wider view of accountability and recommended that a Value Added Statement be considered for new statutory disclosure requirements in the United Kingdom (Accounting Standards Steering Committee, 1975, p. 48). The Value Added Statement became so popular in the United Kingdom that in the 1970s, one third of the largest companies included it in their corporate reports (Morley, 1981, as cited in Roslender, 1992).

However, attention given to value added in the United Kingdom declined during the early 1980s as the political climate became more conservative. The election of Margaret Thatcher as prime minister resulted in a focus on free markets, competition, increased investment in technology, and reductions by corporations in their labour force. This political climate differed from the previous decade’s emphasis on co-operation and participation (Burchell et al., 1985). As well, with the increase of oil prices in 1979, the related economic recession, and the focus on short-term financial results, social reporting all but disappeared until the mid-1980s. At that point, it was brought back as a result of the attention given to establishing environmental reporting standards—for example, by the Brundtland Report (UNWCED, 1987).

In the 1990s, The American Accounting Association (1991) and the International Accounting Standards Committee (1996) recommended that Value Added Statements be included in financial reporting. In the U.K., a major emphasis on value added re-appeared in 2002, when the Department of Trade and Industry Innovation Unit published its first ‘Value
Added Scoreboard,’ which show the top 500 U.K. and top 300 European companies in terms of value added. By 2007, 800 U.K. and 750 European companies were included in the scoreboard (DTI, 2007).

**Social Accounting Models**

It is pertinent to note that social accounting projects can fall into two broad categories. One of them, which I call ‘supplemental social accounting’, uses qualitative data and descriptive statistics to assess the extent to which an organization is meeting the expectations of its stakeholders in executing its mission (GRI, 2000, 2005; New Economics Foundation, 1998; Sillanpää, 1998; Zadek, 1998). Such qualitative social accounting is frequently supplemental to the financial accounts, and as such often receives secondary status (Coupland, 2006). It is also difficult with supplemental reports to judge the relative materiality of social and environmental actions with respect to economic performance. As a result, social and environmental reports published by an increasing number of corporations are frequently dismissed as ‘greenwashing’ or “specious gloss” (Laufer, 2003; Owen & Swift, 2001, p. 5).

The second category of social accounting—the one used in this dissertation—integrates social, environmental and economic data. In other words, the social and environmental dimensions are not supplemental to the financial accounts; rather, the three together are integral. I use the term ‘integrated social accounting’ to refer to this approach.

**Integrated Social Accounting: Two Waves**

What follows next is a review of integrated social accounting models in the accounting scholarly literature. All of these models expand the range of items considered when measuring performance and present them in one statement. They assign a monetary value to non-monetary
social and environmental items in order to include items not exchanged on the market within an accounting statement. Additionally, many are driven by a vision of justice, take a stakeholder approach, and thus make visible the concept of social relations.

As can be seen in Table 2.2, there have been two waves of integrated social accounting. The first was in the 1970s, and was characterized by bold experimentation with alternative accounting models for for-profit organizations, and bold claims about what they could measure and represent. This experimentation all but disappeared in the 1980s, and a second wave re-emerged in the 1990s, albeit a more cautious approach that was more realistic about what these models could measure (Gray, 1998, 2001). This second wave also saw several models applied to organizations outside the for-profit sector, for instance, to non-profits and co-operatives.

**The First Wave of Integrated Social Accounting**

The 1970s saw a growing public demand for information related to expenditures and associated social impacts (Dilley & Weygandt, 1973). Experimentation also grew with different accounting statements to reflect this information demand. Predictions were made that social audits would be required for business organizations within the next ten years (Linowes, 1972). However, as we know now, this was not to be.

It was in this period that David Linowes (1972) created the Socioeconomic Operating Statement, designed to include “expenditures made voluntarily by a business aimed at the improvement of the welfare of the employees and public, safety of the product, and/or conditions of the environment” (Linowes, 1973, p. 40). In this statement, Linowes highlighted improvements and detrims, and the difference between the two was the total socio-economic contribution or deficit for the year. Examples of improvements were the cost of pollution abatement equipment required by law; tangible benefits for employees not specified in collective
agreements; and cash and in-kind donations made by the organization. Detriments were those items that had been brought to the attention of management but which were not acted upon, examples being neglecting to install safety devices or pollution reduction devices.

**TABLE 2.2 The Expanded Value Added Statement in the Context of Integrated Social Accounting**

<table>
<thead>
<tr>
<th>INTEGRATED SOCIAL ACCOUNTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Wave (1970s)</td>
</tr>
<tr>
<td>• Bold experimentation</td>
</tr>
<tr>
<td>• Bold expectations</td>
</tr>
<tr>
<td>Applied to for-profit</td>
</tr>
<tr>
<td>organizations</td>
</tr>
<tr>
<td>Social and Financial</td>
</tr>
<tr>
<td>Income Statement</td>
</tr>
<tr>
<td>(Abt &amp; Associates, 1971)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Socioeconomic Operating</td>
</tr>
<tr>
<td>Statement</td>
</tr>
<tr>
<td>(Linowes, 1972)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Statement of Fund</td>
</tr>
<tr>
<td>Flows for Socially</td>
</tr>
<tr>
<td>Relevant Activities</td>
</tr>
<tr>
<td>(Dilley &amp;</td>
</tr>
<tr>
<td>Weygandt, 1973)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>--------------------------------------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Linowes’ call to identify and include elements brought to the attention of management but ignored, or “social nonactions,” was controversial (Burton, 1973; Linowes, 1973, p. 41; Mobley, 1973), as was the monetization of social actions (Bauer, 1973; Burton, 1973; Lewis, 1973; Mobley, 1973). Linowes’s goal to come up with an firm’s total socio-economic contribution or deficit for the year which was comparable with others in the same industry was
clearly fraught with a great range of complexities. These complexities led most commentators to dismiss this form of accounting.

However, the criticism did not stop other experiments from emerging. A similar statement was proposed by Estes (1976), which he called the Social Impact Statement. In this case, he used the terminology “social benefit” and “social costs”, with a resulting “social surplus” or “social deficit.”

Dilley and Weygandt (1973) presented a Social Responsibility Annual Report for a publicly owned Midwest gas and electric utility, and this Report included a Statement of Funds Flow for socially relevant activities. Although they saw a benefit-cost approach as the most promising, they proposed the cost outlay approach as a first step because of the difficulty in measuring benefits. The Dilley and Weygandt statement highlighted expenditures related to environmental and social activities, and also showed these expenditures as a percentage of operating revenues to indicate the portion of sales revenues applied to social concerns. It also showed environmental and social expenditures as a percentage of advertising expenses to illustrate “the emphasis placed on solving social problems versus creating future sales” (p. 70). Items under the category ‘environmental’ related to pollution control and environmental research. The category ‘social’ included items such as charitable contributions and employee educational and recreational expenditures. The Statement of Funds Flow highlighted the additional expenditures that the company incurred by taking social and environmental considerations into account.

The Abt model was another early attempt at social accounting (Abt & Associates, 1971, as cited in Butcher, 1973). Unlike other accounting innovators of this period who created new statements to supplement traditional accounting statements, the Abt model attempted to modify
existing statements by rearranging them and adding items that broadened the issues included. For example, the Abt group produced a balance sheet that attempted to estimate an organization’s impact on staff, clients, owners, the neighbouring community, and the general public. They also produced a Social and Financial Income Statement using the same principles as for the balance sheet—a broader array of variables, including those for which market values have to be estimated, and a breakdown by stakeholder groups. For example, the stakeholder ‘community’ was shown to receive benefits through local taxes paid by the company, environmental improvements and reduced parking space. Layoffs and involuntary terminations were treated as a social cost, as was the difference of earnings between a minority or female staff member and a non-minority or male staff member. Staff overtime ‘worked but not paid’ was considered a subsidy to society and clients, and environmental resources used through pollution were treated as a cost to society because these are effects of production for which the company does not pay. However, Abt’s approach was seen as too abstract and complicated to be viable for traditional accounting (Bauer & Fenn, 1973).

In Sweden, Gröjer and Stark (1977) undertook a social accounting experiment with a major Swedish company called Fortia Group, responding to what they saw as changes in social values towards more emphasis on quality of life. They sought to develop a social accounting framework founded on a theoretical base, and started by defining their understanding of the purpose of accounting: “accounting is seen as providing a description in both monetary and non-monetary terms of the positive and negative effects which human beings or groups of human beings perceive as stemming from a company’s operations” (Gröjer & Stark, 1977, p. 350). They declined the idea that financial accounting was a subset of social accounting, instead positing that it was neither possible nor desirable to separate economic from social factors. They
attempted to answer three questions: “(1) Accounting by whom? (2) Accounting for whom? (3) Accounting of what?” (Gröjer & Stark, 1977, p. 351). Using a goal-oriented approach they determined the goal fulfillment criteria of the company’s different groups of participants—employees, local authorities (municipalities), county councils, national authorities, the external environment, foreign participants, shareholders and the firm⁴—and constructed a profit and loss account for each group. The goals were translated into indicators at the micro level, and the accounting entity thus became defined through identifying the effects of the company’s operations on the goals of each of the different participants. Theoretically, the totality of these individual profit-and-loss statements would give the total ‘profit-and-loss of the company; however, practically the model provided a surrogate measure rather than a real measure of welfare. Nevertheless, the researchers felt this was still better than the measure of performance expressed through traditional financial statements.

The Second Wave of Integrated Social Accounting

Integrated approaches to social accounting all but disappeared for a decade and then reappeared with the triple bottom line approach proposed by Elkington in the early 1990s (Elkington, 2004). The three bottoms lines he was referring to were people (social equity), planet (environmental quality), and profit (economic prosperity) (Elkington, 2004). In 1987, just before the Brundtland Report was released, Elkington and Hailes co-founded SustainAbility, an organization that advises its clients on the risks and opportunities associated with sustainable development and corporate responsibility (SustainAbility, 2007). In the early 1990s, discussions about the direction of the organization in expanding its environmental agenda to include social and economic dimensions led to emergence of the now commonly used term, triple bottom line

⁴ They also attempted a statement for the group ‘consumers’, but were unable to collect the necessary data.
or TBL. There was a conscious effort to develop language that would resonate with business, as business organizations were their main clients (Elkington, 2004). And resonate it did.

Researchers at the University of Sydney in the Centre for Integrated Sustainability Analysis (out of the School of Physics) used the triple bottom line concept to develop a framework to measure corporate performance against economic, social and environmental sector benchmarks (Weidmann & Lenzen, 2006). They applied the framework to dozens of organizations including companies, government departments and non-profits. One clear finding of applying the model was that the data collection burden had to be small. As a result, they developed a software tool called Bottomline³ that would create a comprehensive sustainability report based on existing financial information only. An interesting output of this program is the generation of a benchmark spider, which shows the key financial, social and environmental indicators of the organization being measured against the average triple-bottom-line performance of the sector that the organization is based in.

The second wave of integrated social accounting also saw a derivative of social and environmental accounting emerge called sustainability accounting. Sustainability is a term that has a long history and many definitions, but its public and policy consciousness is most often linked to the 1987 United Nations report, *Our Common Future*, also known as the Brundtland Report (Bebbington & Gray, 2006). The report calls for “a form of sustainable development which meets the needs of the present without compromising the ability of future generations to meet their own needs” (UNWCED, 1987, p. 8). In other words, there was a call for both inter- and intra-generational equity and development that is not about increasing profits and the standard of living for a few, but about efficient, profitable and fair production that makes life
better for everyone while also protecting our environment. As such, sustainability is primarily a
global concept (Gray & Milne, 2004).

Sustainability accounting supports and monitors an organization’s contribution towards
or away from sustainability (Gray & Milne, 2004; Schaltegger, Bennett & Burritt, 2006).
Whereas the concept of triple bottom line is often thought of as the pillar of economic, social and
environmental bottom lines, sustainability accounting addresses the integration of these three
facets while taking into consideration efficiency and effectiveness. It tries to move away from
the approach of making the wrong things “less bad,” to doing the right thing in the first place
(McDonough & Braungart, 2002, p. 76). Sustainability accounting is thought to be most useful in
considering the impacts of a range of organizations, as opposed to the impact of individual
organizations. Thus, it is a systems concept, rather than an organizational concept (Gray &
Milne, 2004).

In the 1990s, Bebbington and Gray (2001) attempted to develop a ‘sustainable cost
calculation’ for a New Zealand company that specializes in conducting research to develop
knowledge about how land eco-systems can be sustainably managed. Although the researchers
and the organization did not have any detailed idea about how to put together a sustainable cost
calculation, they did initially have some expectations about the magnitude of the figures that
would be produced. As a first stage, they set out to get an idea of the organization’s scope of
operations. Based on factors they thought would have a significant environmental impact and
which were quantifiable, they decided to focus on four areas: energy, transport, core operations,
and a recently completed building project. The first three of these areas related to revenue-
generating activities and the last to a capital project.
Over the next seven years, a costing model was developed, showing in incremental steps what it would cost to become fully sustainable. However, when all the numbers were put together, they were much smaller than anticipated, and this caused uncertainties about the relevance of the project. In practical terms, there were issues in terms of the completeness of the data and the availability of reliable cost data. Secondly, it was found that there was only so much a firm could do to move towards sustainability by changing its operating and purchasing habits to more sustainable goods and services. Finally, one issue that no one had anticipated fully was the reluctance by the organization to significantly change its way from ‘business-as-usual.’ Nevertheless, key lessons from this experiment were that undertaking experiments in new accounting in actual organizations, reflecting on the process and results, and re-conceptualizing as needed, are essential.

In the late 1990s, British Petroleum, in collaboration with the University of Aberdeen and Genesis Oil and Gas Consultants, took the concept of sustainability accounting and developed the Sustainability Assessment Model (SAM). This model quantifies the social, environmental, economic, and resource usage impacts of infrastructure projects over their full life cycle, from ‘cradle to grave’ (Baxter, Bebbington, & Cutteridge, 2004; Brown & Frame, 2005). These impacts are measured through 22 performance indicators and then monetized. The result is a project-specific, graphical ‘SAM signature’ showing both the positive and negative impacts of changes in economic, environmental and social capital. The SAM signature presents performance in four categories: social impacts (positive and negative), environmental impacts (primarily damage), resource usages, and financial flows to the economic entity and its stakeholders (e.g., shareholders, employees, suppliers, government). The developers of the Sustainability Assessment Model explicitly maintain that the SAM does not make a definitive
statement of an organization’s impact on sustainable development. Rather, they advocate use of
the model to provide a starting point for discussions and decision-making.

Finally, Bent and Richardson (2002) proposed a model of financial sustainability
accounting that adjusts and extends the main accounting statements to reflect three dimensions:
timing, location and type of impact. They define financial sustainability accounting as “the
generation, analysis and use of monetarised environmental and socially related information in
order to improve corporate environmental, social and economic performance” (Bent &
Richardson, 2002, p. 7). Their model involves restating the profit and loss statement to show the
internal flow of goods and services through a Value Added Statement, an Environmental
Financial Statement, and a Social Financial Statement. Their model also extends the profit and
loss statement to include external costs and benefits not traditionally taken into account to the
environment, society and the economy. They also proposed an extended balance sheet to include
a fuller account of the range of assets (manufacturing, financial, human, social, and natural
capital), and ‘shadow’ liabilities (liabilities relating to sustainability risks) of an organization.

The second wave of integrated social accounting also saw the beginning of
experimentation with integrated social accounting for organizations outside of the for-profit
sector, although these models are far fewer in number. Organizations within the social economy
(for instance, non-profits, co-operatives and social enterprises) have unique characteristics, yet
traditional accounting procedures are designed for private-sector organizations that exchange
their goods and services in the market and do not reflect this uniqueness. Social accounting
seems particularly appropriate for these organizations.

For non-profits, Land (1996) developed a social impact statement that distinguished
between three components: output, outcome, and side-effect indicators. He used the example of a
‘Meals on Wheels’ program to show how these indicators could be measured. For instance, output indicators included the number of meals delivered and people served; outcome indicators focused on the client satisfaction; and side-effect indicators looked at the impact of the delivery of meals on the client’s nutritional or health status.

Based on this framework, Richmond (1999) created the Community Social Return on Investment model in order to look at how social organizations create value from the perspective of the community. Using a case study of a community-based employment training agency serving persons with disabilities and other server barriers to employment, the model analyzed the organization’s primary, secondary and tertiary outputs in order to reflect the organization’s social return-on-investment. In order to do so, it developed a comparative economic value for social outputs, and also included a value for volunteer contributions.

Vaccari (1997) developed a Co-operative Social Balance statement to reflect the extent to which co-operatives achieve their social mission. It is organized by stakeholder groups: members, consumers, employees, civil society, and the co-operative movement. One unique feature of this statement is a section that highlights the co-operative’s investment in member participation in annual general meetings, the board of directors, and committees.

In 1999, I first experimented with the Expanded Value Added Statement and applied it to a student housing co-operative (Richmond & Mook, 2001). In this model, I included member contributions and other non-financial items in the statement by estimating a comparative market value for them. The model was subsequently applied to volunteer programs in non-profit organizations, as mentioned in the first chapter (Quarter et al., 2003; Mook et al., 2007), and further developed in this dissertation.

In 2002, I developed the Socioeconomic Impact Statement based on research with the
non-profit organization, Junior Achievement of Rochester. This model was subsequently applied to a for-profit company’s program, to encourage employees to reduce their contribution to pollution through their commuting choices, and to a non-profit community and family centre (Mook & Quarter, 2006; Mook et al., 2007). The Socioeconomic Impact Statement is analogous to an income statement, but also includes social information. It builds on the models proposed in the 1970s, including Linowes’ (1972) Socio-Economic Operating Statement, and Estes’s (1976) Social Impact Statement. Whereas traditional accounting creates a perception that social economy organizations are users of resources and separate from the private and public sectors, the Socioeconomic Impact Statement shows them as creators of value and an integral part of our society. For instance, as the graphical representation of a Socioeconomic Impact Statement for the Jane/Finch Community and Family Centre in Figure 2.2 shows, there is a large inflow from the organization to the recipients in the community, and this inflow is achieved primarily because of the outflow to the organization from government, employees, foundations and volunteers. The figure also shows how Jane/Finch supports the private and public sectors. The Socioeconomic Impact Statement emphasizes this transfer, whereas the Statement of Activities, or any traditional income statement, would not. For a non-profit like Jane/Finch, not including the pattern of inflows and outflows misses the essence of the organization’s contribution to society.

In the same year, and also based on the work with Junior Achievement of Rochester, I developed the Socioeconomic Resource Statement, analogous to the balance sheet. This work was inspired by Abt and Associates' (1971) Social and Financial Balance Sheet, but moved it in a somewhat different direction by integrating economic capital (financial and physical capital) with intellectual capital (human, organizational and relational capital). The resulting statement
presents a more complete story of the resources available to create future value than does the traditional balance sheet.

**FIGURE 2.2: Graphical Representation of Inflows and Outflows of Resources of the Socioeconomic Impact Statement**

![Graphical Representation of Inflows and Outflows of Resources of the Socioeconomic Impact Statement](image)

(Mook & Quarter, 2006, p. 261)

**Accounting Education**

In the literature reviewed, I identified two main areas of criticisms to accounting education. The first area of criticism has to do with the disjunction between accounting education and the complexities of today’s workplaces. The second area, and perhaps more important, is the
emphasis on an instrumental rationality at the expense of critical reflection and of an analysis of the role of accounting in society historically and today.

In terms of preparing accountants for the needs of the workplace, accounting education has been described as facing a crisis. Among the major findings of a study by Albrecht and Sack (2000) supporting this claim are the following:

- The number and quality of students electing to major in accounting is decreasing rapidly. Students are telling us by their choice of major that they do not perceive an accounting degree to be as valuable as it used to be or as valuable as other business degrees.

- Both practicing accountants and accounting educators, most of whom have accounting degrees, would not major in accounting if pursuing their education over again.

- Accounting leaders and practicing accountants are telling us that accounting education, as currently structured, is outdated, broken, and needs to be modified significantly.

(Albrecht & Sack, 2000, p.1)

These three findings apply mostly to the business world. To them we can add that current accounting practices are not always relevant to reflect the realities of socially minded organizations. For instance, in relation to non-profit organizations, a study by Mook et al. (2005) surveyed a sample of 49 non-profit accountants and financial officers about their views on whether traditional accounting captures the performance of non-profit organizations in accordance with their missions. The study also included questions about the appropriateness and viability of including volunteer contributions in accounting statements.

Although they were a self-selected group with an interest in measuring volunteer contributions, the perceptions of the accountants and financial officers are still insightful. Less
than one-third of the respondents felt that traditional financial statements appropriately reflected the performance of non-profits, and the majority did not feel that their accounting education was adequate for preparing financial statements that reflect the performance of non-profit organizations.

One of the features of non-profit organizations that is often excluded from accounting statements is volunteer contributions. Only 8 percent felt that it was a bad idea to quantify volunteer contributions, and only 6 percent felt it was impossible. The majority of these accountants and financial officers felt that it was a good idea and that it was possible to include volunteer contributions in accounting statements, but at the same time they felt that they lacked the technical competencies to do so. They suggested that it was important to create spaces for executive directors, accountants and volunteer managers to discuss these issues. Additionally, they identified education and awareness of social accounting for all stakeholders as crucial in order for it to become accepted and implemented on a wider scale.

In relation to the criticism that accounting education lacks critical reflection and analysis, Amernic and Craig (2004, p. 343) point out that it is important for accounting educators and students to recognize that accounting is “idiosyncratic, political, rhetorical, ideological and non-objective.” As they elaborate a few pages later,

By ignoring the social perspective of accounting we are not playing ‘fair’ with the students who ‘learn’ accounting, and with the future generations of people who will bear the consequences of ill-informed accounting behaviour by those students when they enter practice. (Amernic & Craig, 2004, p. 351).
Based on this assessment, Amernic and Craig make three recommendations to accounting educators in order to promote independent thought in the field of accounting: curricular reform, engaging students with critical theory, and exposing students to the history of the field.

Regarding curricular reform, they suggest incorporating four themes into first-year and subsequent accounting courses. The first one is acknowledging that accounting is a language, which influences how we see and think about the world. The second is recognizing that the results of accounting are embedded within many other aspects of business and the world-at-large; for instance, accounting feeds into economics, finance, marketing, human resource management and governance. The third is acknowledging from the beginning that accounting is complex and messy, and the last one includes an understanding of the metaphorical aspects of accounting and business education.

In relation to the second recommendation, Amernic and Craig (2004) point out that accounting education suffers from a “poverty of accounting discourse” (p. 342). To address this, they suggest that accounting educators engage students with theory, critical analysis and ideology. Their third recommendation is to expose students to accounting history, including reading the works of the great minds of the discipline and understanding the criticisms of accounting standards over the years.

**Adoption of Alternative Accounting Models**

Although there have been many attempts to experiment with accounting statements that reflect economic, social and environmental issues, their take-up has been slow or non-existent. Outside of the Value Added Statement, the accounting profession has not supported any of these developments. Some possible reasons for this were explored with policy makers and accounting
bodies in Europe by Bebbington et al. (2001). From their interviews and survey, they identified five explanatory factors to explain why accounting bodies have not initiated change in this area. First, they found that the separation of financial and management accounting bodies meant that many accounting bodies did not feel that these issues (characterized as management accounting issues) were within their mandate. Second, respondents suggested that there first had to be industry demand, and as such industry interest would drive the accounting profession’s interest. Third, if these new forms of accounting were not in the best interests of business, it was thought that legislative force would be necessary before anything would change. Fourth, there was need of a champion at the top leadership levels of the accounting profession to push these ideas forward. Fifth, there was a general lack of knowledge in the accounting profession about these issues and the issues were perceived as being radical. However, the ideas of a ‘triple bottom line’ or accounting as part of achieving sustainable development were more acceptable.

Respondents in this study suggested six ‘triggers’ necessary to put these issues on the agenda of the accounting profession: (1) membership pressure on the professional association for guidance; (2) national government support; (3) support at the regional (European) level; (4) a change of attitude within the profession to make the pursuit of [these ideas]‘acceptable’; (5) the creation of a competitive impulse between individual associations in the accounting profession; and (6) the formation of a group with expertise in these areas to develop clearer technical guidelines (Bebbington et al., 2001).

I now turn to the rationale for the approach I take in this thesis to develop an alternative model of accounting: the Expanded Value Added Statement.
Rationale for an Expanded Value Added Approach

Alternative accounting innovations tend to follow two main paths. The most common path is to first examine the effects of current accounting practices, how they arise, and how to modify them. The other path is to start with a visualization of ‘the world we want’ and explore how accounting could help achieve that vision (Gray, 1995). In this section, I outline the rationale for combining these two approaches through using an expanded value added model and sustainability approach in the development of my model. I start by discussing the contributing factors of the traditional value-added model, its limitations, and propose an expanded value added approach.

As mentioned at the beginning of this chapter, the conceptual model guiding the development of the Expanded Value Added Statement (EVAS) has four main influences: the progressive practices of mainstream accounting (Value Added Statement), the lens of critical accounting, the principles of sustainability, and the contributions of integrated social accounting.

Firstly, I chose to start the development of my model with the Value Added Statement because, in contrast to profit, which is the wealth created for only one group—owners or shareholders—value added represents the wealth created for a larger group of stakeholders including employees, investors, government and the organization itself (Riahi-Belkaoui, 1999). Thus, the Value Added Statement focuses on the wider implications of an organization’s activities beyond profits/losses or surpluses/deficits. Additionally, at a practical level, the Value Added Statement is straightforward and easy to comprehend (Meek & Gray, 1988).

Secondly, using a critical accounting perspective that recognizes that accounting is not neutral, I chose to take a stakeholder approach in order to address issues of social relations and inequality. For example, by making explicit the relative distribution of value added received by
groups of stakeholders, issues of fairness can be addressed. In this sense, it provides information of direct interest to decision makers influenced by notions of justice (Gray & Maunder, 1980). The recognition that accounting is socially constructed also provides agency for accountants and others to develop alternative accounting that can play a role in creating alternative realities.

Thirdly, the Expanded Value Added Statement applies the principles of sustainability by including unpaid labour and externalities and by making explicit the economic, social and environmental impacts of choices in allocating resources. So in addition to analyzing performance in terms of efficiency (doing more with less), the Expanded Value Added Statement also seeks to promote behaviours of effectiveness (doing the right thing in terms of economic, social and environmental impacts).

Finally, integrated social accounting informed the Expanded Value Added Statement by providing working models that synthesize economic, social and environmental factors into one statement and by developing methodologies to estimate a monetary value for non-monetary activities.

In the next section I describe in more detail the different elements that make up the Expanded Value Added Statement.

**The Expanded Value Added Statement**

The Expanded Value Added Statement consists of two sections: value added created and value added distributed (Table 2.3). The first section estimates the value added created by the organization, and the second shows the distribution of the value added to the key stakeholders associated with the organization. For the analysis of the value added that is created by the organization, the table is divided into three columns: a) financial (information from audited
financial statements); b) social and environmental contributions for which a market-comparison monetary value is estimated; and c) combined (the addition of the first two columns). A monetary value is estimated for social and environmental outputs, as accounting practice requires, using a common language as a basis for dialogue.

In closing, this chapter noted the main influences that informed the development of the Expanded Value Added Statement. It also provided an overview of traditional, critical, and social accounting, and their critiques. It described the Value Added Statement and two waves of integrated social accounting, and acknowledged some of the challenges faced by the accounting profession in adopting alternative accounting models. Finally, it provided the rationale and the description of the Expanded Value Added Statement.

In the next three chapters, as noted in chapter 1, the Expanded Value Added Statement will be applied in differing contexts. In Chapter 3, it is applied to a scholarly association, the Association for Research on Nonprofit Organizations and Voluntary Action, to show how members, previously invisible in terms of traditional accounting, create significant value added. In Chapter 4, it is applied to a sustainable building project, to show how a minimal increase in spending to sustainable building creates a significant increase in social and environmental value added. In Chapter 5, it is applied to a real estate development created as an economically targeted investment, to show how a master planned community can create significant value added over the long term. Following that, a cross-case analysis will be done.
TABLE 2.3: Elements of the Expanded Value Added Statement

<table>
<thead>
<tr>
<th>ABC Organization</th>
<th>Expanded Value Added Statement</th>
<th>Social and Environmental</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Financial</td>
<td></td>
</tr>
<tr>
<td>Direct outputs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indirect outputs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total outputs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less: External Goods &amp; Services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Value Added Created</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ratio of Value Added to Ext Goods &amp; Services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Distribution of Value Added</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Providers of labour</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employees</td>
<td>Wages/benefits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volunteers</td>
<td>Skills development</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Providers of capital</td>
<td>Interest on Long term debt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Society</td>
<td>Taxes</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Emissions</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organization</td>
<td>Depreciation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Profit</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Value Added Distributed</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Inevitably, in a manuscript-based thesis, there is some repetition of the research literature referred to in the case studies and also in these introductory chapters in so far as all of the
chapters or manuscripts involve some critique of traditional accounting and all of the chapters involve a rationale for the Expanded Value Added Statement. I have attempted to limit the overlap to some degree, but I highlight it in advance so that the readers can understand why it has occurred.
CHAPTER THREE

The Value of Volunteering for a Non-profit Membership Association: The Case of ARNOVA

Abstract

Although research indicates that volunteer labour is of significant value to many non-profit organizations, this value is generally not included in the organization’s financial accounting statements. This study discusses the value added to non-profit membership organizations of the volunteering done by its members. It uses an exploratory case study of the Association for Research on Nonprofits Organizations and Voluntary Action (ARNOVA) to demonstrate how volunteer labour is valued and presented within a social accounting framework by utilizing the Expanded Value Added Statement. This is followed by discussion on some of the benefits and limitations of such a method and policy implications.

Introduction

This paper focuses on the value of volunteers to professional membership organizations. Although volunteering in the US is ubiquitous, with the US Current Population Survey 2003 reporting that just over 25 percent of men and 32 percent of women are engaged in voluntary activities (Bureau of Labor Statistics, 2003), this activity is quite diverse, spanning across different sectors and sub-sectors of the economy as well as various types of organizations.

---

5 Mook, Laurie, Femida Handy, Jorge Ginieniewicz and Jack Quarter (accepted for publication). Nonprofit and Voluntary Sector Quarterly. This research was supported by a grant from the Social Sciences and Humanities Research Council (SSHRC).
Non-profit organizations can be classified along a spectrum. At one end, there are organizations producing benefits largely geared towards its members such as professional associations, sports associations, labour unions, recreational and sport clubs, religious congregations, and ethno-cultural associations. On the other end of the spectrum are those organizations producing benefits to third parties, such as hospitals, shelters, food pantries, schools, and environmental organizations. Between the two ends are non-profit organizations such as advocacy groups, museums, and some religious groups/organizations, producing benefits to their members as well as to third parties.

In this exploratory study we focus on volunteering at an organization that is close to one end of the spectrum and produces benefits largely for its membership. As there is little literature that deals with volunteering that is exclusive to professional membership organizations, this study speaks to fill this gap.

Extensive debate exists in the literature on the methodology used to capture the monetary value of volunteer labour, a service not exchanged in the marketplace (Brown, 1999; Handy & Srinivasan, 2004; Hodgkinson & Weitzman, 1996). Alongside there is a growing literature that suggests that valuation of unpaid labour should be part of financial statements of organizations that utilize volunteer labour (Macintosh, 1994, 1995; Macintosh, Bartel, & Snow, 1999; Razek, Hosch, & Ives, 2000). This paper embraces the latter viewpoint and specifically builds upon the work developed by Mook and her colleagues (Mook, Quarter, & Richmond, 2007; Quarter, Mook, & Richmond, 2003). In this work, it is argued that excluding volunteer labour in non-profit accounting statements undervalues a key and valuable resource upon which many non-profits rely. A more complete accounting that includes these contributions reflects more accurately the value of the organization to the community. In addition, this information can be
useful to funders and policymakers, who want to understand the full impact of their investment in a non-profit.

Thus, the primary objectives of this paper are to discuss volunteering of members in the context of a membership organization, illustrate a series of methods that can be utilized to measure the impact of member participation in a professional society, and present this impact in part within a social accounting framework.

A question raised about member-based non-profits is whether members are becoming more passive (Putnam, 1995, 2000; Skocpol, 1999). Skocpol (1999) focuses this discussion around advocacy organizations, and suggests that they have been transformed from broad forms of member participation to organizations operated by professional management often with a large membership that does not participate actively but gives tacit consent to management’s activities through membership renewal and other forms of contribution. Putnam (1995) refers to this form of participation as ‘tertiary’ and suggests that it reflects a broader decline in civic engagement and social capital. We also briefly examine the applicability of the Skocpol and Putnam thesis with respect to a professional association. Although this is a case of one, it may provide some insights as to these issues.

**Organization: Choice and Background**

The authors all belong to a professional membership organization, the Association of Nonprofit Organizations and Voluntary Action (ARNOVA). At the Annual Board Meeting of 2005, the authors raised the question as to why the contributions of time by the members was not included in the financial statements, and offered to do these calculations for the organization. In promoting social accounting as an important tool in recognizing voluntary action by scholars in
the field, it was reasonable that ARNOVA should undertake such social accounting itself. Upon gaining approval from the board, this research project commenced.

ARNOVA is a relatively young non-profit membership organization\(^6\) that relies on volunteer labour for carrying out many of its functions. The mission of the organization states: “ARNOVA is a community of people dedicated to fostering through research the creation, application, and dissemination of knowledge on voluntary action, non-profit organizations and philanthropy.” (www.arnova.org). As a non-profit membership association, ARNOVA brings together both academic and applied research, helping scholars and practitioners gain insight into the day-to-day concerns of non-profit organizations. Principal activities of ARNOVA include an annual conference, publications, electronic discussions, and special interest groups.

Members pay fees to join the organization and some volunteer their time or make monetary donations. These volunteer contributions are an important part of the organization’s human resources and lead to a reduction in the membership fee, which otherwise would be higher for the same level of service. Although widely appreciated by the membership prior to this study, it was unknown what portion of ARNOVA members ‘supply’ volunteer contributions to their organization, how much these contributions add to the organization’s total human resources, what is the value added of these unpaid member contributions, and how member-volunteers perceive their volunteer contributions.

For the period 2004-2005, ARNOVA had 1,061 members, most of them belonging to institutions of higher learning. A fourteen-member Board of Directors governs ARNOVA and they appoint standing committees that help them with an array of activities. These include the awards, meetings, and local arrangements, which are central to ARNOVA’s annual conference.

\(^6\) ARNOVA formally constituted in 1990 and had its genesis in 1977 as the Association of Voluntary Action Scholars AVAS.
Furthermore, ARNOVA has paid staff of four persons (full-time and part-time), including an Executive Director.

Given its mission and its principal activities, it is reasonable to assume that ARNOVA has a membership that is highly educated and cognizant of the importance of volunteering. After all, many of its members specialize in studying either this phenomenon or organizations that utilize volunteer labour, or at the meta-level, they study a sector that relies on volunteer labour. For many members, especially those employed in institutions of higher learning, actively participating in ARNOVA and holding an official position often carries benefits in their workplace. Thus, the usual benefits of volunteering are highly augmented by the role they may play in the advancing a volunteer’s career and awarding the volunteer credibility and legitimacy at his or her workplace.

Data Collection: The ARNOVA Survey

Data were collected through the review of documents including audited financial statements and an online survey administered to members. The survey was sent at the beginning of July 2005 to 1,021 ARNOVA members with valid email address; there were four reminders until it was closed on September 23, 2005. In total, 550 responses, representing about 54 percent response rate, were recorded. Of these 195 reported that they had volunteered for ARNOVA in the year ending June 30th, 2005. Sixty-four of the respondents were board and committee members (referred to as core volunteers hereon).
Findings: Volunteers at ARNOVA

Of those 195 reporting that they had volunteered, 184 responded to the question of how many hours and they reported contributing 7,211 hours for the fiscal year ending June 30, 2005. This finding can be broken down as: core members reporting a total of 3,932 hours volunteered, an average of 68 hours each (n=58),7 and other (non-core) members volunteered a total of 3,279 hours, an average of 26 hours each (n=126). Over 95 percent of this group also volunteered for other organizations (n=187), suggesting that volunteering for ARNOVA did not preclude other volunteering.

The majority of respondents (n=550) were women (59%), 45 years of age and older (59%) from the U.S. (82%), either faculty or students from academic institutions (75%), and with at least 3 years of membership at ARNOVA (65%). Relative to the overall pool of respondents, ARNOVA’s 195 currently active volunteers (those who volunteered in the last fiscal year) were 52% women, 45 years of age and older, from the U.S., with an average membership of 9 years, and even more heavily academic members from universities (80%). On the other hand, respondents who had never volunteered for ARNOVA were 64% women and members of the association on average 3 years. The most number of hours were contributed for activities related to Publications (2,428 hours; n=113), followed by Board of Directors (1,639 hours; n=20), Annual Conference (1,582 hours; n=89), Committees (700 hours; n=53), Special Interest Groups (619 hours; n=36), and Other (245 hours; n=17).

The top reasons that current volunteers indicated that they volunteered for ARNOVA included Believe in cause supported by the organization (77%), Personally asked (72%), To use skills and experience (49%), and Fulfill obligations or beliefs (46%). The top benefits volunteers

7 n = 58 as six of the 64 core members who returned surveys did not report hours volunteered.
reported were Enhancement to my personal reputation (61%), Social interaction (51%), and Strengthening of existing skills (50%).

Respondents who had never volunteered for ARNOVA (n=277) reported three major constraints for their lack of volunteering: Have not been personally asked (56%), Do not know how to get involved (51%), and Do not have extra time (41%). Members who had volunteered previously but do not currently volunteer for ARNOVA (n=67) indicated similar constraints: Have not been personally asked (55%) and Do not have extra time (42%), although as opposed to those who had never volunteered for ARNOVA, they did know how to become involved. Of these two groups, only 15 (4%) indicated they had no interest in volunteering for ARNOVA.

Current ARNOVA volunteers who responded to the survey reported high levels of satisfaction with their volunteer role. Eighty-six percent indicated that they were either ‘satisfied’ or ‘very satisfied’ with their volunteer experiences. They were also twice as likely to donate money to ARNOVA (40% versus 20% of non-volunteers, p<.001), and 47% incurred out-of-pocket expenses for which they did not claim for reimbursement.

**ARNOVA: Value Added by Volunteers**

One way of thinking about the contribution an organization makes to its community is to look at it from the perspective of the value added it creates and distributes. Value added is a measure of wealth that an organization creates by ‘adding value’ to raw materials, products, and services with labour and capital. It is equal to the value of outputs minus the cost of externally purchased goods and services. Calculation of ‘value added’ can be accomplished by utilizing Value added Statements. These accounting statements differ from income statements in their
focal point. While typical accounting statements focus on one stakeholder - the shareholders - and the return on their investment, the Value added Statement focuses on multiple stakeholders.

Although, ‘Value added Statements’ have generally been applied to for-profit businesses, they are well suited for non-profits. One complexity faced in adapting the Value added Statement to non-profits is that volunteers generate a portion of the organization’s value added. However, volunteer contributions normally do not involve monetary transactions and so are not included in the organization’s financial statements. Therefore, there are several challenges in creating a Value added Statement for use by non-profits: (a) attributing an appropriate market value to volunteer labour; (b) attributing a value to benefits received by the volunteers from their volunteering, and (c) attributing value to the social impacts of non-profits although this is difficult to quantify and not generally monetized, a larger issue.

**Expanded Value Added Statement (EVAS): Introducing the Model**

The Expanded Value added Statement (EVAS) addresses some of the difficulties in applying accounting models developed for business enterprises to non-profit organizations (Mook et al, 2007). Non-profit organizations are different from business enterprises in some very significant ways. They operate for purposes other than to earn a profit; their efficiency and effectiveness cannot be determined through information in financial statements only; and they may receive large amounts of resources from providers (such as donors, or government) who do not expect monetary benefits in return (Razek, Hosch, & Ives, 2000). Non-profit organizations are also different from profit organizations in that they acknowledge the contribution of multiple stakeholders (for example, funders, clients, and community), involve volunteers, and have both social and economic goals.
The EVAS recognizes this uniqueness by focusing on both economic and social impacts, instead of just the ‘bottom line’ of financial surpluses or deficits. For instance, an EVAS analysis of a housing co-operative was able to identify key aspects of the organization’s functioning that were not apparent from traditional financial statements alone (Richmond & Mook, 2001). These key aspects included the impact of unpaid labour/volunteers, the role of the organization in providing employment, skills development, and personal growth for its members, and the contribution of the organization to society through service provision and tax payment.

The EVAS also emphasizes the collective effort needed for an organization to achieve its goals, viewing each stakeholder as important to its viability as a socially and economically responsible organization. For example, including volunteers and society as stakeholders presents an alternative perspective of an organization to focusing solely on its ability to spend its financial resources. Thus, the EVAS includes non-monetized social contributions of volunteers who become one of the stakeholders; a portion of the value added is distributed to them. By combining financial and social value added, the EVAS also emphasizes the interconnectedness and interdependence of the economy, community and environment (Mook, Quarter, & Richmond, 2007). Overall, every EVAS contain two parts: the calculation of value added by an organization and its distribution to the stakeholders.

Determining the market value for the outputs of a for-profit firm is relatively straightforward – it is simply the amount of revenues received through sales, or in other words, the amount people have paid for those goods or services in the market. However, for some non-profit organizations revenues are seen as inputs\(^8\) and the term outputs is generally used to mean the direct products of its activities; for example, such services as mentorship and counselling for

\(^8\) The characterization of revenues as inputs might not apply to all non-profits, for example, those that earn their revenues from market transactions.
clients or running a soup kitchen. However, determining the market value for the outputs present
unique challenges and are generally ignored, as are indirect outputs such as the increase in the
human capital of volunteers, increasing safety in neighbourhoods where they are located, etc.

However, it is possible to look at prevailing market rates for similar activities and to
impute value for some inputs and outputs, such as the value of labour provided by volunteers
doing counselling or value of meals given free in soup kitchens.

**Estimating the Value Added by Volunteers in ARNOVA**

To estimate the monetary value of the unpaid services contributed by ARNOVA
members, three U.S. dollar values were used; 1) an hourly rate based on occupation and skill; 2) an hourly rate based on the North American Industry Classification System (NAICS); and 3) an hourly rate based on survey responses. The first two values assume a replacement value methodology, where unpaid labour is valued at what it would cost the organization to replace its volunteers with paid staff and continue the services currently provided by a volunteer, whereas the third is a modified version of the opportunity cost method. A brief elaboration of each approach follows:

1) **Valuation based on occupations and skill.** For an hourly rate based on occupation and skill, we used values from the National Compensation Survey of the US Bureau of Labor Statistics. The rate reported for the category that includes executives, administrators, and managers (all levels) for the year 2003 (the latest year available at the time) was $35.92/hour (U.S. Bureau of Labor Statistics, 2003). Applying this hourly rate to data from our ARNOVA survey, the comparative market value of the volunteer contributions of 7,211 hours for the year would be estimated as $259,019.
2) **Valuation based on NAICS.** For an hourly rate based on the North American Industry Classification System (NAICS), the category applicable to ARNOVA is the ‘Professional Organizations’ sub-sector. This category comprises organizations primarily engaged in advancing the professional interests of their members and the profession as a whole. The activities listed in this sub-sector fit well with the administrative volunteer activities contributed by ARNOVA volunteers, but may underestimate the value for activities requiring professional expertise, such as reviewing articles for academic journals. The hourly rate for those involved in this category for the period July 1, 2004, to June 30, 2005, was $22.92/hour (U.S. Bureau of Labor Statistics, 2005). Using this hourly rate, the comparative market value of volunteer contributions for the year would be estimated as $165,276. We expect this valuation represents a lower bound for valuing volunteer contributions.

3) **Valuation based on opportunity costs.** Opportunity costs are the wages volunteers would earn if they chose to remain in the labour market instead of volunteering. Due to difficulties of empirically calculating the opportunity costs facing members, we follow Handy and Srinivasan (2004) and use modified opportunity cost values based on survey responses to the following question: “To estimate a value of your efforts imagine you were to be paid for your volunteering time with ARNOVA, what would you consider as a reasonable *compensation per hour*? If you do more than one task then take an average. Please choose your currency and insert the estimated amount in the space beside it.” For those responding, the median reported was $50.00/hour.

---

9 This system (jointly developed by Canada, the United States, and Mexico) classifies organizations (such as businesses, government institutions, unions, charitable and non-profit organizations) according to economic activity. Listings of the different classifications are available at [http://www.census.gov/epcd/naics02/](http://www.census.gov/epcd/naics02/) and [http://www.statcan.ca/english/Subjects/Standard/naics/2002/naics02-menu.htm](http://www.statcan.ca/english/Subjects/Standard/naics/2002/naics02-menu.htm).
This is not a typical survey question and individuals are not often asked to value their volunteer time. Furthermore, as there is no upper boundary to how much they are willing to accept for the hours donated this response may be biased upwards, as is the case in many willingness-to-accept compensation responses (Coursey, Hovis, & Schulze, 1987). We choose the median response to exclude some inflated responses as well as those who responded zero. Using this rate, the comparative market value of volunteer contributions for the year would be estimated as $360,550.

Given the possible upward and downward biases in the three methods presented, we would ideally choose the average of the three methods to value volunteer hours: $36.28. However, as it may be difficult for organizations to replicate these methods in arriving at the value of the volunteer hour, we suggest using the valuation based on occupations and skill that is $35.92, which is sufficiently close to the value arrived on averaging. An example of the EVAS shown in Table 3.2 uses the valuation of volunteer hours based on occupations and skill ($35.92), and data from the financial statements for the year ended December 31, 2003.10

Volunteers also contributed value by not claiming expenses they had paid for out of their own pocket, such as travel, telephone, daycare etc. The survey asked members about these contributions, and it was estimated these expenses totaled $26,056 for the year (Table 3.1).

---

10 ARNOVA was in the process of changing its year-end, and did not publish financial statements for the year for which the volunteer data were collected (July 1, 2004 to June 30, 2005). Table 3.2 Uses figures from financial statements for the year ended December 31, 2003.
Table 3.1: Calculation of Volunteer Non-reimbursed Out-of-pocket Expenses

<table>
<thead>
<tr>
<th>Volunteers reporting expenses</th>
<th>Average Amount per volunteer reporting expenses</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board members 14 [83%]</td>
<td>$281.79</td>
<td>$3,945</td>
</tr>
<tr>
<td>Committee members 16 [40%]</td>
<td>$404.29</td>
<td>$6,469</td>
</tr>
<tr>
<td>Other members 53 [44%]</td>
<td>$295.13</td>
<td>$15,642</td>
</tr>
<tr>
<td>Total Non-reimbursed Out-of-pocket Expenses</td>
<td></td>
<td>$26,056</td>
</tr>
</tbody>
</table>

Table 3.2 presents the partial value added by ARNOVA, and is organized in three columns that refer to different types of value added:

1. Financial, which represents information from audited financial statements only, and therefore is also referred to as Restricted Value added;

2. Social, which represents information about non-monetized contributions for which a market comparison is estimated;

3. Combined, which represents the total of the Financial and Social value added and is referred to as Expanded Value added Statement (EVAS).

This is referred to as partial value added, as we are only consider volunteer contributions, and do not attempt an extensive analysis of all the outputs of the organization, such as increasing knowledge and building community, which is beyond the scope of this paper.

In order to calculate the amount of value added, the first step is to assess the total outputs of the organization and assign a comparative market value to them. The primary financial outputs of ARNOVA include an annual conference, publications, electronic discussions, and special interest groups. For ARNOVA’s fiscal year under consideration, the amount was
$644,842, as shown in the column financial. In other words, this amount is what ARNOVA spends in order to provide its services or outputs. Conducting a market comparison of the other outputs is beyond the scope of this study; the amount that ARNOVA spends on providing these services is taken as a measure of the output value.

For the Primary Outputs in the Social Accounts column, two components related to the volunteer contributions are added: the dollar value of the hours contributed by volunteers ($259,019) and the non-reimbursed out-of-pocket expenses of volunteers ($26,056). This adds up to a total of $285,075 to the value of Outputs in the column labelled Social Accounts.
TABLE 3.2: Expanded Value Added Statement for ARNOVA

<table>
<thead>
<tr>
<th>Financial Accounts</th>
<th>Social Accounts</th>
<th>Combined Accounts</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Restricted Value Added]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One year period</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outputs (1)</td>
<td>Primary $644,842</td>
<td>$285,075</td>
</tr>
<tr>
<td>Less: External Purchases of Goods and Services (2)</td>
<td>$375,644</td>
<td>$375,644</td>
</tr>
<tr>
<td>Total Value Added (3) = (1) – (2)</td>
<td>$269,198</td>
<td>$285,075</td>
</tr>
</tbody>
</table>

Ratio of Total Value Added to External Purchases
= (3) divided by 375,644 (External Purchases)

0.72
0.76
1.48

Distribution of Value Added

| Wages & Benefits | $243,980 | $243,980 |
| Volunteer Contributions | $285,075 | $285,075 |
| Depreciation | $25,218 | $25,218 |
| Total Value Added Distributed | $269,198 | $285,075 | $554,273 |

= (4) + (5)+ (6)
The value of volunteer contributions is added to the amount that the organization spends on its services in order to arrive at an approximation of the total cost, as if the goods or services had been offered through the market.11 For ARNOVA the total value of the organization’s outputs is the expenditures ($644,842) plus social contributions ($285,075) which is a total of $929,917 (see Combined Accounts column).

In order to measure the value added by the organization, the goods and services that are purchased externally, $375,644 (Table 3.3), are subtracted from the Total Outputs of $929,917 (as per the definition of value added12), leading to a total of value added of $554,273 (column labeled Combined). The ratio of value added to purchases, indicated in the final row of Table 3.2, is established by dividing the value added by the cost of external goods and services. This ratio indicates that for every dollar expended on goods and services, the organization generated $1.48 in value added. The significance of this figure is discussed in the concluding paragraphs of this section.

The Expanded Value added Statement includes a market estimate for Volunteer Contributions. If this item had not been included, the ratio of value added to purchases would be 0.72 as is indicated in the “Financial Accounts” column. Therefore, the inclusion of non-monetized items increases this ratio by over 105 percent.

---

11 In the for-profit sector, the value of a good or service can be calculated either as the revenues received, or as the total of expenditures plus profit. In the non-profit sector, to this value, we add to the expenditures any items that would normally be an expense in the for-profit sector, but is received “free” (e.g. volunteer labour). The remaining value of profit foregone is still missing, but if calculated, it would be added to arrive at the same value as in the for-profit sector.

12 Value added is a measure of the value added to external goods and services using labour and capital.
TABLE 3.3: Reconciliation of Expenditures on Audited Financial Statements to Purchases of External Goods and Services on Value Added Statement

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total expenses (1) less:</td>
<td>$644,842</td>
</tr>
<tr>
<td>Employee wages &amp; benefits (2)</td>
<td>$243,980</td>
</tr>
<tr>
<td>Amortization of capital assets (3)</td>
<td>$25,218</td>
</tr>
<tr>
<td><strong>Purchases of external goods &amp; services</strong></td>
<td></td>
</tr>
<tr>
<td>(EVAS) = (1)-(2)-(3)</td>
<td>$375,644</td>
</tr>
</tbody>
</table>


As noted above, to estimate the value of volunteer contributions, we applied the rate of the U.S. Bureau of Labor Statistics National Compensation Survey ($35.92/hour). If we applied the other rates under consideration, they would have affected the total value added and the ratio of value added to external purchases. For the North American Industry Classification System ($22.92/hour), the total value added would decrease to $460,530, and the ratio of value added to external purchases would decrease to 1.23. For the self-evaluation of the ARNOVA members ($50.00/hour), the total value added would increase to $655,804 and the ratio of value added to external purchases would increase to 1.75. In other words, the estimated value of volunteer contributions does influence the estimate of value added and the associated ratio.

**Distribution of Value Added**

The value added by the organization is distributed to the stakeholders in its entirety in the EVAS. The latter rows of Table 3.2 present the Distribution of Value added in ARNOVA for all stakeholders, with three of the stakeholders, Employees,
Society, and the Organization receiving shares of the value added. For example, the value added distributed to Employees represents their wages and benefits of $243,980.

The stakeholder referred to as Society receives value added of $285,075, equivalent to the value of volunteer contributions. If these contributions change, there would be an identical change to the distribution to this stakeholder. Value added distributed to the stakeholder Organization was for $25,218 for the Depreciation of Capital Assets. In total, the value added distributed corresponds to the value added created. Where the items are limited to those on audited financial statements, that value added is $269,198; where the items are expanded to include non-monetized social contributions, the value added is $553,217.

**Summary of the Expanded Value Added Statement (EVAS)**

The Expanded Value added Statement (Table 3.2) indicates that $554,273 of value was added and distributed. If the audited financial accounts only were considered, ARNOVA appeared to create value added of $269,198 for the year. The EVAS shows that the financial information without the social value added does not tell the organization’s whole performance story. Including volunteer contributions in the calculation of value added led to an increase of over 105 percent. Furthermore, when considering the financial and in-kind resources of the organization, volunteer hours and out-of-pocket expenses together account for 30.7 percent of the total (Figure 3.1). This figure shows that volunteer contributions, both monetary and non-monetary, provide the organization with a significant resource that should be counted in its overall performance.
Another way of looking at the significance of volunteer contributions is to examine the proportion that volunteers contribute to the overall human resources of the organization. Volunteer activities account for 57 percent of the ARNOVA’s human resources (Figure 3.2). Based on the estimate of 7,211 volunteer hours and a workweek of 35 hours (1,820 per year or 35 x 52), volunteers contributed 4 full-time equivalent (FTE) positions for the fiscal year ending June 30, 2005. This means that, including volunteer contributions, ARNOVA has the equivalent of a total workforce FTE of 7, more than doubling its paid staff FTE of 3. In other words, more than twice the labour is required in the production of ARNOVA’s goods and services than the traditional accounting statements show.
FIGURE 3.2: Proportion of Total Activity Hours by Volunteers and Staff

![Pie chart showing the proportion of total activity hours by volunteers and staff ARNOVA FTEs.]

57% Volunteer FTE
43% Paid staff FTE

Additional Observations

Social goods and services, those not given a monetary value, are often a large part of a non-profit organization’s operations. Without taking these goods and services into account, there is not a clear picture of either a non-profit’s performance or the contributions made by its members. The Expanded Value added Statement is an experimental process to expand the process of accounting for non-profits. In the case of ARNOVA, the EVAS tells a different story than the financial statements alone – and to a different audience. The EVAS helps various stakeholders, particularly members, to see what value they have added to ARNOVA – in this case, almost 52 per cent of the value added. In making this more visible, it also help members to understand better what value they have received and to appreciate that without substantial unpaid member
contributions it would not be possible for ARNOVA to provide the same level of service at current membership rates.

Although the EVAS presented above begins to capture the impact of volunteers upon the organization, these estimates are probably understated because there are additional externalities associated with volunteering for ARNOVA that were not assessed in this study. For example, they are more likely to donate money to the organization and they provide an important signal that the services provided by the organization have value. In addition, volunteers expand the base of support for the organization by making the work of the non-profit transparent. They also provide their organization with word-of-mouth promotion and have the potential to cultivate a broader base of supporters. This may result in increasing organizations’ networks and capacity to attract more members. Finally, the work of volunteers in the area of publications – of producing and disseminating knowledge-has long term effects that benefit members and society.

Examples of such externalities are not uncommon in the non-profit sector. For example, CEOs of hospitals say that volunteers act as ambassadors in the community and help promote public health, an outcome they value. Given this positive externality, they prefer to continue to use volunteer labour over paid labour even if paid labour may be more (economically) advantageous to the hospital (Handy & Srinivasan, 2005). Training programs provided by non-profits using volunteers are not always cost-effective and government recognizing the positive externalities may subsidize voluntary organizations undertaking such training (Simon & Wang, 2002).

Another positive externality is the role modeling of volunteers, for example, to other members who may be willing to donate and volunteer if their colleagues also do so, thereby increasing the future pool of volunteers and donations (Toppe, Kirsch, & Michel, 2002). Thus, such positive externalities of volunteering are not captured in the EVAS
statement as presented above, and as such, the findings need to be understood as an underestimate of the benefits of volunteering for the organization.

In membership organizations, such as ARNOVA, the volunteering roles by definition are limited to governance, committee work, outreach, recruiting, fundraising, organizing the annual conference, reviewing papers. This is in sharp contrast to non-membership organizations such as service organizations where there are many diverse roles for volunteers and members respectively. For example, volunteers in hospitals can take on a myriad of direct service roles as well as other tasks including governance, committee, administration, and fundraising. Thus, the value of volunteering to an organization that relies on volunteers will vary, not only by the sector that the organization is in but also by the nature of the organization itself.

On the other hand, there may also be some negative externalities of using volunteers due to disagreements with labour unions or the threat they may pose to staff who may feel that volunteers could replace them. Furthermore, if volunteers are accepted due to long standing traditions, organizations may find themselves 'making work' for volunteers, and were they to leave, their work would not be replaced (Handy and Brudney, 2007).

**Discussion of Findings**

This case study of ARNOVA demonstrates how volunteer services by members can be presented within a social accounting framework. The work is experimental, but the technique is transferable. The technique is important because, unlike the traditional
accounting statements, it captures the value that volunteers add to the organization within a model that addresses the value added of ARNOVA.

The data also illustrate that ARNOVA does not appear to conform to the pattern expected from the Putnam and Skocpol school of thought about member-based organizations. While the majority of the membership does not volunteer for the organization, over a third, (35%) of the current members volunteered during the year under consideration, and there is a core group, representing about 12 percent of the members, who make major time commitments. Furthermore, the contributions of the non-core volunteers was not inconsequential. This suggests that ARNOVA, a professionally run membership organization, refutes the literature suggesting apathy among its members. Although, it is not clear from these data whether ARNOVA is typical or different from other membership organizations, this would be an issue worth exploring with a larger sample. It is also not clear, given our data, if and what changes have occurred over time at ARNOVA; this is another issue worth exploring.

Although ARNOVA would probably like to increase member volunteering, it is possible that there is a ceiling as there is a limited number of volunteer roles. Inevitably, the core volunteers will be associated with the executive and other key roles such as journal editor, conference organizer, or board members. There will be an array of middle level roles such a committee heads and memberships involving less time. However, there may be opportunities to create new avenues for volunteering as many members do have an interest in becoming more involved, as corroborated by the data, which indicates the major reason that people do not volunteer is that they are not asked to do so. However, on
a cautionary note, this should be done without creating make-work projects that do not benefit the organization.

Volunteer contributions do permit the organization to provide a level of service at a fee that would have been increased if their contributions were replaced by paid labour. Assuming the same level of service and receipt of financial resources, we estimate that the volunteer contributions reduce the membership fee by 73 percent. However, it does not follow that ARNOVA could reduce its membership fee proportionately with volunteer increases because for an organization of this size and type, volunteer contributions are limited and it is unlikely, and not desirable, that volunteers could take on the functions of paid staff, which require them to be available every working day. Arguably, then there is a point beyond which volunteer contributions would have a minimal impact on membership fees, or worse, create a negative externality.

This survey highlights that ARNOVA relies on volunteer contributions for its human resources, and without them could not provide the current level of service without a substantial fee increase. The ARNOVA survey and information from the staff indicate that ARNOVA has 67 “core volunteers” – that is, board and committee members – and 136 active volunteers during the fiscal period 2004-2005. The contributions of the latter averaged 26 hours each, as compared to 68 hours each for the volunteers in the core group. In addition to the volunteers in the fiscal year, 2004-2005, there were others who had volunteered previously for ARNOVA. However, as in many mutual associations, there is a proportion of so-called ‘free riders’, who derive the benefit of the volunteer contributions to the organization, without cost to themselves. Perhaps the label ‘free

---

13 The average annual membership dues for ARNOVA are about $98. Volunteer contributions of hours and out-of-pocket expenses were estimated to be $285,075, or $269 per member.
rider’ in the ARNOVA context is unfair because volunteering opportunities are limited and among the reasons given for not volunteering by over half the respondents were – Have not been personally asked (56%). Do not know how to get involved (51%). In addition, the data suggest that there is an inner circle and those outside the inner circle’s network may receive less encouragement to participate in committees than those within the core networks.

We make three suggestions: First, that ARNOVA make a concerted effort to find new opportunities for volunteering among its members, such as mentorship for student members, increasing its fundraising and outreach activities using a large pool of volunteers, and increasing the opportunities for virtual or online volunteering. This can go hand-in-hand with inviting more members to participate in volunteering through personal contact by using current volunteers to reach out and personally invite another member to volunteer and particularly new members and those who have not been involved. Second, ARNOVA should conduct an annual survey on volunteer unpaid member contributions to the organization and track the diversity in volunteering among members, how long it takes newcomers to become volunteers, and the motivations and benefits of volunteering for ARNOVA. In membership organizations, not being part of the inner circle can be intimidating to newcomers, and hence it is important to track outreach efforts in terms of how long it takes a new member to get involved and volunteer. Lastly, ARNOVA should include information on its volunteer contributions in its annual report and add an explanatory note to its annual financial statement of the value added by its volunteers as a way to acknowledge the contribution made by its members in meeting its mission. As seen above for the year 2004-2005, including volunteer
contributions in the calculation of value added led to an increase of over 105 percent. Not an insignificant contribution!
CHAPTER FOUR

Integrating and Reporting an Organization’s Economic, Social and Environmental Performance: The Expanded Value Added Statement

Abstract

This chapter presents a social accounting model called the Expanded Value Added Statement (EVAS), which reports on the economic, social and environmental value added by an organization in an integrated, single statement. The development of the model is guided by the assumption that accounting is a driver of behaviour and can be conceived of as an explicit change agent in order to move organizations towards sustainability. An example of sustainable (green) building is used to demonstrate how the model can focus attention on and report these impacts.

Introduction

The main goal of this chapter is to present an accounting model called the Expanded Value Added Statement (EVAS) developed with the intention of driving organizational behaviour towards sustainability. Many definitions of sustainability have been advanced, but most arise from the 1987 United Nations report Our Common Future, also known as the Brundtland Report, which called for “a form of sustainable development which meets the needs of the present without compromising the ability of future generations to meet their own needs” (UNWCED, 1987, p. 8). Drawing on this,

sustainability reporting has been defined as “an organization’s public account of its economic, environmental, and social performance in relation to its operations, products, and services” (GRI, 2002, p. 1).

In contrast to accounting statements and traditional analyses currently published by most organizations, the EVAS brings together economic, social and environmental impacts in one statement. It also expands the boundaries of organizational reporting to consider multiple stakeholders and aims to use accounting as an explicit change agent: ‘what gets measured, gets managed.’

The remainder of the chapter is organized in five sections. The first one discusses the key assumption behind this model. The second looks at social accounting as a conceptual guide to the model. Next, value added accounting is explained, and an example provided of the EVAS as applied to a sustainable building company. The last section provides a general discussion.

The Main Assumption: Accounting as a Change Agent

Accounting, by the very act of counting certain things and excluding others, shapes a particular interpretation of social reality, which in turn has policy implications (Hines 1988). Much has been written on how accounting communicates, creates, sustains and changes social reality (Cooper & Neu, 1997; Craig & Amernic, 2004; Gray, 2002; Hines, 1988; Llewellyn, 1994; Mathews, 1997; Morgan, 1988; Tinker, 1985). This leads to the key assumption that guides the work in this chapter: accounting is a driver of organizational behaviour.
The Danish Green Accounts are one example that supports this assumption. In 1995, the Danish parliament passed the Green Accounts Act, which requires certain organizations to publish their environmental profile. An initial evaluation of 500 organizations that had prepared these accounts found several organizational behavioural changes as a result:

Forty percent of all enterprises have achieved environmental improvements. This applies especially within the sector of energy and water consumption, other resources and materials as well as waste. Many have initiated work with cleaner technology and every fifth with less environmentally hazardous products.

Fifty percent of the firms have involved employees in the elaboration of the accounts. Sixty percent of these enterprises have experienced a positive effect of employee involvement, and most of them expect increased involvement. The positive effects include higher involvement, better communication and more efficient work routines.

For several firms, work with the green accounts has also contributed to the establishment of new environmental policies, elaboration of environmental action plans or to a decision to introduce environmental management. (Danish EPA, 1999, pp. 7-8)

Although there are many studies on the quantity and type of disclosure of social and environmental items, there are far fewer on organizational behaviour as a result of measuring and reporting (Schepers & Sethi, 2003; Waring & Lewer, 2004). For instance, do environmental standards (and the environmental management systems measuring and
reporting them) actually reduce emissions? (For a discussion on this question, see Corbett & Luca, 2002; King & Lennox, 2000; Russo, 2004; and Wagner, 2003.) Do labour standards improve the lives of workers? What are the unintended consequences of applying these standards? To what extent does reporting generate an intrinsic or extrinsic motivation to act in a certain way?

By focusing attention on measuring the economic, social and environmental value created (or destroyed) by an organization, these questions can begin to be addressed. This is one of the purposes of social accounting.

**Social Accounting**

Social accounting provides guidelines and tools to collect, analyze and monitor financial, social and environmental data (and thus guide behaviour). Although accounting as a professional field has a lengthy history dating back to at least the mid-nineteenth century (Tinker, 1985), social accounting is more recent and burgeoned during the early 1970s (Mathews, 1997).

There are many definitions of social accounting. Here is a sample of them:

- The process of selecting firm-level social performance variables, measures, and measurement procedures; systematically developing information useful for evaluating the firm’s social performance; and communicating such information to concerned social groups, both within and outside the firm. (Ramanathan, 1976, p. 519)

- The measurement and reporting, internal or external, of information concerning the impact of an entity and its activities on society. (Estes, 1976, p. 3)
• The process of communicating the social and environmental effects of organizations’ economic actions to particular interest groups within society and to society at large. As such it involves extending the accountability to organizations (particularly companies), beyond the traditional role of providing a financial account to the owners of capital, in particular, shareholders. Such an extension is predicated upon the assumption that companies do have wider responsibilities than simply to make money for shareholders. (Gray, Owen, & Maunder, 1987, p. ix)

• At the very least, social accounting means an extension of disclosure into non-traditional areas such as providing information about employees, products, community-service and the prevention or reduction of pollution. However, the term “social accounting” is also used to describe a comprehensive form of accounting which takes into account externalities. (Mathews & Perera 1995, p. 364)

• Social and ethical accounting is concerned with learning about the effect an organization has on society and about its relationship with an entire range of stakeholders—all those groups who affect and/or are affected by the organization and its activities. (Institute of Social and Ethical AccountAbility, 2000, p. 1)

• A systematic analysis of the effects of an organization on its communities of interest or stakeholders, with stakeholder input as part of the data that are analyzed for the accounting statement. (Quarter, Mook, & Richmond 2003, p. xix)

What these definitions share in common is the feature of expanding the range of criteria that are taken into consideration when measuring performance and looking at the
organization in relation to its surrounding social and natural environment. These definitions can be contrasted with the definition of traditional accounting set forth by the Accounting Principles Board (1970, Section 1023): “Accounting is a service activity. Its function is to provide quantitative information, primarily financial in nature, about economic entities that is intended to be useful in making economic decisions of action.” Thus, while traditional accounting focuses only on the reporting of financial items for economic decision-making, social accounting focuses on a wider scope than on financial items alone.

**The Expanded Value Added Statement**

Building upon earlier social accounting models (for example, Abt & Associates, 1971; Belkaoui, 1984; Estes, 1976; Linowes, 1972), Mook developed several social accounting models that integrate financial and social information in order to present a fuller picture of an organization’s performance story (Mook, 2004; Mook, Richmond, & Quarter, 2003a, 2003b, 2004; Mook, Quarter, & Richmond, 2007; Richmond & Mook, 2001; Quarter, Mook, & Richmond, 2003). One of these models is the Expanded Value Added Statement, or EVAS, which is based on a traditional accounting statement (the Value Added Statement) but modified to include social and environmental items. (See Mook et al. (2007) for more details on how the EVAS was developed and applied to co-operatives and non-profit organizations.)

Value added is the wealth that an organization creates by its own and its employees’ efforts (ASSC, 1975). Whereas sales revenue includes the value of work done by organizations outside the firm, value added includes only the value of work done by the firm (Meek and Gray, 1988).
Value added is typically measured by the difference between the market value of the goods or services produced, and the cost of goods and services purchased from other producers (Ruggles & Ruggles, 1965). The Value Added Statement shows both the wealth created and how that wealth is used to pay those who created it. In equation form it can be expressed as follows (Riahi-Belkaoui, 1992):

\[ S-B=W+I+DP+D+T+R \]

Where

- \( S \) = Sales revenue
- \( B \) = Bought-in materials and services
- \( W \) = Wages and benefits
- \( I \) = Interest
- \( DP \) = Depreciation
- \( D \) = Dividends
- \( T \) = Taxes
- \( R \) = Retained earnings

In contrast to profit, which is the wealth created for only one group – the owners or shareholders – value added represents the wealth created for a larger group of stakeholders (Burchell, Clubb, & Hopwood 1985; Riahi-Belkaoui, 1999). Thus, the Value Added Statement focuses on the wider implications of an organization’s activities beyond its profits or losses (Meek & Gray, 1988). It emphasizes that the organization also employs people, contributes to societal costs through taxes, rewards investors and creditors for risking their funds, and contributes to the community.
One of the limitations of the traditional Value Added Statement is that it focuses only on financial items and pays no attention to intangibles and items that do not pass through the market. Another limitation is that it does not account for indirect impacts of an organization’s activities. To overcome these limitations, the Expanded Value Added Statement was developed to incorporate social and environmental wealth created or destroyed (directly or indirectly) together with economic wealth.

The EVAS is not intended to replace existing financial statements, but to supplement them. By synthesizing traditional financial data with social and environmental data, the EVAS provides additional valuable information for understanding the dynamics of an organization and one that shows great potential by focusing attention on value creation and use.

**Sustainable Building Example**

The example of a sustainable building company will help to illustrate the economic, social and environmental value added of an organization. Sustainable building has been approached as a way to “to produce structures that enhance the quality of life and protect the environment, and do so efficiently, profitably and fairly” (WS Atkins Consultants, 2001, p. 4). In Canada, sustainable building certification initiatives such as the Leadership in Energy and Design (LEED)-Canada certification program, the Green Globes design for environmental assessment, and the Building Research Establishment Environmental Assessment Method (BREEAM)/Green Leaf Eco-rating program are available to evaluate new and existing buildings in terms of how well they meet sustainable building practices. For example, the LEED-Canada program, based on the
U.S. LEED program but taking into consideration the Canadian climate, construction practices and regulations, evaluates buildings in six different categories:

1. Sustainable Sites
2. Water Efficiency
3. Energy and Atmosphere
4. Materials and Resources
5. Indoor Environmental Quality

The green building movement has great potential to make a significant impact on sustainability, particularly in relation to three areas. First, commercial and residential buildings consume considerable amounts of water, wood, energy and other resources. Second, the building sector accounts for significant CO$_2$ emissions (in the U.S. these are estimated to be about 35% of total national CO$_2$ emissions), which are a major contributor to global warming. Finally, ‘sick building syndrome’ resulting from inadequate temperature, humidity, lighting, or ventilation, is a common complaint of traditional buildings, affecting health and productivity of building occupants.

In a pioneering study of green buildings in the U.S., Kats et al. (2003) found that sustainable building practices yield many benefits to customers including lower energy, waste disposal, and water costs, lower environmental and emissions costs, lower operations and maintenance costs, and savings from increased productivity and health. Potential benefits to larger society through reduced waste and reduced emissions were also calculated. The study also found that the additional upfront investment for these buildings was minimal (about 2 percent of construction costs), and that the life cycle
savings were over ten times the initial investment. Indeed, this study, the first to fully aggregate the costs and benefits of green buildings in the U.S., concluded that “an initial upfront investment of up to $100,000 to incorporate green building features into a $5 million project would result in a savings of at least $1 million over the life of the building, assumed conservatively to be 20 years” (Kats et al., 2003, p. v). Based on data collected on 33 green buildings (25 offices and 8 schools), Kats et al. estimated that the financial benefits of green buildings based on a 20-year lifespan amounted to a net present value (NPV) of $15.98/ft² for environmental benefits, and between $36.89/ft² and $55.33/ft² for social benefits (Table 4.1). (See Kats et al. et al. (2003) for details of these calculations.)

Some of these rates relate directly to potential tangible financial benefits to the purchaser of the building for example, reduction in expenses due to decreased energy and water consumption. Others relate to the impact on property, health and environment. For example, the emissions value in Table 4.1 refers to the value of reducing air pollution and emissions associated with burning fossil fuels, including a value associated with the risk of not reducing CO₂ levels in order to counter global warming.
TABLE 4.1: Financial Benefits of Green Buildings (per ft²)

<table>
<thead>
<tr>
<th>Category</th>
<th>20-year NPV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy value</td>
<td>$5.79</td>
</tr>
<tr>
<td>Emissions value</td>
<td>$1.18</td>
</tr>
<tr>
<td>Water value</td>
<td>$0.51</td>
</tr>
<tr>
<td>Waste value (construction only) – 1 year</td>
<td>$0.03</td>
</tr>
<tr>
<td>Commissioning* operations &amp; maintenance value*</td>
<td>$8.47</td>
</tr>
<tr>
<td>Subtotal</td>
<td>$15.98</td>
</tr>
<tr>
<td>Productivity &amp; health value (LEED Certified and Silver)</td>
<td>$36.89</td>
</tr>
<tr>
<td>Productivity &amp; health value (LEED Gold and Platinum)</td>
<td>$55.33</td>
</tr>
<tr>
<td>Less green cost premium</td>
<td>($4.00)</td>
</tr>
<tr>
<td>Total 20-year NPV (LEED Certified and Silver)</td>
<td>$48.87</td>
</tr>
<tr>
<td>Total 20-year NPV (LEED Gold and Platinum)</td>
<td>$67.31</td>
</tr>
</tbody>
</table>

* Commissioning is the “process of ensuring that systems are designed, installed, functionally tested and capable of being operated and maintained according to the owner’s operational needs” (US DOE 1998, 9).

Relative to traditional buildings, however, green buildings are few and far between. One of the reasons for this is that there is a general misconception that green buildings are significantly more expensive up front than traditional buildings (Bartlett & Howard, 2001; Berman, as cited in Kats et al., 2003). Part of the problem is the separation of capital budgets from operating budgets, as this hinders the validation of higher capital costs by future revenue savings. But the effect of sustainable building is
not just economic; it is also social and environmental. Since an organization’s traditional accounting statements (i.e., the income statement and the balance sheet) are limited to reporting internally generated financial items, they fall short in reporting (and hence in promoting) the full impact of green building practices. A more inclusive approach, such as the EVAS, is needed.

To illustrate the possibilities of EVAS with a concrete example, the data gathered by Kats et al. (2003) will be applied. The intent of this exercise is to show how the EVAS can incorporate social and environmental information, thereby presenting a fuller picture of the organization than the one based on traditional accounting statements. Identifying and monetising externalities are complicated matters that are currently under much discussion. Probably Kats et al. could have used different or additional indicators, but this discussion is beyond the scope of this paper. The purpose of this example is to present an alternative accounting model which could reflect externalities however they are selected.

The data for the example are as follows:

1. Building size: 17,500 ft$^2$ (1625.75 m$^2$)
2. Traditional building cost per ft$^2$: $286$
3. Total traditional building cost: $286/ft^2 \times 17,500 \text{ ft}^2 = $3,600,000
4. The cost of raising the standard of a building up to the LEEDs standard of environmental performance = $5/ft^2$
5. Sustainable building cost per ft$^2$: $286/ft^2 + $5/ft^2 = $291$ (item 3 plus item 4)
6. Total sustainable building cost: $291/ft^2 \times 17,500 \text{ ft}^2 = $3,700,000
7. Total 20-year NPV Environmental Benefits: $15.98 \times 17,500 \text{ ft}^2 = $279,650

(from Table 4.1)
8. Total 20-year NPV Productivity & Health Benefits: $36.89 * 17,500 ft² = $645,575 (from Table 4.1)

**Income Statement**

The income statement based on these data is shown first for a traditional building project, and then for the same project built to sustainable building standards. In this example, the assumption is that the increased cost (derived from Kats et al. 2003) of using sustainable building materials and techniques ($100,000 plus profit margin) is passed along to the customer. According to the income statement, the ‘bottom line’ for the Traditional Building Co. is $250,000 and for the Sustainable Building Co. $255,050 (Table 4.2).

**TABLE 4.2: Income Statement**

<table>
<thead>
<tr>
<th></th>
<th>Traditional Building Co. (TBC)</th>
<th>Sustainable Building Co. (SBC)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenues</strong></td>
<td>$ 5,250,000</td>
<td>$ 5,356,050</td>
</tr>
<tr>
<td><strong>Expenses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Materials/Outside services</td>
<td>$ 3,600,000</td>
<td>$ 3,700,000</td>
</tr>
<tr>
<td>Wages/benefits</td>
<td>$ 1,250,000</td>
<td>$ 1,250,000</td>
</tr>
<tr>
<td>Depreciation</td>
<td>$ 100,000</td>
<td>$ 100,000</td>
</tr>
<tr>
<td><strong>Total Expenses</strong></td>
<td>$ 4,950,000</td>
<td>$ 5,050,000</td>
</tr>
<tr>
<td><strong>Earnings before taxes</strong></td>
<td>$ 300,000</td>
<td>$ 306,050</td>
</tr>
<tr>
<td><strong>Taxes</strong></td>
<td>$ 50,000</td>
<td>$ 51,000</td>
</tr>
<tr>
<td><strong>Earnings after taxes</strong></td>
<td>$ 250,000</td>
<td>$ 255,050</td>
</tr>
</tbody>
</table>
However, this statement does not show the social and environmental impact of sustainable building practices. It reflects the additional cost of materials to create a more sustainable building ($100,000), but it does not reflect social and environmental benefits (a 20-year NPV of $925,225) (Table 4.3).

**TABLE 4.3: Financial Benefits of SBC Project A (17, 500 ft²/1625.75 m²)**

<table>
<thead>
<tr>
<th>Category</th>
<th>20-year</th>
<th>20-year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NPV/ft²</td>
<td>NPV</td>
</tr>
<tr>
<td><strong>Potential benefits to customers</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy value</td>
<td>$5.79</td>
<td>$101,325</td>
</tr>
<tr>
<td>Water value</td>
<td>$0.51</td>
<td>$8,925</td>
</tr>
<tr>
<td>Commissioning operations &amp; maintenance value</td>
<td>$8.47</td>
<td>$148,225</td>
</tr>
<tr>
<td>Productivity &amp; health value (Certified and Silver)</td>
<td>$36.89</td>
<td>$645,575</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$904,050</td>
</tr>
<tr>
<td><strong>Potential benefits to larger society/environment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste value (construction only) – 1 year</td>
<td>$0.03</td>
<td>$525</td>
</tr>
<tr>
<td>Emissions value</td>
<td>$1.18</td>
<td>$20,650</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$21,175</td>
</tr>
<tr>
<td>Sub-total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$52.87</td>
<td>$925,225</td>
</tr>
</tbody>
</table>

As we can see by comparing the last two tables, table 4.2 indicates that the additional cost of materials to create a more sustainable building is $100,000, yet table
4.3 informs us that the 20-year net present value of projected social and environmental benefits is $925,225.

**The Expanded Value Added Statement (EVAS)**

To prepare an Expanded Value Added Statement for SBC, we need to consider both direct and indirect outputs and subsequent impacts of its activities. Direct outputs refer to the direct effects of the organization’s activities on clients. For the SBC, the primary output in this example is a building using sustainable building standards. Indirect outputs can be split into two types: those that are the indirect effects of the organization’s activities on its clients or members, and those that are the indirect effects of the organization’s activities on those other than its clients or members. In the example of SBC, the former includes the reduced costs of energy, water operations and the commissioning of operations and maintenance, and levels of improved health and productivity. The latter includes reduced landfill use and reduced emissions.

As noted, there are two parts to an Expanded Value Added Statement: (1) the calculation of value added by an organization; and (2) its distribution to the stakeholders. Note that the definition of value added is broadened from considering only financial transactions (that are part of the financial statements), to take into account monetised social and environmental impacts. Table 4.4, which presents the value added by SBC, has six columns that refer to different sources of value added:

**Financial 1 (F1):** information from audited financial statements but does not include expenditures or revenues related to changing social and/or environmental performance;
Financial 2 (F2): information from audited financial statements related to voluntary/proactive expenditures or revenues related to changing social and/or environmental performance;

Financial Total (F TTL): adds together F1 and F2

Social/Environmental (SOCENV1): information about non-monetised contributions and outputs for which market comparisons are estimated: potential benefits to customers

Social/Environmental (SOCENV2): information about non-monetised contributions and outputs for which market comparisons are estimated: potential benefits to larger society

Combined TOTAL (C TTL): total of F TTL and SOCENV1 and SOCENV2

**Value of Outputs**

In order to calculate the amount of value added, the first step is to assess the total outputs of the organization and assign a comparative value to them. In the first column, F1, the amount indicated as ‘direct value’ is revenue that would be received for the building had it been constructed under traditional building standards ($5,250,000). In the second column, F2, the amount of additional revenue received as a result of covering the increased costs to construct the building according to sustainable building standards is shown ($106,050). The third column, F TTL, adds these two figures together to total a ‘direct’ value of $5,356,050. The fourth and fifth columns, SOCENV1 and SOCENV2, include the values that were calculated by Kats et al. for the social and environmental benefits of building to sustainable standards (Table 4.3). SOCENV1 refers to the potential benefits that would go directly to the customers, while SOCENV2 includes an
estimate of potential value that would be gained by larger society. The final column (C TTL) adds together the financial, social and environmental values to end up with $6,281,275.

**Subtracting External Purchases**

Returning to our earlier definition, value added is a measure of wealth that an organization creates by “adding value” to the raw materials, products, and services through the use of labour and capital. The total outputs (combined) represent the value placed on the organization’s goods and services, but in order to provide those goods, SBC purchased goods and services from external sources. The cost of these purchases is taken from the organization’s audited financial statements. As shown in Table 4.1, SBC’s total expenditures in its audited financial statements are $5,101,000, but in order to arrive at
### TABLE 4.4: Expanded Value Added Statement – Sustainable Building Co. (SBC)

<table>
<thead>
<tr>
<th>SUSTAINABLE BUILDING CO. Expanded Value Added Statement For Project ABC</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Traditional</td>
<td>Sustainable</td>
<td>SOCENV1</td>
<td>SOCENV2</td>
<td>Combined</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F1</td>
<td>F2</td>
<td>F TTL</td>
<td>Potential benefits to customers</td>
<td>Potential benefits to society</td>
<td>C TTL</td>
</tr>
<tr>
<td><strong>Direct outputs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales</td>
<td>$5,250,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$5,356,050</td>
</tr>
<tr>
<td><strong>Indirect outputs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy value</td>
<td></td>
<td></td>
<td>$101,325</td>
<td></td>
<td>$101,325</td>
<td></td>
</tr>
<tr>
<td>Water value</td>
<td></td>
<td></td>
<td>$8,925</td>
<td></td>
<td>$8,925</td>
<td></td>
</tr>
<tr>
<td>Commissioning value</td>
<td></td>
<td></td>
<td>$148,225</td>
<td></td>
<td>$148,225</td>
<td></td>
</tr>
<tr>
<td>Productivity &amp; health value</td>
<td></td>
<td></td>
<td>$645,575</td>
<td></td>
<td>$645,575</td>
<td></td>
</tr>
<tr>
<td>Waste value</td>
<td></td>
<td></td>
<td>$525</td>
<td></td>
<td>$525</td>
<td></td>
</tr>
<tr>
<td>Emissions value</td>
<td></td>
<td></td>
<td>$20,650</td>
<td></td>
<td>$20,650</td>
<td></td>
</tr>
<tr>
<td><strong>Total outputs</strong></td>
<td></td>
<td></td>
<td>$5,250,000</td>
<td></td>
<td>$5,356,050</td>
<td></td>
</tr>
<tr>
<td><strong>External Goods &amp; Services</strong></td>
<td></td>
<td></td>
<td>$3,600,000</td>
<td></td>
<td>$3,700,000</td>
<td></td>
</tr>
<tr>
<td><strong>Value Added Created</strong></td>
<td></td>
<td></td>
<td>$1,650,000</td>
<td></td>
<td>$1,656,050</td>
<td></td>
</tr>
<tr>
<td><strong>Ratio of VA to Ext G&amp;S</strong></td>
<td>0.46</td>
<td>0.45</td>
<td>0.24</td>
<td>0.01</td>
<td>0.70</td>
<td></td>
</tr>
<tr>
<td><strong>Employees</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wages/benefits</td>
<td>$1,250,000</td>
<td></td>
<td>$1,250,000</td>
<td></td>
<td></td>
<td>$1,250,000</td>
</tr>
<tr>
<td><strong>Customers</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduction in waste and emissions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$21,175</td>
</tr>
<tr>
<td><strong>Society</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taxes</td>
<td>$50,000</td>
<td>$1,000</td>
<td>$51,000</td>
<td></td>
<td>$51,000</td>
<td></td>
</tr>
<tr>
<td><strong>Organization</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depreciation</td>
<td>$100,000</td>
<td></td>
<td>$100,000</td>
<td></td>
<td></td>
<td>$100,000</td>
</tr>
<tr>
<td><strong>Profit</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$250,000</td>
<td>$5,050</td>
<td>$255,050</td>
<td></td>
<td></td>
<td>$255,050</td>
</tr>
<tr>
<td><strong>Value Added Distributed</strong></td>
<td></td>
<td></td>
<td>$1,650,000</td>
<td></td>
<td>$1,656,050</td>
<td></td>
</tr>
</tbody>
</table>
the amount expended externally on goods and services, the costs related to capital and labour have to be subtracted from the total. Therefore, $5,101,000 is reduced by the employee wages and benefits ($1,250,000), the amortization of capital assets ($100,000) and taxes ($51,000) and the resulting amount is the cost of externally purchased goods and services ($3,700,000). The externally purchased goods and services as they relates to what would have been spent to construct a traditional building is shown in F1 ($3,600,000), and the additional costs to make the building sustainable are shown in F2 ($100,000).

**Value Added**

The amount of value added is calculated by subtracting the amount of externally purchased goods and services from the value of the goods and services produced.

**Ratio of Value Added to Purchases**

The ratio of value added to purchases, indicated in Table 4.4, is calculated by dividing the value added by the cost of external goods and services. This ratio indicates that, for every dollar expended on goods and services the organization generated 0.70 in value added. As noted, the Expanded Value Added Statement includes an estimate of the future value of items such as reduced energy use, water use, and emissions levels; decreased operating and maintenance expenses; increased occupant health; and increased worker productivity. If those items had not been included, the ratio of value added to purchases would have been 0.45 indicated in the “financial” column. Therefore, the inclusion of non-monetized items increases this ratio by over 56 percent.
Distribution of Value Added

The stakeholder-based approach of the Value Added Statement differentiates it from most other forms of financial statements that are oriented toward shareholders. For the statement of distribution, the value added created by the organization is distributed to the stakeholders in its entirety. Stakeholders are selected on the basis of their contribution to the viability of the organization and its values. For a Value Added Statement, the stakeholders suggested by accounting regulatory bodies normally are employees, government, investors, and the organization itself. For purposes of the Expanded Value Added Statement of SBC, one additional stakeholder was identified—customers; and one was modified—the stakeholder government was changed to the stakeholder society.

Table 4.4 presents the distribution of value added for these five stakeholders and also lists the items associated with each stakeholder.

Employees

The value added distributed to the stakeholder employees lists their wages and benefits at $1,250,000.

Customers

The building owner or lessee received a portion of the value added created through financial benefits to be received over the life of the building ($904,050). These include reduced energy and water costs, reduced operating and maintenance expenses ($258,475); and increased productivity of employees ($645,575).

Society

The stakeholder referred to as society received a portion of the value added created through the reduction of emissions into the environment estimated according to
the research done by Kats et al. (2003) to be $21,175. The stakeholder Society also received value added from payments made to the public sector through taxes ($51,000).

**Organization**

Value added distributed to the stakeholder organization was for $100,000 for the depreciation of capital assets and $255,050 from an operating surplus.

**Summary of EVAS**

In total, the value added distributed corresponds to the value added created. Where the items were limited to those on audited financial statements, that amount was $1,656,050; where the items were expanded to include non-monetized social and environmental impacts, the amount was $2,581,275. Figure 4.1 shows this in graphic form.

**FIGURE 4.1: Graphic Depiction of Value Added Showing Traditional and Sustainable Building Methods**
Traditional accounting does not show the impressive additional social and environmental benefits (nearly $1 million) gained from a mere two percent increase in costs ($100,000) in order to make the building sustainable. The EVAS reflects these figures, and hence shows a much broader picture of the organization’s performance.

**Discussion**

The Expanded Value Added Statement shows that financial information alone does not tell the organization’s whole performance story. In the example posed in this chapter, the Expanded Value Added Statement focuses on value creation and creates greater awareness of at least three areas:

- the impact of the organization on different stakeholders;
- the role of the organization in creating economic, social and environmental value added; and
- the interconnectedness of the economic, social and environmental dimensions of organizational activities.

Some of the limitations of the EVAS are imposed by the selection of items to be included and by the methods available to put a monetary value on them. In this regard, the challenges faced by the Expanded Value Added Statement are shared by other forms of alternative accounting and economics, namely identifying, measuring, quantifying, standardizing and placing a value on key social and environmental indicators which could encourage and measure sustainable performance (Ranganathan, 1999; White & Zinkl, 1999). In the example analyzed above, the figures suggest that the potential social and environmental benefits to larger society are very low in relation to the ones enjoyed by customers. This could be due to the choice of indicators used by Kats et al. and to the
difficulties to assign a value to complex variables. Another challenge is to assess not only value added but also value subtracted, as it is important for accounting statements to illuminate both positive and negative impacts on sustainability. These are areas that require continued development and discussion (see Bennett et al., 2002; Bennett et al., 2003; Rikhardsson et al., 2005; Schaltegger & Burritt 2000).

The strengths of the Expanded Value Added Statement lie in its ability to take a broader look at the organization and the role of stakeholders to put this into a larger socio-economic perspective. By including non-monetary items, the EVAS presents a fuller picture of an organization’s economic, social and environmental dimensions, and on the interdependence amongst them. Although more work has to be done on coming up with acceptable valuation methods (as not everyone would agree with the estimates of projected value presented in this example), the change of focus from a profit-oriented bottom line, to an integrated economic, social and environmental bottom line provides an opportunity for organizations and society to think about impacts in a broader sense.

This brings us back to the initial assumption stated at the beginning of the paper, that is, that accounting is a driver of behaviour and can be conceived of as an explicit change agent in order to move organizations towards sustainability. By synthesizing financial data with social and environmental data, the Expanded Value Added Statement is one mechanism for understanding the dynamics of an organization and the inter-related economic-social-environmental implications of various choices made in day-to-day operations. In making these relationships more visible, hopefully the EVAS can help create a new awareness, which in turn can shape more sustainable attitudes and behaviours in organizations, and communicate this to a wider audience.
CHAPTER FIVE

Social Accounting and Reporting for Economically Targeted Investments: The Expanded Value Added Statement

Introduction

This chapter presents a social accounting model called the Expanded Value Added Statement for reporting the economic, social and environmental impact of an organization in order to assist with economically targeted investment decisions. After providing an introduction to economically targeted investments and social accounting, the chapter outlines the Expanded Value Added Statement, which is applied subsequently to an economically targeted investment based on a real estate development undertaken by Concert Properties Inc., unique because it is owned exclusively by union and management pension plans. As explained below, although the economically targeted investment and the real estate firm exist and are described using the best information available, elements of the data used in the Expanded Value Added Statement had to be estimated.

This case, like the others referred to in this thesis to demonstrate the utility of the Expanded Value Added Statement, addresses two questions: 1) How can economic, social and environmental impacts of an organization be quantified to be included in an accounting model? 2) How can an organization’s contribution to/detraction from sustainability (quality of life and environmental health) be reflected in an accounting

---

15 A version of this manuscript has been accepted for publication in J. Quarter, I. Carmichael, & S. Ryan (Eds.), The Socially Responsible Investment of Pension Funds, University of Toronto Press.
model? The contribution in this particular case is to evaluate a range of social and environmental impacts over a period of ten years through the lens of the Expanded Value Added model.

Economically Targeted Investments and Fiduciary Responsibility

In Canada, the assets of trusteeed pension plans amount to over $650 billion, representing the deferred wages of about 4.5 million Canadians (Statistics Canada, 2004). There is a growing interest by workers in learning about the nature and impact of these investments (Quarter et. al., 2003). Indeed, the Canadian trade union movement, represented primarily by the Canadian Labour Congress, has called for an approach to pension fund investing that combines good returns with targeted social, economic and environmental objectives (CLC, 2004). This is precisely the intent of economically targeted investments (ETIs), which “seek to obtain risk-adjusted market grade returns while achieving collateral benefits for plan members and their communities” (SHARE, n.d.). Some examples of collateral benefits include job creation or protection, community economic development, affordable housing, development of infrastructure, public works and social services. Also considered is the limiting of “collateral damage,” for instance job losses, company closures, significant negative impacts on pension plan members, and environmental damage (Wortsman, 2002).16

Pension fund administrators and trustees in Canada have been reluctant to consider factors other than the maximization of financial returns when making investment

---

16 Some examples of collateral benefits include job creation or protection, community economic development, affordable housing or development of infrastructure, public works and social services. Also considered is “collateral damage,” for instance job losses, company closures, significant negative impacts on pension plan members, and environmental damage (Wortsman, 2002).
decisions. One issue of concern is whether or not socially responsible investing is congruent with their fiduciary responsibilities (Carmichael, 2000, 2003b; Yaron, 2001, 2004). In the Canadian institutional context, there are two legal principles that pension fund trustees have to satisfy in carrying out their duties responsibly:

(1) The principle of prudence, which includes:

(a) the duty to obtain a reasonable rate of return on investment;
(b) the duty to invest the trust property;
(c) the duty to maintain an adequate diversity of investments; and
(d) the duty to obtain proper investment advice where necessary.

(2) The principle of loyalty, which includes:

(a) the duty to act honestly and in good faith and in the best interests of the beneficiaries treating all beneficiaries with an even hand;
(b) the duty to exercise discretion and not delegate ultimate responsibility; and
(c) the duty not to allow one’s personal interests to conflict with those of the beneficiaries. (Yaron, 2001, p. 5)

In an extensive analysis of Canadian legislation, common law and academic literature, Yaron (2001, p. 2) argues that the best interest of beneficiaries are not solely their financial interests and that “there is significant legal and empirical support for viewing socially responsible investment practices as a requisite element of prudent and loyal trusteeship.” Yaron concludes that pension trustees “may apply non-financial criteria in selecting investments as long as such investments provide a reasonable rate of return comparable to other investment options with similar levels of risk.” And he adds:
The prudence of investment decisions is based on a process-focused, long-term, portfolio-wide assessment in keeping with modern portfolio theory, not the performance of individual investments. … In all instances, pension trustees should act in accordance with the plan’s investment policy, seek independent expert advice where necessary, and document the basis for all decisions made. (Yaron 2001, pp. 53-4)

This was confirmed through an analysis of fiduciary responsibility in terms of pension fund investing undertaken by one of the world’s largest law firms (Watchman et al., 2005). In their report, A legal framework for the integration of environment, social and governance issues into institutional investment, prepared for the UNEP Finance Initiative, legal experts set out to determine if environmental, social and governance (ESG) issues in investment policy of public and private pensions funds were voluntarily permitted, legally required or hampered by law and regulation. These issues can be characterized by having one or more of the following features (Enhanced Analytics Initiative 2006, p. 1):

• they tend to be qualitative and not readily quantifiable in monetary terms (e.g. corporate governance, intellectual capital)

• they relate to externalities not well captured by market mechanisms (e.g. environmental pollution)

• they relate to wider elements of the supply chain (e.g. suppliers, products and services)

• they are the focus of public concern (e.g. genetically modified organisms)

• they have a medium to long-term horizon (e.g. global warming)
• the *policy and regulatory framework* is tightening (e.g. greenhouse gas emissions).

This analysis looked at legal frameworks in nine countries as they concerned pension investment policy, covering both the Anglo-American common law system (the US, the UK, Australia and Canada), and the Roman-French civil law system (Spain, France, Italy, Germany, and Japan). After careful consideration, it was concluded that ESG factors can be considered, and arguably are required as part of fiduciary responsibility. The specific wording of the report is as follows:

The links between ESG factors and financial performance are increasingly being recognized. On that basis, integrating ESG considerations into an investment analysis so as to more reliably predict financial performance is clearly permissible and is arguably required in all jurisdictions. It is also arguable that ESG considerations must be integrated into an investment decision where a consensus (express or in certain circumstances implied) amongst the beneficiaries mandates a particular investment strategy and may be integrated into an investment decision where a decision-maker is required to decide between a number of value-neutral alternatives. (Watchman et al., 2005, p. 13)

The enormous size of pension funds gives investors a powerful opportunity to influence corporations to influence sustainability issues (Brown, 2003; Minns, 2003, Sparkes & Cowton, 2004). In order to do this, accounting tools are needed to help investment decision-makers choose investments that take into consideration economic, social and environmental impacts. The Expanded Value Added Statement (EVAS), a social accounting statement, was developed as one of these tools. The EVAS is not
intended to replace existing financial statements, but to supplement them. By synthesizing traditional financial data with social and environmental data, the EVAS provides additional valuable information for understanding the dynamics of an organization and one that shows great potential by focusing attention on value creation and use. By focusing attention on an organization’s economic, social and environmental impact, the EVAS is another tool that can be used to tell an organization’s performance story, and perhaps change the way the world appears by making visible things that affect the long-term interests of pension shareholders and society in general.

An Introduction to Social Accounting

Social accounting provides a way of looking at how well an organization is performing economically, socially and environmentally. It expands the range of criteria that are taken into consideration when measuring performance, by looking at the organization in relation to its role in the larger community. To do this, it looks at the organization’s impact on a number of stakeholder groups, for instance, employees, customers, owners, society and the environment.

Social accounting can also be applied to a community, as is being done in Newfoundland\textsuperscript{17} and Nova Scotia.\textsuperscript{18} In both areas, a System of Community Accounts attempts to measure the security and well-being of the area, using resident feedback on their feelings of safety, incidence of crime, volunteering, health, social supports, time use and other socio-economic factors.

\textsuperscript{17} See \url{http://www.communityaccounts.ca/communityaccounts/onlinedata/getdata.asp}
\textsuperscript{18} See \url{http://www.gov.ns.ca/finance/communitycounts/}
Typically, social accounting focuses on three inter-related components: economic, social and environmental:

- **economic**: of relating to or based on the production, distribution, and consumption of goods and services
- **social**: of or relating to human society, the interaction of the individual and the group, or the welfare of human beings as members of society
- **environmental**: the complex of physical, chemical, and biotic factors (as climate, soil, and living things) that act upon an organism or an ecological community and ultimately determine its form and survival.\(^{19}\)

The definition of social accounting followed in this chapter is “a systematic analysis of the effects of an organization on its communities of interest or stakeholders, with stakeholder input as part of the data that are analyzed for the accounting statement” (Quarter, Mook, & Richmond, 2003, p. xix). This can be contrasted to definitions of traditional accounting, which focus only on the reporting of financial items for economic decision-making:

Accounting is a service activity. Its function is to provide quantitative information, primarily financial in nature, about economic entities that is intended to be useful in making economic decisions of action. (American Institute of Certified Public Accountants (Accounting Principles Board), 1970, Section 1023).

Thus, social accounting differs from traditional accounting in its focus on community impact, on stakeholders, and on its wider scope than on financial items alone.

\(^{19}\) [http://www.m-w.com/dictionary/economic](http://www.m-w.com/dictionary/economic)
The Expanded Value Added Model

Along the line of earlier researchers (for example Abt & Associates Inc., 1974; Belkaoui, 1984; Estes, 1976; Linowes, 1972), Mook developed several social accounting statements that integrate financial and social information (Quarter, Mook, & Richmond, 2003). One model in particular will be applied in this chapter: the Expanded Value Added Statement, or EVAS. The EVAS is based on a traditional accounting statement called the Value Added Statement, but it is modified to include social and environmental items.

Value added is a measure of wealth that an organization creates by adding value to raw materials, products and services using labour and capital. It is not a new concept; rather it has been used since the turn of the twentieth century in the calculation of the Gross National Product. The Value Added Statement also is not new; it was proposed in 1954 by Suojanen and has been used in the United Kingdom since the 1970s. It is also used in other European countries and South Africa. In contrast to profit, which is the wealth created for only one group—the owners or shareholders—value added represents the wealth created for a larger group of stakeholders (Riahi-Belkaoui, 1999). Thus, the Value Added Statement focuses on the wider implications of an organization’s activities beyond its profits or losses. It emphasizes that the organization also employs people, contributes to societal costs through taxes, rewards investors and creditors for risking their funds, and contributes to the community.

Figures 5.1 and 5.2 depict the difference between profit and value added. Figure 5.1 presents a simple graphic illustration of an income statement that equates wealth with profit—or revenues less expenses. The expenses may include payments for such items as external goods and services, wages and benefits to employees, interest on loans, taxes,
and depreciation. Revenues received (which is also the market value of the organization's outputs) are shown on the left-hand side of Figure 5.1, while the expenses and profit that correspond to those revenues are shown on the right.

**FIGURE 5.1 A Graphic Illustration of Profit**

Value added, on the other hand, is a much broader definition of wealth. As can be seen in Figure 5.2, value added looks beyond the wealth (profit) created for shareholders and includes the wealth for a wider group of stakeholders such as employees, creditors, government and the organization itself. Thus, value added can be thought of as revenues less purchases of external goods and services. Materials and supplies are purchased from suppliers and turned into different goods and services using labour and capital.

---

20 Depreciation or amortization is the process of matching the cost of an asset against revenues based on its estimated useful life. Thus, instead of expensing the entire cost of an asset when it is purchased, it is expensed according to how long it is estimated to be useful in producing value. In a simple example, if the asset were estimated to last five years, one fifth of its cost would be expensed every year for five years.
To use a simple example, the value added created by a furniture-making company is calculated by taking the difference between the price the furniture was sold for and the cost of the materials that went into making the furniture (wood, screws, glue, etc.). So if you were making a table that sold for $300, and the wood and materials cost $100, the value added would be $300 minus $100, or $200. Another way of looking at value added is that labour and capital transformed the raw materials into another form, i.e., the table, and as a result, the value of the materials increased by $200. That value added, $200, is then distributed to the stakeholders of the company – its employees, creditors, government (taxes), and shareholders.

**FIGURE 5.2. A Graphic Illustration of Value Added**

![Value Added Diagram]

However, one limitation of the Value Added Statement is that it focuses only on financial items and pays no attention to intangibles and items that do not pass through the
market. The organization has social and environmental impacts as well as economic ones. The impacts may be intended or unintended, and may occur in the short-term (up to three years), medium-term (four to six years), and long-term (seven years or more). In the Expanded Value Added Statement, we want to consider all impacts that have occurred as a result of turning those externally purchased goods and materials into something else. To overcome these limitations, the Expanded Value Added Statement was developed to incorporate social and environmental value added (or subtracted) by an organization.\(^1\)

The overall concept used to guide the application of the model is sustainability. Sustainability has many definitions, but most arise out of the 1987 United Nations report, *Our Common Future*, also known as the Brundtland Report, which called for “a form of sustainable development which meets the needs of the present without compromising the ability of future generations to meet their own needs” (UNWCED, 1987, p. 8). In other words, development should be about improving quality of life for all while not destroying the environment, and not about increasing profits and the standard of living for a few.

The EVAS is not intended to replace existing financial statements but rather to be presented alongside them. By synthesizing traditional financial data with social and environmental data, the EVAS is another mechanism for understanding the dynamics of an organization and one that shows great potential for focusing attention on value creation and use. As such, it generates an additional set of questions that can be used to guide investment decisions. It challenges us to think about organizations in a different way—as creators or destroyers of value to a wide group of stakeholders. As an organizational tool, there is a shift from a narrow focus on how to maximize profit to a

wider focus on how to maximize value creation that is sustainable. This involves a two-step analysis. First, the contributions of each activity are determined across three dimensions: the economic, social and environmental. Second, each dimension (economic, social and environmental) is evaluated by stakeholders to measure the entire contribution of the organization (program, community) to sustainability.

The utility of the EVAS will be illustrated by applying it to an economically targeted investment (ETI). The case was created based on an analysis of documents and interviews around a master-planned real estate development called Collingwood Village. This involved looking at four institutions: a for-profit real estate development company; a non-profit community policing office; a non-profit neighbourhood center; and the municipal government. The real estate development company provided partial financial data about the construction of the buildings and infrastructure, and other financial data were obtained from public sources. Documents reviewed included minutes from government meetings; organization newsletters, pamphlets and reports; personal correspondence; and government reports available on Internet sites. Interviews were conducted with two top management and two staff members of the real estate company, with the executive director of the community policing centre, and with a researcher who had done previous research on this community. As noted above, the information needed to complete the Expanded Value Added Statement was incomplete; therefore, estimates were made for some variables such as operating expenses and maintenance fees. While this was not ideal, it does allow the reader to obtain a more complete picture of the potential of this work.
An Economically Targeted Investment: Collingwood Village

Collingwood Village is a master-planned community located on Canada’s west coast, in Vancouver, British Columbia. Vancouver is recognized as one of the world’s most “livable” cities, and the Greater Vancouver Regional District has won several major awards for its strategic planning processes (Timmer & Seymoar, 2005). Based on extensive public consultation in the 1970s, it developed “The Livable Region Strategic Plan,” where the public decided livability goals for the region. It focused on four areas: protecting green space and natural resources; creating complete communities with high density based on regional town centres; achieving a compact and dense metropolitan region; and connecting the region through a transit-supportive and automobile-restrained transportation system. The Sustainable Region Initiative, and most recently the PLUS 100-year vision, followed this plan for the Greater Vancouver Regional District, with each plan adding new insights into the concepts of livability, sustainability and resilience.

This is the context in which Collingwood Village was designed and built. Land was purchased in a light industrial area near the Joyce Street Sky Train station (now the Joyce-Collingwood Station) in the early 1990s for $65 million by the developer, Concert Properties Ltd. (Carmichael, 2005). This land was previously zoned industrial, also called a brownfield. A brownfield is “an abandoned, vacant, derelict, or underutilized commercial or industrial property where past actions have resulted in actual or perceived contamination and where there is an active potential for redevelopment” (NRTEE, 2003, p. ix). It is estimated that there are as many as 30,000 such sites in Canada. Public benefits of redevelopment include reduced health risks and improved neighbourhoods
(NRTEE, 2003). An additional adjoining 2.3 acres of land owned by the City of Vancouver was leased and also developed (Carmichael, 2005).

Concert Properties is unique in that it is owned exclusively by union and management pension plans representing over 200,000 British Columbians (Concert, 2003). It was started by union activists who wanted to build affordable, good quality housing with union labour, and to provide good returns to the pension funds that had invested in it. Part of the business plan of Concert is to own income-producing properties such as rental housing, which has reasonably safe levels of returns and produces long-term income (Wintrob, 2002). Concert has a reputation for building good quality housing and for being a caring, ethical organization.22

Although coordinated by Concert Properties, the project team for Collingwood Village was much larger, and incorporated private, public and community groups. The team included, among others, architects, engineers, municipal planners, zoning officials, tradespeople, financial actors and community residents. Extensive consultations and negotiation with the community and the city were undertaken to put together the final design of the project. This was a key factor in the success of Collingwood Village. From the beginning, the developer worked closely with community leaders and the city to determine the needs and priorities of the community. Many members of the community, including resident groups, service providers and businesses in the area, worked over many months developing policy directions for the site, including prioritizing amenities which would support their community vision and accommodate high density development, in excess of 100 units per acre. According to Concert CEO, David

Podmore, “that was a big change for a community, yet we faced no opposition at all and we still have a great relationship with them” (as cited in Peterson, 2005, p. 23). Indeed, the Association of Neighbourhood Houses of Greater Vancouver awarded Concert Properties the 2004 Corporate Good Neighbour Award. Commended for its long-term positive relations with resident groups, service providers and businesses, Concert Properties was recognized as a true partner in helping achieve the community’s vision to improve the quality of life of Collingwood residents.23

Construction of Collingwood Village began in the spring of 1994. From the beginning to July 2003 (Phases 1 to 3 of the project), over 2.1 million hours of union labour created over 1,700 units of housing (40 percent rental, which Concert manages on-site), a community centre including daycare facilities and an indoor gymnasium, a street-front community policing office (the first in Vancouver), 70,000 square feet of commercial space including a community health centre, and two parks (4.9 acres). Outdoor sports facilities include tennis courts, a sports field and baseball diamond. A cooperative housing building with 79 units is also located on the property, as is an entry-level low-rise housing complex with 59 units owned by VanCity Credit Union. Phase 4 is set for completion in 2007, and will add an additional 900 condominium units and one more park (2.5 acres), resulting in an increase of unit-per-acre density from six to over 100 (Concert, 2004).

Financing for the project came from pension fund investors and banks. Pension fund investors contributed in two ways: One was through equity provided by pension funds (25 percent of financing); and the second through Mortgage Fund One (25 percent), an investment trust financed by pension funds in which net income reverts back to

23 http://www.anhgv.org/2004+Corporate+Good+Neighbour+Award.htm
the unit holders and thus no income tax is paid on earnings. Returns reported by Mortgage Fund One averaged 8.5 percent for the ten-year period of 1995 to 2004 (Table 5.1) (Carmichael, 2005; ACM Advisors, 2002, 2005). Private lenders finance the remaining 50 percent.

<table>
<thead>
<tr>
<th>Year</th>
<th>Rate of return</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>7.34%</td>
</tr>
<tr>
<td>2003</td>
<td>6.68%</td>
</tr>
<tr>
<td>2002</td>
<td>9.15%</td>
</tr>
<tr>
<td>2001</td>
<td>8.55%</td>
</tr>
<tr>
<td>2000</td>
<td>9.03%</td>
</tr>
<tr>
<td>1999</td>
<td>3.02%</td>
</tr>
<tr>
<td>1998</td>
<td>8.30%</td>
</tr>
<tr>
<td>1997</td>
<td>7.96%</td>
</tr>
<tr>
<td>1996</td>
<td>10.02%</td>
</tr>
<tr>
<td>1995</td>
<td>8.22%</td>
</tr>
</tbody>
</table>

Collingwood Village was built according to the planning principles and ‘best practices’ of the day, including transit-oriented development, crime prevention through environmental design, urban intensification, and urban revitalization (Concert Properties, 2005). Concert’s current building practices include those associated with the LEED®24 principles, which are increasingly used for sustainable building.

---

After the first phase of construction, it was found that the demand for parking spaces was much lower than anticipated. A transit study commissioned in the summer of 1996 confirmed that households located within 300 metres of the SkyTrain (rapid transit) station had lower car ownership rates (Bunt & Joyce, 1996). Twenty-four percent did not own cars at all, compared to 17 percent not owning a car living at least 1,000 metres from the station. Car ownership rates near the Skytrain station were found to be 0.96 vehicles per household, significantly lower than two other areas studies (Burnaby and Coquitlam), which had rates ranging from 1.40 to 1.48. Households close to a Skytrain station are also more likely to be frequent users of rapid transit: 47 percent versus 18 percent for those in remote locations. As a result of this study, the developer was successful in getting the city to reduce the minimum parking standard for Collingwood Village from 1.35 stalls per unit in the first phase of construction to 1.04 units in later phases. The resulting savings were used to improve the station area streetscape and security (Nieweler, 2004).

Another design element that encourages reduced car use is bicycle parking; all buildings in Collingwood Village have bicycle parking at and below grade. For residential buildings, there are 1.25 bicycle stalls provided for each unit. Commercial buildings and community buildings in the development have change rooms and showers (Concert Properties, 2005).

**Neighbourhood Amenities**

Neighbourhood amenities play an important part in the fabric of Collingwood Village. These include three parks amounting to 27 percent greenspace in the development area, a baseball diamond, sports field, tennis courts and gathering places.
Special attention has been paid to ensure the roadways and walkways are pedestrian friendly. A community neighbourhood centre was built as part of the project, as well as a community policing office.

**Collingwood Community Neighbourhood House**

The 26,500-square-foot community neighbourhood house was completed in 1995. Its mission is “to provide leadership, programs and services in response to the social, educational, economic, health, cultural and recreational needs of residents of Collingwood, and to promote the well being of the residents and the community as a whole” (Collinwood Neighbourhood House, 2003). The facilities include an 8,000 square foot indoor gymnasium and 7,000 square foot daycare centre for up to 69 children—the centre employs 40 full-time staff and 60 part-time staff with a budget over $3 million. A $2 million endowment from Concert contributes to support operations and services.

**Collingwood Community Policing Centre**

The area in which Collingwood Village is located used to have the highest crime rate in its district; however, budget restraints did not allow for a police station to be located in the area. As a result, the Collingwood Community Policing Centre was started in 1994, the first of its kind in Canada, and located in Collingwood Village. The office operates in a rent-free space provided by Concert, and is run by the community. It is also supported in part by an endowment from Concert. The goal of the office is to bridge the gap between the community, the City, and the Vancouver Police Department, and to educate and empower citizens to take responsibility for crime in their community (Collingwood Community Policing Centre, 2006).
The success of the Collingwood Community Policing Centre is reflected in its strong volunteer involvement. In the year 2005, 219 volunteers contributed an estimated 25,202 hours, or based on a 35-hour week, the equivalent of 13.85 full-time staff equivalents. This represents 87 percent of the total activity hours. If a comparative market value is put on these hours, it amounts to $293,855, approximately 55 percent of all incoming resources.\textsuperscript{25}

All in all, this high density mix of market and non-market housing in proximity to rapid public transit, along with its community amenities and ‘Crime Prevention through Environmental Design’ features, earned Collingwood Village the Greater Vancouver Regional District’s (GVRD) \textit{Livable Region Award} in 2002. It was noted as a “outstanding example of community-based planning” that contributes to the Livable Region Strategic Plan of protecting the green zone, building complete communities, increasing transportation choices, and achieving a compact metropolitan region (GVRD, 2002, p. 28). These features and the accompanying award have paid off in terms of condominium sales and low vacancy rates in rental buildings. As an example, one of the latest condominium buildings, a 27-storey tower, sold out completely within three weeks of being advertised.

\textsuperscript{25} To calculate the estimated market value of the hours contributed by volunteers, the replacement cost method is used. This is the amount it would cost an organization if they had to pay someone to do the same tasks. An hourly rate calculated by Statistics Canada using the North American Industry Classification System (NAICS), is used. To assign a value to the contributions by Collingwood CPC volunteers, NAICS category sub-sector 5616, Investigation and Security Services, is applied. This sub-sector includes organizations engaged in providing guard and patrol services. The activities listed in this sub-sector fit well with the majority of the volunteer activities contributed by Collingwood CPC volunteers. The hourly rate for those involved in this category in British Columbia for the year 2005 was $11.66/hour. Using this figure, the estimated total value for the 25,202 hours, or the equivalent of almost 14 full-time staff equivalents (based on a 35-hour week) is $293,855.
Case Example: Community Village

Using the key features found in Collingwood Village, I developed a composite case study (Community Village) to demonstrate the utility of the Expanded Value Added Statement for an economically targeted investment. I created this case from several sources rather than relying totally on Collingwood Village, because the data available for Collingwood Village were limited. Nevertheless, wherever possible, I did use data based on Collingwood Village, and then supplemented it with additional data. Overall, the purpose of this exercise is to demonstrate what can be learned by using the Expanded Value Added Statement to assess the economic, social and environmental aspects of this type of development over a time frame of 10 years.

Community Village was developed as an economically targeted investment by several pension plans located in a large city in Canada. The community currently has a population of 5,000 residents, and is located within a larger municipal community with a population of 40,000. It was developed on brownfield land in close vicinity to a rapid transit station. The development consists of four rental and six condominium buildings, along with a community centre and community policing centre. Throughout the development, there are several parks with green space accounting for about 25 percent of the total land area.

The development used only union labour, and over the course of the ten years, 3.3 million hours of employment were created: 2.4 million hours in the construction of the buildings; 159,000 in the operations of the buildings; 727,000 in the community centre; and 21,000 in the community policing centre. In addition, 238,000 hours of volunteer opportunities were also created.
The next section outlines the specifics of construction, operations, community centre, and community policing centre, characteristics that will then be brought together in the Expanded Value Added Statement. While previous analyses using this model have been applied at the program and organization levels, this application goes one step beyond, using the community as its unit of analysis.

**Construction**

Although the construction of Community Village occurred over a period of ten years, to keep the example simple, it is assumed that each building is constructed in a period of one fiscal year. The costs of construction of the rental buildings and amenities are capitalized and amortized over 40 years, including interest charges incurred during the time of construction. Half of the financing for Community Village comes from private lenders, and the other half from pension funds: twenty-five percent in the form of equity investments and another twenty-five percent through an investment trust.

**Operations**

*Rental management.* Expense categories and percentage of revenues to manage the four rental buildings are outlined in Table 5.2. The percentage of specific expense categories as compared to revenues is based on a study of five apartment buildings. The rental rate in the first year is based on actual rental rates of similar buildings in Vancouver: $1.15 per square foot per month, and increased yearly by the cost of living adjustment set by the provincial government.

---

26 http://www.canfedapts.org/TaxStudy.htm#intro
Table 5.2: Breakdown by Percentage of Expenses of Rental Buildings

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>100.00 %</td>
</tr>
<tr>
<td>Expenses</td>
<td></td>
</tr>
<tr>
<td>Advertising</td>
<td>0.78%</td>
</tr>
<tr>
<td>Insurance</td>
<td>1.21%</td>
</tr>
<tr>
<td>Professional</td>
<td>0.26%</td>
</tr>
<tr>
<td>Management</td>
<td>5.76%</td>
</tr>
<tr>
<td>Property taxes</td>
<td>8.03%</td>
</tr>
<tr>
<td>Repairs</td>
<td>12.61%</td>
</tr>
<tr>
<td>Utilities</td>
<td>4.88%</td>
</tr>
<tr>
<td>Wages &amp; benefits</td>
<td>5.22%</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>0.17%</td>
</tr>
<tr>
<td>Office</td>
<td>0.33%</td>
</tr>
<tr>
<td></td>
<td><strong>39.26%</strong></td>
</tr>
<tr>
<td>Net income</td>
<td><strong>60.74%</strong></td>
</tr>
</tbody>
</table>

Condominium management. Fees paid monthly by condominium owners cover costs associated with common areas in their buildings and provide funds for a reserve for future capital expenditures. For this example, condominium fees are calculated at $0.20 per square foot per month. Expense categories and reserve appropriations are shown in Table 5.3.
TABLE 5.3: Breakdown by Percentage of Expenses of Condominiums

<table>
<thead>
<tr>
<th>Expenses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utilities</td>
<td>39.9%</td>
</tr>
<tr>
<td>On Site Wages/Contract</td>
<td>17.1%</td>
</tr>
<tr>
<td>Repairs &amp; Maintenance</td>
<td>22.9%</td>
</tr>
<tr>
<td>Other Operating Expenses</td>
<td>3.6%</td>
</tr>
<tr>
<td>Administrative Expenses</td>
<td>1.3%</td>
</tr>
<tr>
<td>Management Fees</td>
<td>5.1%</td>
</tr>
<tr>
<td>Current Reserve</td>
<td></td>
</tr>
<tr>
<td>Appropriation</td>
<td>10.1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

**Community Centre**

A 30,000 square foot community centre was in full operation by year 3 of the development. Over the seven-year period covered in this example, it employed an average of 50 full-time employees and 50 half-time employees yearly. It also provided volunteer opportunities for 15 people yearly (the Board of Directors). The average yearly budget for the community centre is $3 million.

**Community Policing Centre**

The Community Policing Centre also came into full operation in year 3. It is run by 2 full-time paid staff and 200 volunteers. Its average yearly budget is $175,000, with $100,000 coming from government funding.
Taxation

The impact of taxation is felt at all three levels of government: municipal, provincial and federal. At the municipal level, the development contributes to an increased property tax base. In this example, the property tax rate of condominium properties is estimated to be 0.005 percent of property value. At the provincial level, provincial sales tax of 7 percent is charged on the sale of new condominiums. A federal goods and services tax of 7 percent is also collected on the sale of new condominiums. For first-time homebuyers, a rebate is available of 2.52 percent. In this example, it is estimated that 50 percent of the condominium buyers are first-time buyers. Employment also provides taxes to government, in this case estimated to be 25 percent of wages net of contributions.

Statement of Operations

The Statement of Operations for the ten years covered in this example is shown in Table 5.4. It brings together four key groups: the development group responsible for constructing and running the housing units, the non-profit community policing office, the community centre, and the government. Over the ten years, the net surplus to the group is $45.6 million.
### TABLE 5.4: Statement of Operations

<table>
<thead>
<tr>
<th>PRODUCTION</th>
<th>Development group</th>
<th>Neighbourhood House</th>
<th>Community Policing Centre</th>
<th>Government</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sale of residential properties</td>
<td>197,671,925</td>
<td></td>
<td></td>
<td>31,077,93</td>
<td>228,749,018</td>
</tr>
<tr>
<td>Self-constructed assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rental buildings</td>
<td>90,713,060</td>
<td></td>
<td></td>
<td>4,819,205</td>
<td>95,532,265</td>
</tr>
<tr>
<td>Amenities</td>
<td>12,399,000</td>
<td></td>
<td></td>
<td>12,399,000</td>
<td></td>
</tr>
<tr>
<td>Condo management fees</td>
<td>12,398,400</td>
<td></td>
<td></td>
<td>12,398,400</td>
<td></td>
</tr>
<tr>
<td>Payroll taxes received</td>
<td></td>
<td></td>
<td></td>
<td>23,159,330</td>
<td>23,159,330</td>
</tr>
<tr>
<td>Rent</td>
<td>59,981,896</td>
<td></td>
<td></td>
<td></td>
<td>59,981,896</td>
</tr>
<tr>
<td>Government Grants</td>
<td>15,000,000</td>
<td>1,000,000</td>
<td></td>
<td></td>
<td>16,000,000</td>
</tr>
<tr>
<td>Other Grants</td>
<td>15,000,000</td>
<td>750,000</td>
<td></td>
<td></td>
<td>15,750,000</td>
</tr>
<tr>
<td>In-kind donations</td>
<td>(240,000)</td>
<td>240,000</td>
<td></td>
<td></td>
<td>240,000</td>
</tr>
<tr>
<td></td>
<td>372,924,280</td>
<td>30,000,000</td>
<td>1,990,000</td>
<td>59,055,629</td>
<td>463,969,909</td>
</tr>
</tbody>
</table>

| EXPENSES                    |                   |                     |                           |            |         |
|-----------------------------|                   |                     |                           |            |         |
| Materials and supplies      | 205,874,218       | 5,650,000           | 1,290,000                 |            | 212,814,218 |
| Wages and benefits          | 84,142,287        | 24,000,000          | 700,000                   |            | 108,842,287 |
| Payroll taxes               |                   |                     |                           |            |         |
| Grants                      |                   |                     |                           | 16,000,000 | 16,000,000 |
| Depreciation                | 18,043,182        | 350,000             |                           |            | 18,393,182 |
| Property taxes              | 4,819,205         |                     |                           |            | 4,819,205 |
|                             | 312,878,893       | 30,000,000          | 1,990,000                 | 16,000,000 | 360,868,893 |
| Sub-total                   | 60,045,387        | 0                   | 0                         | 43,055,629 | 103,101,016 |
| Dividends                   | 12,511,656        |                     |                           |            | 12,511,656 |
| Interest                    | 43,759,500        | 0                   |                           | 0          | 43,759,500 |
| Condo reserve               | 1,252,238         |                     |                           |            | 1,252,238 |
| Net income                  | 2,521,993         | 0                   | 0                         | 43,055,629 | 45,577,622 |
Value Added Statement

Another way of looking at the performance of this development is to estimate the value added it created over the ten years and how it was distributed to its primary stakeholders (Table 5.5). In the case of Community Village, $201 million of value added was created and distributed to employees, government, creditors, investors, unions, condo owners, and a portion retained by the organizations. The portion distributed to each stakeholder can also be shown in a pie chart (see Figure 5.3).

TABLE 5.5: Value Added Statement for Community Village, for the Ten Years ending December 31, 2004

<table>
<thead>
<tr>
<th></th>
<th>Financial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value of outputs</td>
<td>435,991,373</td>
</tr>
<tr>
<td>Externally purchased G&amp;S</td>
<td>210,818,087</td>
</tr>
<tr>
<td>Value added</td>
<td>225,173,286</td>
</tr>
<tr>
<td>Employees</td>
<td>83,792,399</td>
</tr>
<tr>
<td>Unions</td>
<td>1,890,558</td>
</tr>
<tr>
<td>Condo owners</td>
<td>1,252,238</td>
</tr>
<tr>
<td>Society</td>
<td>16,000,000</td>
</tr>
<tr>
<td>Creditors</td>
<td>45,755,630</td>
</tr>
<tr>
<td>Investors</td>
<td>12,511,656</td>
</tr>
<tr>
<td>Organizations</td>
<td>20,915,176</td>
</tr>
<tr>
<td>Government</td>
<td>43,055,629</td>
</tr>
<tr>
<td>Value added</td>
<td>225,173,286</td>
</tr>
</tbody>
</table>

27 Stakeholders are those that affected by the organization’s activities, positively or negatively. Primary stakeholders are those groups that are essential to the ongoing operation of the enterprise. Typically, these are customers, employees, investors, community, government, and suppliers. If any one of these groups fails to support the organization, the organization will cease to function. Secondary stakeholders are those that are influenced by or affected by the organization’s activities, but do not engage in transactions with the organization. They are also not essential for its survival (Clarkson, 1995).
FIGURE 5.3: Distribution of Value Added

Identifying Social and Environmental Impacts

Even though there may be disagreement on the specificities of assigning a value to social and environmental outputs, placing a value on them recognizes their presence and their relative importance to economic performance. As mentioned previously, the key concept leading the development of this model is sustainability, integrating economic, social and environmental issues with a long-term view to planning and development. Significant problems such as rapid population growth, atmospheric change, persistent pollutants, the beginning of the end of the oil economy, loss of species and habitats, poverty, war, disease and social instability, all contribute to the extreme necessity that we change our perspectives on how corporations, cities are managed, and households are managed (Greater Vancouver Regional District, 2004).
The next section highlights some of the social and environmental characteristics of Community Village that could be accounted for in an Expanded Value Added Statement: the impact of transit-oriented development; opportunities for an active lifestyle; crime prevention measures; and the impact of making environmentally-conscious decisions in purchases energy-using devices. These items are hypothetical and not meant to be exhaustive; rather, they are illustrative and meant to trigger thought on other types of impacts that could be included.²⁸

*Transit-oriented development.* Because Community Village is located on the rapid transit line, residents can quite easily leave their car at home when they commute to work. Some even choose not to have a car at all. The impact of this reduced car use affects both the individual and wider society. An extensive study of these impacts by Litman (2005) isolated individual and societal transportation cost factors, as shown in Table 5.6.

---
²⁸ In order to determine which outputs to include in social accounting, it is helpful to think about outputs at three levels: primary, secondary and tertiary. Primary outputs refer to the direct effects of the organization’s activities on its primary stakeholders. In the example of Community Village, this includes the provision of housing. Secondary outputs are the indirect effects of the organization on its primary stakeholders. This might be the impact of increased physical activity because of the design of the development. Tertiary outputs are the effects of the organization’s activities on those other than primary stakeholders. This could include wider environmental impacts of the development.
### TABLE 5.6: Transportation Cost Factors (in 1996 US dollars)

<table>
<thead>
<tr>
<th>Cost</th>
<th>Definition</th>
<th>Average car (per mile)</th>
<th>Rideshare passenger (per mile)</th>
<th>Shift (per mile)</th>
<th>Shift (per km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vehicle Ownership</td>
<td>Fixed vehicle expenses</td>
<td>$0.1873</td>
<td>$0.0000</td>
<td>$0.1873</td>
<td>$0.1124</td>
</tr>
<tr>
<td>Internal Parking</td>
<td>Parking costs borne by users</td>
<td>$0.0455</td>
<td>$0.0000</td>
<td>$0.0455</td>
<td>$0.0273</td>
</tr>
<tr>
<td>Vehicle Operation</td>
<td>User expenses that are proportional to travel</td>
<td>$0.1336</td>
<td>$0.0030</td>
<td>$0.1306</td>
<td>$0.0784</td>
</tr>
<tr>
<td>User Travel Time</td>
<td>Time spent traveling</td>
<td>$0.2300</td>
<td>$0.1800</td>
<td>$0.0500</td>
<td>$0.0300</td>
</tr>
<tr>
<td>Internal Accident</td>
<td>Vehicle accident costs borne by users</td>
<td>$0.0500</td>
<td>$0.0500</td>
<td>$0.0000</td>
<td>$0.0000</td>
</tr>
<tr>
<td>Total individual</td>
<td></td>
<td>$0.6464</td>
<td>$0.2330</td>
<td>$0.4134</td>
<td>$0.2480</td>
</tr>
<tr>
<td>Societal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>External Accident</td>
<td>Vehicle accident costs not borne by users</td>
<td>$0.0318</td>
<td>$0.0000</td>
<td>$0.0318</td>
<td>$0.0191</td>
</tr>
<tr>
<td>External Parking</td>
<td>Parking costs not borne by users</td>
<td>$0.1091</td>
<td>$0.0000</td>
<td>$0.1091</td>
<td>$0.0655</td>
</tr>
<tr>
<td>Congestion</td>
<td>Delay each vehicle imposes on other road users</td>
<td>$0.1545</td>
<td>$0.0000</td>
<td>$0.1545</td>
<td>$0.0927</td>
</tr>
<tr>
<td></td>
<td>The disamenity roads and vehicle traffic imposes on pedestrians and bicyclists.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Also called “severance”</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barrier Effect</td>
<td>Road expenses not paid by user fees</td>
<td>$0.0136</td>
<td>$0.0000</td>
<td>$0.0136</td>
<td>$0.0082</td>
</tr>
<tr>
<td>Road Facilities</td>
<td></td>
<td>$0.0145</td>
<td>$0.0000</td>
<td>$0.0145</td>
<td>$0.0087</td>
</tr>
<tr>
<td>Municipal Services</td>
<td>Public services devoted to vehicle traffic</td>
<td>$0.0136</td>
<td>$0.0000</td>
<td>$0.0136</td>
<td>$0.0082</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
</tr>
<tr>
<td>Roadway Land Value</td>
<td>Opportunity cost of land used for roads</td>
<td>$0.0218</td>
<td>$0.0000</td>
<td>$0.0218</td>
<td>$0.0131</td>
</tr>
<tr>
<td></td>
<td>Reduced travel choices, especially for disadvantaged people</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option &amp; Equity Value</td>
<td></td>
<td>$0.0045</td>
<td>$0.0000</td>
<td>$0.0045</td>
<td>$0.0027</td>
</tr>
<tr>
<td>Air Pollution</td>
<td>Costs of motor vehicle emissions</td>
<td>$0.0564</td>
<td>$0.0020</td>
<td>$0.0544</td>
<td>$0.0326</td>
</tr>
<tr>
<td>Noise</td>
<td>Costs of motor vehicle noise</td>
<td>$0.0091</td>
<td>$0.0000</td>
<td>$0.0091</td>
<td>$0.0055</td>
</tr>
<tr>
<td>Resource Consumption</td>
<td>External costs resulting from resource consumption</td>
<td>$0.0264</td>
<td>$0.0010</td>
<td>$0.0254</td>
<td>$0.0152</td>
</tr>
<tr>
<td></td>
<td>Water pollution and</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>hydrologic impacts of vehicles &amp; roads</td>
<td>$0.0118</td>
<td>$0.0000</td>
<td>$0.0118</td>
<td>$0.0071</td>
</tr>
<tr>
<td>Waste Disposal</td>
<td>External costs from motor vehicle waste disposal</td>
<td>$0.0018</td>
<td>$0.0000</td>
<td>$0.0018</td>
<td>$0.0011</td>
</tr>
<tr>
<td></td>
<td>Economic, environmental and social costs resulting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>from low density, auto oriented land use</td>
<td>$0.0636</td>
<td>$0.0000</td>
<td>$0.0636</td>
<td>$0.0382</td>
</tr>
<tr>
<td>Total Societal</td>
<td></td>
<td>$0.5327</td>
<td>$0.0030</td>
<td>$0.5297</td>
<td>$0.3178</td>
</tr>
<tr>
<td>Total Overall</td>
<td></td>
<td>$1.1791</td>
<td>$0.2360</td>
<td>$0.9431</td>
<td>$0.5659</td>
</tr>
</tbody>
</table>

Using these figures, the impact of one person from 25 percent of the adult residents (assuming an average of 1.5 adults per unit) switching from car-use to rapid-transit use for the daily commute to work is calculated. This is based on an average 20-kilometre round-trip commute, five days a week, 48 weeks a year. At $0.5659 per kilometre (Table 5.6), the 1996 dollar value associated with this switch is $2,716 per
person per year. Breaking this down into individual and societal impacts, the rate per kilometre is $0.248 and $0.3178, respectively (in 1996 US dollars). When these figures are adjusted for cost of living and converted to Canadian dollars, over ten years the total impact of this switch amounts to $18.3 million, with $8.0 million in actual savings to the residents who have switched (individual impacts) and $10.3 million in economic, social and environmental benefits to the wider society (societal impacts). This also takes into consideration the population growth over the ten years in Community Village as new buildings were constructed.

*Active lifestyle.* In 1997, almost two-thirds of Canadians were found to be physically inactive (Craig, Russell, Cameron, & Beaulieu, 1999). Katzmarzyk, Gledhill, and Shephard (2000), in a study on the effects of physical inactivity on coronary artery disease, stroke, colon cancer, breast cancer, type 2 diabetes mellitus and osteoporosis, estimated that physical inactivity has resulted in a cost in 1997 to the Canadian health care system of $2.1 billion, or 2.5 percent of all healthcare costs. The same study found that reducing physical inactivity by 10 percent has the potential to reduce these expenditures by $150 million a year.

In the case of Community Village, several elements come together to promote a physically active lifestyle: proximity to public transit, pedestrian-friendly walkways, provision of bicycle racks, and recreational and sports facilities. Extrapolating the figures above, if we estimate that the physical inactivity rate in Community Village (population 5,000) was reduced by 10 percent as recommended by the Katzmarzyk, Gledhill, and Shephard study (from 62 percent to 55.8 percent), the impact on health care costs would amount to about $88,684 in the ten-year period. If the impact were calculated for the
community surrounding Community Village (population 40,000) who have access the amenities of Community Village (40,000 people), the amount would increase many fold. This would be reported in the social column of the Expanded Value Added Statement. Although this may seem minor in the context of the development as a whole, it does bring attention to the issue of a healthy, active lifestyle and its impact on health promotion and quality of life.

Crime prevention. Two initiatives of Community Village have an impact on crime prevention. One is the creation of a Community Policing Centre, and the other is the application of planning principles known as ‘Crime Prevention through Environmental Design’. It is possible to put a value on this and include it in the Expanded Value Added Statement using studies, which estimate the direct cost of crimes to victims and the cost of pain and suffering associated with these crimes. Using data from Statistics Canada (Table 5.7), the average direct cost of property crimes in Canada, in 1996$, was $2,390 (Brantingham & Easton, 1998). The cost of pain and suffering associated with these crimes has been estimated in 1999$ to be $11,563 (1996$ = $11,076) (Leung, 2004). This results in a total of $13,466 in 1996$.

TABLE 5.7: Average Cost of Property Crime to Victims, by Type of Crime (1996$)

<table>
<thead>
<tr>
<th>Crime Type</th>
<th>Cost (1996$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theft</td>
<td>$2,131</td>
</tr>
<tr>
<td>Mischief</td>
<td>$638</td>
</tr>
<tr>
<td>Break and enter</td>
<td>$2,309</td>
</tr>
<tr>
<td>Motor vehicle theft</td>
<td>$6,649</td>
</tr>
<tr>
<td>Robbery</td>
<td>$2,857</td>
</tr>
<tr>
<td>Fraud</td>
<td>$3,531</td>
</tr>
<tr>
<td><strong>Overall average</strong></td>
<td><strong>$2,390</strong></td>
</tr>
</tbody>
</table>
Prior to the development of Community Village, property crime rates in the area, as reported by the city, were 50 per 1,000 people per year. With a population in the area of 40,000, this amounts to 2,000 crimes per year. Since the development and the Community Policing Centre were established, crime rates have gone down by five percent. Using these figures, the overall impact over ten years amounts to $7.5 million.

*Impact of purchasing decisions.* The Expanded Value Added model makes explicit the economic, social and environmental impacts of purchasing decisions, especially useful if these impacts are realized in the long-term. One example of this is in the choice of energy-using devices. In a housing development, the impact of choosing energy efficient equipment can be significant. The following example illustrates the impact of two such devices: exit signs and compact fluorescent light bulbs (Table 5.8). In both cases, the initial cost outlay is significantly more for the ENERGY STAR\textsuperscript{29} rated devices than for the non-ENERGY STAR ones. However, this is recouped fairly quickly. Indeed, over the ten years, the total cost (including energy costs) for the ENERGY STAR rated devices is $278,914, while the cost of the non-ENERGY STAR ones is $955,453. In other words, as a result of a purchasing decision, the organization is providing extra value to its customers of $676,539.

\textsuperscript{29} ENERGY STAR is an international standard for consumers that identify products that are the most energy-efficient on the market.
TABLE 5.8: Comparison of ENERGY STAR and Non-ENERGY STAR

<table>
<thead>
<tr>
<th></th>
<th>ENERGY STAR</th>
<th></th>
<th>Non-ENERGY STAR</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Initial</td>
<td>Energy use</td>
<td>Initial</td>
</tr>
<tr>
<td></td>
<td>required</td>
<td>cost (yearly)</td>
<td></td>
<td>cost (yearly)</td>
</tr>
<tr>
<td>Exit signs</td>
<td>573 (3 per</td>
<td>$75 each</td>
<td>44 kWh</td>
<td>$45 each</td>
</tr>
<tr>
<td></td>
<td>floor)</td>
<td>$0</td>
<td></td>
<td>$10</td>
</tr>
<tr>
<td>Compact fluorescent</td>
<td>4584 (24 per</td>
<td>$15 each</td>
<td>42 kWh</td>
<td>$0.50 each</td>
</tr>
<tr>
<td>lights</td>
<td>floor)</td>
<td>$0</td>
<td></td>
<td>$10</td>
</tr>
</tbody>
</table>

Energy savings are not the only impact of using these energy-efficient devices.

There is also an impact on the creation of carbon dioxide gases, the production of which is linked to global warming. By choosing to use the ENERGY STAR rated devices in these two examples, CO₂ emissions are reduced by almost 2,000 tonnes for 10 years. This impact is also shown in the Expanded Value Added Statement using a shadow price of $45.79/tonne of CO₂, based on the estimated cost of an international emission-trading permit (Wigle, 2001). This is only one method of assigning a cost (and fairly conservative), but allows it to be included in the statement.³⁰ With these two items alone, exit signs and compact fluorescent lights, this would result in a value to society of almost $90,000 over the ten years.

Whereas in a traditional Value Added Statement the impact of purchasing energy efficient devices would not be shown, the Expanded Value Added Statement highlights

---

the social and environmental impacts of purchases of external goods and services. In this case, the additional value added created is distributed to customers: to condominium owners in the form of lower condominium fees and to renters in the form of lower rents. These future savings can be thought of as self-created intangible assets and carried at cost on the balance sheet, and amortized over the useful life of the device. With major advances made in the last 15 years in the energy use of appliances, and the increasing importance of addressing the use of non-renewable energy sources and their impact on global warming, the Expanded Value Added Statement can make visible the ‘secondary costs’ of these items, especially if the initial cost of energy-efficient devices is higher than less energy-efficient ones.

**Putting it All Together**

Combining all of these elements—building construction, amenities, social and environmental impacts—in the Expanded Value Added Statement (Table 5.9) shows that Community Village created almost $228 million of value added over the ten years covered in this example. If only the financial items were considered, as they are in traditional accounting, the value added would be $201 million. The Expanded Value Added Statement highlights the additional value added created because of deliberate social and environmental considerations taken into account, and provides a way of communicating this information to a wider public. It also makes explicit how this value added was distributed and the primary stakeholders involved in keeping this community viable.
Discussion

The Expanded Value Added Statement for Community Village (Table 5.9) shows that financial information alone does not tell the organization’s whole performance story. The Expanded Value Added Statement focuses on value creation and creates greater awareness of at least two areas:

1) The role of the different stakeholders in creating financial, social and environmental wealth;

2) The interconnectedness of the economic, social and environmental dimensions of organizational activities.

Some of the limitations of the Expanded Value Added Statement are imposed by the selection of items to be included and by the methods available to put a monetary value on them. In this regard, the challenges faced by the Expanded Value Added Statement are shared by other forms of alternative accounting and economics, namely identifying, measuring, quantifying, standardizing and placing a value on key social and environmental indicators which could measure and encourage sustainable performance (Ranganathan, 1999; White & Zinkl, 1999).

Another challenge is to assess not only value added but also value subtracted, as it is important for accounting statements to illuminate both positive and negative impacts on sustainability. These are areas that require continued development and discussion (see Bennett, Rikhardsson, & Schaltegger, 2003; Gray & Bebbington, 2001; Rikhardsson, Bennett, Bouma, & Schaltegger, 2005; Schaltegger & Burritt, 2000).
### TABLE 5.9: Expanded Value Added Statement for Community Village

<table>
<thead>
<tr>
<th></th>
<th>Financial</th>
<th>Social and Environmental</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Individuals</td>
<td>Society</td>
<td></td>
</tr>
<tr>
<td>Productions for the period</td>
<td>435,991,373</td>
<td>435,991,373</td>
<td></td>
</tr>
<tr>
<td>Volunteer contributions</td>
<td>0</td>
<td>1,912,500</td>
<td>1,912,500</td>
</tr>
<tr>
<td>Additional value added created by Community Policing Centre</td>
<td>0</td>
<td>5,691,753</td>
<td>5,691,753</td>
</tr>
<tr>
<td>Additional value added created by purchase decisions</td>
<td>0</td>
<td>676,519</td>
<td>88,890</td>
</tr>
<tr>
<td>Transit-oriented development</td>
<td>0</td>
<td>8,009,822</td>
<td>10,264,621</td>
</tr>
<tr>
<td>Active lifestyle</td>
<td>0</td>
<td>88,684</td>
<td>88,684</td>
</tr>
<tr>
<td>Value of outputs</td>
<td>435,991,373</td>
<td>8,686,341</td>
<td>19,156,919</td>
</tr>
<tr>
<td>Externally purchased G&amp;S</td>
<td>210,818,087</td>
<td>210,818,087</td>
<td></td>
</tr>
<tr>
<td>Value added</td>
<td>225,173,286</td>
<td>8,686,341</td>
<td>18,046,448</td>
</tr>
<tr>
<td></td>
<td><strong>1.07</strong></td>
<td><strong>1.19</strong></td>
<td></td>
</tr>
<tr>
<td>Employees</td>
<td>83,792,399</td>
<td>83,792,399</td>
<td></td>
</tr>
<tr>
<td>Unions</td>
<td>1,890,558</td>
<td>1,890,558</td>
<td></td>
</tr>
<tr>
<td>Condo owners/Renters</td>
<td>1,252,238</td>
<td>8,686,341</td>
<td>9,938,579</td>
</tr>
<tr>
<td>Society</td>
<td>16,000,000</td>
<td>18,046,448</td>
<td>34,046,448</td>
</tr>
<tr>
<td>Creditors</td>
<td>45,755,630</td>
<td>45,755,630</td>
<td></td>
</tr>
<tr>
<td>Investors</td>
<td>12,511,656</td>
<td>12,511,656</td>
<td></td>
</tr>
<tr>
<td>Organizations</td>
<td>20,915,176</td>
<td>20,915,176</td>
<td></td>
</tr>
<tr>
<td>Government</td>
<td>43,055,629</td>
<td>43,055,629</td>
<td></td>
</tr>
<tr>
<td>Value added</td>
<td>225,173,286</td>
<td>8,686,341</td>
<td>18,046,448</td>
</tr>
</tbody>
</table>
The strengths of the Expanded Value Added Statement lie in its ability to take a broader look at the organization and the role of stakeholders and to put this into a larger socio-economic perspective. It starts with existing financial information but presents it in such a way as to emphasize the contribution of labour and capital to production. It also includes non-monetary items, to present a more encompassing picture of an organization’s economic, social and environmental dimensions, and their interdependence. Putting a value on them is not the same as commodifying them for trade in private markets; rather, knowing their value is helpful for their effective management (Costanza, 2006). Although more work has to be done on coming up with acceptable valuation methods, and not everything can be monetized, the change of focus from a profit-oriented bottom line, to an integrated economic, social and environmental bottom line provides an opportunity for organizations and society to think about impacts in a much broader sense. Accounting is a driver of behaviour and can be conceived of as an explicit change agent in order to move organizations towards economic, social and environmental goals.

By synthesizing financial data with social and environmental data, the Expanded Value Added Statement is one mechanism for understanding the dynamics of an organization and the inter-related economic-social-environmental implications of various choices made in day-to-day operations. In making these relationships more visible, the Expanded Value Added Statement can help us look at the world differently and as a result act differently in a way that responds to the needs of workers, retirees, communities and the environment.
CHAPTER SIX

COMPARATIVE CASE ANALYSIS,
RECOMMENDATIONS AND CONCLUSIONS

This final chapter gives a brief summary of the three cases analyzed in this dissertation and addresses the two research questions posed in the first chapter. It compares the three cases and draws out their main commonalities and differences. Subsequently, I suggest some recommendations for accounting education, policy, and further research, and share preliminary observations about the implementation of the model in several non-profit organizations. The chapter ends with conclusions and limitations of the study.

Revisiting the Research Questions

This thesis was guided by two main questions:

1) What are the contributions and limits of mainstream accounting, critical accounting and social accounting to the development of an accounting model that integrates economic, social and environmental impacts of an organization?

2) Can an organization’s contribution to sustainability or detraction from unsustainability (quality of life and environmental health) be reflected in the Expanded Value Added Statement? If so, what can be learned from the application of the Expanded Value Added Statement as applied in different contexts?
The first question is more conceptual in nature and refers to the disciplinary and academic traditions that inform the Expanded Value Added Statement. The second question constitutes the bulk of this thesis. It is more empirical in nature, and refers to the insights arising from the three case studies undertaken in this research. The rationale behind these two questions was to determine if economic, social and environmental impacts could be included in an accounting model with the concept of sustainability as its main guiding principle. In the following pages I address these two questions.

**Question One: The EVAS in the Accounting Context**

Q1. What are the contributions and limits of traditional accounting, critical accounting and social accounting to the development of an accounting model that integrates economic, social and environmental impacts of an organization?

From the review of the accounting literature discussed in the second chapter, it is clear that traditional accounting is well entrenched, with the reformist contributions of critical and social accounting still very marginal. However, there is one reformist accounting statement, the Value Added Statement, which could be considered mainstream in some parts of the world, particularly, in the United Kingdom and parts of Europe. In developing the Expanded Value Added Statement, I have used the accepted accounting format of the Value Added Statement to provide a familiar starting point in order to bridge traditional, critical and social accounting. The Value Added Statement defines wealth in a much broader way than profit for shareholders, and uses a stakeholder approach in its reporting. This approach makes it possible to address issues underlying
social relations, a point recognized in the field of critical accounting, which argues that accounting is not neutral and plays a role in exploitation.

Another key insight from critical accounting is that accounting is socially constructed and shapes reality. However, this does not mean that it has to continue in its present form; it can also be used to strategically shape a reality that includes the values and principles of sustainability. As critical accounting does not provide much in the way of working models, we can turn to the field of social accounting and one of its subfields, which I call integrated social accounting, to find strategic accounting innovations. While the more popular type of social accounting statement (also labelled as a social or ethical audit) is supplemental to the financial accounts, integrated social accounting synthesizes within one statement economic, social and environmental factors. Two waves of integrated social accounting innovations—one in the 1970s and the other starting in the 1990s—provide many examples of how economic, social and environmental factors can synthesized within an accounting statement.

**Question Two: Comparing the Three Cases**

Q2. Can an organization’s contribution to sustainability or detraction from unsustainability (quality of life and environmental health) be reflected in the Expanded Value Added Statement? If so, what can be learned from the application of the Expanded Value Added Statement as applied in different contexts?

Each of the three different cases examined in this thesis presented examples of how non-monetary elements and externalities can be included in an Expanded Value
Added Statement that integrated economic, social and environmental factors. The first case looked at the value added of volunteer work for the organization by members of a scholarly association (ARNOVA). The value added was determined by considering the hours and out-of-pocket expenses contributed by members in a one-year time period. This significant source of value added to the organization was previously invisible in the traditional accounting statements.

The second case, Sustainable Building, applied the Expanded Value Added Statement over a 20-year time period by developing a combined capital and operating budget for a building project. In this case, the value added was determined by re-analyzing data obtained by Kats et al. (2003) in a study of 33 sustainable buildings in the U.S.A. The resulting Expanded Value Added Statement showed the costs and benefits of building in a sustainable way versus using traditional building techniques.

The third case, Community Village, was based on Collingwood Village, a master-planned community in the city of Vancouver. The value added was determined by examining public documents and financial statements produced by different organizations in this development. This case, arguably the most complex of the three, shows how the Expanded Value Added Statement can be used to integrate the economic, social and environmental impacts and to help make investment decisions that support sustainability.

All three cases in this research included factors that could be used in an analysis of an organization’s contribution to sustainability, in other words, in the analysis of its contribution to quality of life and environmental health. In applying the Expanded Value Added Statement to socially minded organizations in different contexts, the identification
of these factors was made possible by looking at key factors that helped the organizations achieve their social and economic missions.

Applying the Expanded Value Added Statement in different settings also allowed for comparative analysis. In doing so, I identified seven areas in which the boundaries of traditional accounting were expanded:

a) how wealth was measured;

b) to whom wealth was distributed;

c) to whom the entity was accountable;

d) new items made visible;

e) time period considered;

f) unit of account; and

g) area of focus.

The first three elements, having to do with wealth creation, distribution, and accountability, were in all three cases. Table 6.1 compares how these three elements are considered in the traditional income statement, in the Value Added Statement, and in the Expanded Value Added Statement. As shown in Table 6.2, the last four elements varied across the cases, but each one provided insights for the adaptation of the Expanded Value Added Statement to different contexts.

**Common Elements across the Case Studies**

As mentioned in chapter one, the underlying assumption of traditional accounting is that the purpose of an organization is to provide net income or profit to its owners, and organizations that maximize net income or shareholder wealth are deemed to be more
successful than those who do not. The income statement is thus constructed to assess profit.

The Value Added Statement, on the other hand, assumes that the purpose of an organization is to contribute to a broader community in addition to its profitability (Suojanen, 1954). The measure of this contribution is called value added. The groups that are typically considered in the creation and distribution of value added are employees, creditors, government and the organization.

The Expanded Value Added Statement is an adaptation of a Value Added Statement that includes social and environmental value added. It also assumes that the purpose of organizations is to contribute to a broader community, but includes both paid and unpaid labour as well as physical and natural capital. For example, unpaid labour such as volunteer contributions and natural capital such as the environment are considered. By making explicit the distribution of wealth that goes to stakeholder groups, the Expanded Value Added Statement makes visible issues of equity, providing an opportunity to evaluate the fairness of these distributions.

**Varying Elements across the Case Studies**

Each of the three cases provided distinct applications of including social and environmental factors in the Expanded Value Added Statement. The ARNOVA case expanded the boundaries of traditional accounting by including volunteer contributions as part of the accounting statement. Volunteer contributions were estimated from the value of hours contributed by members as well as out-of-pocket expenses not claimed for reimbursement. Combining monetary and non-monetary items considerably changed the story provided by the accounting statements and showed how the members contributed
significantly to the outputs created by the organization. From the funders’ perspective, this showed how their funds were leveraged; from the members’ perspective, it provided a clearer picture of the value they were receiving for their membership dues.

**TABLE 6.1: Summary of Expanding the Boundaries Common to all Cases**

<table>
<thead>
<tr>
<th>Measure of wealth</th>
<th>Traditional Income Statement</th>
<th>Value Added Statement</th>
<th>Expanded Value Added Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profit (Revenues less expenses)</td>
<td>Value added (Revenues less cost of externally purchased goods and services)</td>
<td>Expanded Value added (Value of outputs less cost of externally purchased goods and services)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Wealth for whom</th>
<th>Owners/shareholders</th>
<th>Employees Organization Creditors Government</th>
<th>Human resources Organization Creditors Society Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accountability to whom</th>
<th>Owners/shareholders</th>
<th>Employees Funders/Owners Organization</th>
<th>Employees Funders/Owners Organization Society Environment Future generations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In the second case, Sustainable Building, social and environmental items were added to the Expanded Value Added Statement, and the temporal dimension covered by the statement was extended to 20 years. By extending the time considered in this case, there was an opportunity to link the impact of operating and capital decisions. The amount of expanded value added created was broken down into benefits to both customers and to society-at-large.

The third case, Community Village, also included social and environmental items alongside economic ones, and expanded the unit of account to include four institutions which came together to make up the master planned community: a real estate development and property management company; a non-profit community policing centre; a non-profit neighbourhood house; and the municipal government. The time considered in this case was an aggregate of ten years. This information could be useful to investors who are considering a stake in real estate communities, but wish to make socially responsible choices for current and future generations.

Another way of thinking about these cases is to consider the items excluded from their traditional accounts. The traditional income statement of ARNOVA shows revenues and expenses. In terms of accountability, the statements show where the funds received were spent, how much was spent, and how much was retained as a surplus. However, almost one-third of all the resources that went into ARNOVA in a one-year period—the organization’s volunteer contributions amounting to the equivalent of four full-time positions—were not reported in the traditional statements.

In the Sustainable Building case, traditional accounting considers only the expenses incurred in the construction of a capital asset (a building). Not considered are
the impacts on future operating costs and the effects of different building methods on health and productivity of building occupants.

The case of Community Village shows the limitations of traditional accounting in informing socially responsible investment decisions. Typically, investors would be comparing real estate company results in terms of economic profit; however, to make socially responsible investing decisions, other considerations come into play.

**TABLE 6.2: Summary of Expanding the Boundaries Specific to each Case**

<table>
<thead>
<tr>
<th>Expanding boundaries</th>
<th>Case 1: ARNOVA</th>
<th>Case 2: Sustainable Building</th>
<th>Case 3: Community Village</th>
</tr>
</thead>
</table>
| New items (items previously excluded in traditional accounting and included in the Expanded Value Added Statement) | Volunteer contributions of hours and out-of-pocket expenses | Impact on:  
- energy costs  
- water costs  
- operations and maintenance costs  
- waste disposal  
- emission levels  
- health  
- productivity | Volunteers hours  
The impact of:  
- transit-oriented development  
- opportunities for an active lifestyle  
- crime prevention measures  
- making environmentally-conscious decisions in purchases  
- energy-using devices |
<table>
<thead>
<tr>
<th>Expanding boundaries</th>
<th>Case 1: ARNOVA</th>
<th>Case 2: Sustainable Building</th>
<th>Case 3: Community Village</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>One year</td>
<td>Net present value of impacts over 20 years</td>
<td>Aggregate of 10 years</td>
</tr>
<tr>
<td>Unit of account</td>
<td>Non-profit organization</td>
<td>Sustainable building project</td>
<td>Four interrelated institutions: real estate development and property management company; non-profit community policing center; non-profit neighbourhood house; municipal government</td>
</tr>
<tr>
<td>Area of focus</td>
<td>Operations</td>
<td>Capital construction</td>
<td>Capital construction and operations</td>
</tr>
</tbody>
</table>

In summary, this comparative study has provided new insights for the further development, improvement and adaptation of the Expanded Value Added Statement to different contexts. The Expanded Value Added Statement makes a significant contribution to the field of accounting by highlighting hitherto invisible dimensions and integrating them into a single accounting statement. This, in turn, helps to tell a much richer performance story of organizations and opens up new possibilities for organizational and social change. The Expanded Value Added Statement recognizes
established traditions in the field of accounting, but at the same time pushes the envelope aiming at viable changes in accounting practices that nurture a more sustainable society.

Socially minded organizations such as non-profits, co-operatives, social purpose businesses and socially responsible businesses already have as part of their mission a portion of their success linked to factors other than economic ones. To some extent they may be motivated by profit, but their social values are also engrained in their ways of operating. This group of organizations subscribes to at least a somewhat alternate paradigm of how to run an organization and measure success. However, their traditional accounting statements do not reflect this alternate paradigm; rather they were devised to measure profit and shareholder wealth with the assumption that these are the measures that reflect success.

The three cases in this study demonstrate that including social and environmental items alongside economic ones is possible. A more challenging issue is shifting the paradigm of accounting from focusing on profits for owners and shareholders to focusing on wealth for a larger group of stakeholders, including sustaining the planet for future generations. The value added approach is useful in this regard, as it asks us to look at the value added or subtracted in the transformation by labour and capital of externally purchased goods and services. It is a way of focusing on the implications of our actions that can be easily understood by those outside the accounting profession. It attempts to answer the question, what difference do our actions make in economic, social and environmental terms? This is in sharp contrast to the question asked by traditional accounting, how can we maximize profit for our owners?
This next section outlines some recommendations for education, policy, and further research.

**Recommendations for Accounting Education and Policy**

This thesis proposes an alternative accounting model that takes into account variables that are often excluded from traditional financial statements. At the present time, this model is being applied by a handful of organizations with very promising results. However, in the larger context of accounting practice, it is still a marginal and invisible initiative. The adoption of new accounting models is a complex process that takes time and effort and needs to consider the realities of accounting education and policy.

In terms of accounting education, there are at least six challenges to be addressed. One of them is a decrease in enrolments and in the quality of students majoring in accounting vis-à-vis other business degrees. A second is a general dissatisfaction with the profession, as both practicing accountants and accounting educators declare that, if pursuing their education over again, they would not major in accounting. A third is a general recognition among accounting leaders and practicing accountants that current accounting education is outdated for the complexities of contemporary workplaces and in need of significant reform. This is particularly relevant for socially minded organizations. A fourth issue relates to the emphasis of accounting education on instrumental rationality at the expense of critical reflection and analysis of the historical and present role of accounting in society. A fifth challenge has to do with the low exposure of accounting students to currently used alternative accounting models that go beyond the narrow
financial statements. Finally, there are few spaces for practitioners to share and learn about accounting innovations in their workplaces (Albrecht & Sack, 2000; Amernic & Craig, 2004; Mook et al., 2005).

To be sure, informal education through networks, coalitions and communities of interest is a key area of importance (Carlsson-Wall, 2006). As it stands now, accountants, financial officers and other organizational leaders have few spaces to get together and dialogue on these issues. These networks are crucial for policy development (Swanson et al., 2006). In fact, the lack of networks has been attributed to the failure of accountants to create change in the policy arena (Neu et al., 2001).

To address these challenges, first and foremost, it is important to encourage the formation of networks and spaces to dialogue and learn about these issues, develop curricula and propose policy. In order to do this, one recommendation of this study is for business schools to identify champions in academia, policy and workplaces to form progressive ‘think tanks’ with the explicit aim of reforming accounting education and practice. Secondly, and related to that, it is recommended that critical and social accounting content is included in high school, undergraduate and graduate accounting courses. Such content should pay attention to externalities, to the social construction of accounting models and practices, and to the development of rigorous yet flexible accounting models that reflect the realities of for-profit, non-profit and public organizations. Thirdly, workshops and mentoring circles should be developed for practicing accountants to provide support and resources for the adoption and use of alternative accounting practices. For example, workshop facilitators could be trained to give workshops in adopting the Expanded Value Added Statement that include the
formation of support groups for the ongoing use of the model. These workshops and support groups would provide a space for practitioners to upgrade their skills and share lessons, experiences and practices. All of these recommendations also serve to breathe new life into the field of accounting and inspire a new generation of accountants.

In terms of policy, the main challenge relates to the narrow scope of frameworks and tools that focus almost exclusively on a financial bottom line and ignore important aspects of organizational activities. Hence, it is recommended that the current accounting principles and standards be reviewed and revised to reflect a) the realities and complexities of contemporary workplaces, especially those of socially minded organization and b) the social and environmental externalities of economic activities.

**Recommendations for Further Research**

This study has made a significant contribution to the field of accounting by bringing together instrumental tools from mainstream and social accounting, theoretical insights from critical accounting, and the values and principles of sustainability. It also has provided a useful framework to put previously invisible organizational activities into a communicable format for accountants and stakeholders, a format that takes into account the interrelationship between economic, social and environmental factors. The three case studies illustrate the application of this model to socially minded for-profit, non-profit and public institutions and help to address the two main research questions for this thesis.

From this study, it is possible to suggest five recommendations for further research. The first is to evaluate the relevance of the model to different contexts by conducting more case studies in a variety of settings not yet explored such as social
enterprises, community economic development organizations, credit unions, and for-profit organizations without a social mandate, and to adapt the model to the realities of these particular settings.

Additionally, it would be appropriate to conduct further analyses of inter-organizational connections in developing sustainable communities. The case study of Community Village presented in this thesis constitutes a first step in this direction, but more research is needed to better understand the real potential of these innovative initiatives.

To complement this study on value added, another area of potential research could explore the value subtracted of organizations. For instance, how could the Expanded Value Added Statement reflect negative environmental and social externalities?

For practical reasons, it is pertinent to do research on the internal and external challenges to the implementation of the Expanded Value Added Statement in accounting practices.

Finally, an important area of further research is in the validation of the model. This includes analyzing reactions to the model and identifying changes in decision-making, behaviour and organizational culture as a result of its use (Gröjer & Stark, 1977).

**Epilogue: The Model in Use**

Interviews were undertaken with key staff in several organizations that had adopted the expanded value added approach for their volunteer programs to find out what, if any, were the impacts on their stakeholders. All are mid-sized organizations
operating in either the health field or in education, and all had champions of the approach—either the executive director or the director of finance—who had undergone training that involved learning about the theory behind the approach and how to apply the approach to their own organization.

For one organization, presenting the value added of volunteers at their annual general meeting resulted in people “nearly falling out of their chairs.” This was an organization with an estimated value of volunteer contributions that was almost four times the amount of financial revenues. The immediate impact of this was the successful lobbying of funding for a volunteer coordinator position, which has enabled the organization to provide stable support and guidance for its 30 volunteer-led chapters. Another key impact was the board of directors started to pay a lot of attention to risk management. A challenge that still remains is the development of a system to collect volunteer hours, but one that is being addressed this year.

In another organization, the value of volunteer contributions was also very significant, amounting to 40 percent of its resources. The extent of these contributions had not been recognized before, and was an eye-opener for the organization. This organization was also able to identify other ways it created value added outside of the volunteer program by engaging its staff and volunteers to think about all the various ways the organization impacted the community. Interestingly, this created a change in organizational dynamics between the accounting and the programming departments.

Another organization found that by using this approach they were able to more fully articulate the significant impact of their volunteers to their stakeholders and potential donors. They have incorporated the approach into the benchmark indicators that
they use internally for management planning, and also communicate the results externally, for example, on their Website to recruit new volunteers.

Additionally, the Expanded Value Added Statement has been applied to community economic development organizations in Canada (Jackson, Babcock, Cholich, & Harji, 2007), and published in the annual report of a large non-profit organization in the Netherlands under the guidance of a major accounting firm (KNRM, 2006). The Expanded Value Added Statement was also used in a major study of the value added of literacy volunteers in Ontario (Community Literacy of Ontario, 2005).

These insights and other anecdotal evidence suggest that the model is significant in initiating change by making visible information previously not explicated. It appears to have contributed to a new organizational culture and enhanced relationships with key stakeholders. The model also appears to have affected strategic and operational planning and made clearer the extent of an organization’s impacts. While these are preliminary observations, evidence suggests that the Expanded Value Added Statement can have a noteworthy impact in just a short period of time.

**Conclusions and Limitations**

The main contribution of this work was to create an integrated accounting model that contemplates social, environmental and economic dimensions in one single statement. This is significant in several ways. It can be applied across different organization types, for example, non-profits, for-profits, co-operatives and social enterprises. It can be applied at different levels, for instance, program, community and organization, and across different time periods. It focuses attention on value added from a
stakeholder perspective and provides a broader perspective of the organization by highlighting economic, social and environmental factors. Overall, it increases the awareness of social accounting and its possibilities.

Each of the cases was successful in telling a different performance story than traditional accounting. Each made important factors visible so that they could be assessed and potentially included in decision-making. The relationship between economic, social and environmental factors was highlighted, as were the relationships between different stakeholder groups. The Expanded Value Added Statement opens possibilities for other essential factors to be considered, and its adaptability and flexibility to different contexts are key features. It also addresses a common critique waged against critical accounting theorists, that is, it is an actual model based on and usable by actual organizations.

In spite of these contributions, the study has clear limitations. To begin with, the intent of the cases was to construct an adaptable model that focuses attention on a wider bottom line of sustainability rather than a narrow bottom line of profit. In doing so, the model made a first attempt at recognizing the specific realities of different organizational contexts by incorporating variables relevant to each of the three case studies. However, this is only a first step in developing a flexible model that includes the full range of variables that could be included in an Expanded Value Added Statement. This is an important task to undertake in the near future.

Another limitation of this research relates to the selection of cases. Each of the cases represented organizations that are socially minded and presumably had a significant social impact. While this is not a problem in itself, it does not shed much light on organizations without a social mandate. A third limitation of the thesis is that the analysis
of the three cases focused on value added and did not explore the impact of possible value subtracted.

In closing, The Expanded Value Added Statement developed in this thesis offers accountants, policy developers, members of organizations and society at large a tool to understand the connections between economic, social and environmental dimensions, and the inter-relationships between organizations in different sectors in society. The Expanded Value Added Statement starts with the assumption that an organization should be accountable to society, not only to a powerful few.

As a model driven by sustainability in today’s context of climate change, the Expanded Value Added Statement provides an alternate way of thinking about how economic, social and environmental issues coincide, and also collide. It is a tool that can be used in a myriad of ways: as a showcase of an organization’s performance story; as a facilitator of learning about sustainability and alternate ways of seeing; and as a driver of behaviour in a variety of settings. The three settings analyzed in this dissertation and recent applications of this model to other organizations show that another accounting is possible.
References


www.heartlandnetwork.org/steelasp/newsletter/art_view.asp?art_id=24


**APPENDIX A**

**VALUATION METHODS**

**Valuation of Unpaid Labour**

The valuation of unpaid labour using a replacement cost method to assign a comparative market value was done in both the ARNOVA case and the Community Village case. The replacement cost approach looks at volunteer value from the perspective of the organization. This procedure, which is favoured by the accounting profession in cases where estimation for volunteer value is permitted, assumes that volunteers could be replaced by wage earners as substitutes in terms of skills and productivity.

There are three approaches to estimating replacement costs: Generalist Approach; Specialist Approach; and Modified Specialist Approach (Mook & Quarter, 2003). The Generalist Approach makes the assumption that all volunteer tasks should be treated equally, and is the simplest of the three methods to apply. The Specialist Approach on the other hand, targets the value of a volunteer’s role to the market value of the exact task. Its strength is its precision — comparisons are made for each volunteer task and the market rate for paid work in that category is used. These rates can be found in labour market data generated by government agencies. The limitations are that organizations may not have access to the information needed to make such comparisons, and may lack the personnel do the analysis. The Modified Specialist Approach targets the rate for a volunteer task to an organization and the general skill level of the volunteer task. This approach is simpler than the specialist approach and, arguably, more practical. This was the method used in the Community Village case.
In the ARNOVA case, an additional approach called a modified opportunity cost method was considered. In this method, respondents were asked what they thought a reasonable wage rate would be for someone doing what they had been doing while volunteering. The ARNOVA case considered all three methods of replacement cost as well as opportunity cost, and applied the Specialist approach.

**Valuation of Social and Environmental Factors**

In the Sustainable Building case, the valuation method was provided by Kats et al. (2003), who reviewed the cost and benefits of 33 green buildings and compared them to the costs and benefits of traditional designs for those buildings. This was the first report of its kind to fully aggregate the costs and benefits of green buildings. Kats et al. found sufficient data in the literature to put together reasonable estimates of the value of many green building attributes. In all areas, they used conservative assumptions to come up with estimates. The general approach they used was life cycle costing (LCC), which considers the costs and benefits over the life of a particular product, technology or system. Using this approach, they provided a calculation in today’s dollars for 20 years of financial benefits discounted by a 5 percent real interest rate and assuming an inflation rate of 2 percent a year.

Overall, they were able to quantify the impact of lower energy, waste, and water costs, lower environmental and emissions costs, lower operations and maintenance costs, and savings from increased productivity and health. Energy, waste and water savings were fairly predictable, and could be calculated with a high degree of accuracy. Productivity and
health benefits were relatively uncertain, but the conservative estimates that were made were judged to be reasonable.

In the end, the results of their study estimated that the average premium for building these green buildings was minimal, about $3-5/ft^2, much less than the common perception. Most of this increased cost was due to design time to integrate sustainable building practices into projects; however the earlier green building gets incorporated, the lower the cost. Benefits, on the other hand, were conservatively calculated to be $48-67/ft^2.

In the third case, Community Village, the social and environmental characteristics accounted for in the Expanded Value Added Statement included the impact of transit-oriented development; opportunities for an active lifestyle; crime prevention measures; and the impact of making environmentally-conscience decisions in purchasing energy-using devices. An excel spreadsheet was used to build a model of a master-planned community that incorporated these factors alongside economic ones over a period of ten years. Details of the valuation methods follow.

**Valuing impact of transit-oriented development**

The data used to estimate values for the impact of transit-oriented development were taken from two sources: census data from 2001 for an area adjacent to rapid transit was used to determine the percentage of residents who used public transit to commute to work (Statistics Canada, 2001); and the an extensive study of individual and societal transportation cost factors was used to estimate a value for this benefit (Litman, 2005).
Valuing an active lifestyle

To estimate the value of an active lifestyle, census data and two academic studies were used. One study, Craig, Russell, Cameron, & Beaulieu (1999), found that almost two-thirds of Canadians are physically inactive. A second study looked at effects of physical inactivity on coronary artery disease, stroke, colon cancer, breast cancer, type 2 diabetes mellitus and osteoporosis, and estimated the cost of physical inactivity to the Canadian health care system (Katzmarzyk, Gledhill, and Shephard, 2000). The same study found that reducing physical inactivity by 10 percent has the potential to reduce these expenditures by 7 percent. Census data were then used to calculate this reduction in health care costs per citizen.

Valuing cost of crime

Using data from Statistics Canada, the average direct cost of property crimes in Canada and the associated cost of pain and suffering were determined (Brantingham & Easton, 1998; Leung, 2004). Crime rate data were obtained from Vancouver Police Department Planning and Research Section (City of Vancouver, 2003).

Valuing CO$_2$ emissions and electricity costs

To place a value on reducing CO$_2$ emissions, eleven alternatives were considered, which provided rates ranging from $11/tonne to $835/tonne (in U.S. dollars). The rate used in this study was an average of these rates, $45.79/tonne (Canadian) (Wigle, 2001). A CO$_2$ equivalent emissions factor for electricity was obtained from Natural Resources Canada, as was the national average cost of electricity (Natural Resources Canada, 2006). The calculations of savings due to the use of ENERGY STAR devices were done using the ENERGY STAR Simple Savings Calculator, originally developed by the U.S.
Environmental Protection Agency (EPA) and Department of Energy (DOE), and modified by Natural Resources Canada for use in Canada (Natural Resources Canada, 2006).

Across all the cases, data to estimate values were available from reliable sources, much of it from national statistics agencies. The cases show that placing a value on items typically not found in traditional accounting is possible. If assumptions are stated clearly, this work could go forward and be further refined. In order to do this, however, spaces have to be created to enable dialogue on these issues.